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CONSUMERS' CULTURAL ATTITUDE TOWARD MOBILE ADVERTISING: AN EMPIRICAL INVESTIGATION AMONG DIFFERENT NATIONAL CULTURES

[1]MAIDUL ISLAM, [2]MINCHEOL KANG

[1]Assistant professor, Keimyung University, Department of E-Trade, Taegu, South Korea

[2]Professor, Ajou University, Department of e-Business, Suwon, South Korea

E-mail: [1]maidul@kmu.ac.kr, [2]mckang@ajou.ac.kr

ABSTRACT

The aim of this study is to examine the relationships between the characteristics of advertisement and consumer attitude toward mobile advertisement. How national culture moderates those relationships. A survey was conducted with consumers from three different countries (Korea, India, and China). Results show that consumers are willing to accept mobile ads if they are informative, credible, and interactive. Results also indicate that the Power Distance Index (PDI) of national culture has positive moderating effects on the relationships of informativeness and credibility, with attitude toward mobile advertising and the Uncertainty Avoidance Index (UAI) of national culture having negative moderating effects on the interactivity of mobile ads.

Keywords: *National culture, Hofstede, Mobile Advertising, Consumer Attitude, Cultural Dimension*

1. INTRODUCTION

We have entered a world where there are more tablet PCs and smart phones than personal computers. The mobile phone is becoming one of the most important means of communications [1]. Customers use mobile phones as a multipurpose means, which serves as a phone, diary, MP3 player, video player, word processor, games console, etc. [2]. As a result, demand for smart phone increases. As per International Data Corporation [3], vendors shipped more than 344.3 million smart phones all over the world, in the first quarter of 2017. The most recent data from the IDC [3] show that in the first quarter of 2017, vendors' shipment grew 3.4% worldwide the potential of mobile devices as direct marketing tools has not gone unnoticed, and advertisers have realized the opportunity to use the mobile channel to send/receive information to/from targeted consumers. Marketing through mobile devices (i.e., mobile marketing) allows innovative types of customer relationships and expected to lead to the development of numerous mobile commerce-based services [4]. A core element of mobile commerce is mobile advertising, which is inexpensive and novel and can be highly targeted toward certain individuals. Mobile advertising is a curtail tool among marketers as it can personalize text messages [5]. As mobile technology becomes a worldwide phenomenon and mobile carriers and content providers begin to perform on a global scale, mobile advertising has become a popular topic [6]. Differences in cultural dimensions have shown different impacts on attitudes of customers toward mobile advertising. Many prior studies, using Hofstede's [7] cultural dimension framework, have shown that culture and power distance index are related [8; 9]. Thus, it is increasingly important to consider different national cultures concerning advertising.

A great deal of research has been conducted on cross-cultural issues, focusing on the "traditional" Internet. Among such studies, some based on the web in a cross-cultural context have discovered that a user's cultural background significantly influences that individual's perception of visible advertising design elements [10; 11]. Culture and advertising are fundamentally connected with each other. As per Wells et al. [12] realizing and understanding cultural difference is considered to be the basic requirement of International advertising. The cultural influence of consumers' beliefs and attitudes toward advertising has been well documented in the marketing literature (e.g., [13]). However, cross-cultural research in mobile advertising has yet to be thoroughly investigated. According to Choi et al.

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[14], no existing study except them has tried empirically to examine key success factors in mobile marketing with a cross-cultural approach. In particular, there are few studies, if any, to investigate the relationships among the characteristics of mobile advertising, customer attitude, and cross-culture although the growing importance of mobile marketing in a global context [14]. The present study is performed as an endeavor to fill the deficit.

It is meaningful to look at the impact of different culture on mobile advertising. As mobile technologies become a universal trend and mobile carriers and content providers perform on a global scale, empirical cross-country research on mobile advertising has become increasingly relevant. For this reason, the current study attempts to find answers to the question as to whether consumers in different cultures perceive mobile advertising differently.

In this study, a survey among mobile phone users in Korea, India, and China was carried out. These countries were selected because they show high penetration rates of mobile phones, as discussed in detail in the later part of the paper. Further, these countries are at different stages of economic and technological development. China and India are quickly adopting modern technologies and are making great economic strides; South Korea has already leaped forward. Interestingly, as per Hofstede cultural dimension, three countries show dissimilarity in culture, even though they are all Asian countries; for example, China has a high long-term orientation index (Figure 1) in comparison to India or Korea [7]. Such differences in major cultural orientations validate a comparison of mobile advertising among these countries.

2. LITERATURE REVIEW

2.1 Mobile Advertising

In general terms, mobile advertising entails the sending or dissemination of advertising via a mobile device [15]. Mobile advertising involves the transfer of messages incorporating product and service related information via mobile devices [16]. In literature, mobile advertising, mobile marketing, and wireless advertising are used interchangeably. Customer attitude toward advertisements has long been the main issue in advertising, such that the topic has been extensively researched in the past [17; 18]. Currently, mobile phones have become one of the popular advertising media [4]. The rise of the mobile web and mobile apps on smart phones and tablet PCs in developed countries, and a large adoption of cell phone adoption in emerging markets from Brazil to Eastern countries such as China, India, and Indonesia have opened the door for mobile advertising as a category to gain tremendous momentum this decade [19, 20]. Recognizing the importance of mobile advertising, several researchers have studied topics regarding mobile advertising.

Consumer trust and privacy are important factors that affect mobile advertising [21]. The rapid penetration rate of mobile phones has boosted the users' exposure of advertisements for products and service. Improvements in Wi-Fi and hotspot network technology are some of the core factors in the expansion of mobile advertising as well as mobile phones. Personalized mobile ads tend to have positive associations with informativeness, credibility, and entertainment [22]. Additionally, advertising value is significantly associated with incentives for such ads [22]. Culture also plays a significant role in mobile advertising; and infotainment and credibility are the key components predicting advertising value among the Japanese and Austrians [9]. Furthermore, research findings show that Austrians are less irritated by mobile ads than the Japanese [9]. This is may be because Austria has a very low Power Distance Index (11), whereas Japan has a PDI almost five times higher than that of Austria (54) [7].

Looking on location-based mobile advertising, it has become more possible than ever before to reach a targeted audience exactly at the point of purchase by placing a message, discount, or offer in front of them right when they are deciding whether to purchase something. Barnes [23] argued that informative and personalized mobile ads could target more individuals. According to Xu et al. [24], advertising can be more effective if it is based on consumers' gender, location, context, and preference. Ververidis and Polyzos [25] mentioned that location-based ads generate five to ten times higher click volumes than tradition Internet advertising.

2.2 Cultural Attitude

Attitudes are mental conditions used by people to understand and react to situations, circumstances, objects, or ideas [19]. Attitudes toward advertisements involve consumers' preferences to react toward a particular message in

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a positive or negative way [26]. Most studies have supported the positive effects of advertisements on consumers' attitudes [27]. In turn, attitude affects behavior through intention [28]. Tsang et al. [6] claimed that there is a positive relationship between attitude and intention for consumers to accept mobile advertisements, and that intention significantly affects consumer behavior.

Cultures affect people's attitudes [29]. Culture is a social behavior, norms and value which shared by a group of people in a society and these underlying values effect individual attitudes [30]. Therefore, it is worth examining whether consumers in different cultures display different attitudes toward mobile advertising. Hofstede developed the cultural dimension framework that represents cultures with cultural index values [7]. In his framework, Hofstede uses five dimensions: power distance (PDI), individualism (IDV), masculinity (MAS), uncertainty avoidance (UAI), and long-term orientation (LTO) [7]. The power distance dimension refers to the degree of hierarchical power distribution in a society. The individualism/collectivism dimension speaks to the dialectical relationship between individuals and groups. The masculinity/femininity dimension describes the gender roles in a society. Uncertainty avoidance explains the degree to which people are tolerant of uncertainty. The long-term versus short-term orientation addresses differences in cultural values and virtues. According to Hofstede's framework, Western and Asian cultures show significantly different cultural index values. Even within Asian cultures, different countries (for example, China, India, and South Korea) exhibit different cultural index values (see Figure 1). Employing Hofstede's framework, this study examines the relationship between five cultural dimensions and consumer attitude toward mobile advertising.

<< Figure 1 needs to be here. >>

2.3 Consumer Behavioral Responses

With an increase in industry competition and a decrease in the effectiveness of traditional media, mobile advertising provides a lucrative means for retailers to effectively, profitably, and accurately reach their consumers. From the perspective of consumers, however, ads are not always welcomed. According to Bauer and Greyser [31], consumers have a propensity to hold both positive and negative attitudes toward advertising. Shavitt et al. [18] discovered in their empirical study that three-fourths of the participants had either favorable or neutral overall attitudes toward advertising. Interestingly, Bauer and Greyser [31] found that while consumers criticize certain aspects of advertising, overall, they are favorable toward advertisements, and attitudes toward advertising on average have not changed significantly over time.

According to an article from Recode [32], a technology news website, online ad first beat out TV as the biggest ad medium in 2017 and online advertisers were expected to spend $40 billion more than TV advertisers in 2018. The growth of online ad is mainly due to the increase of mobile ad [32]. Nowadays, most of businesses have caught up with the mobile revolution and have been investing in mobile advertising [33]. However, they have to be cautious when advertising through mobile devices. In the era of smart phones, consumers are always online, and consumers seeing their smartphone as part of their own personal space [34]. Therefore, advertisers who simply send random ads messages to consumers are likely to be unsuccessful. Zanot [35] found that consumer response has become more and more unfavorable toward mobile ads. Interestingly, however, there exist other studies, which have found positive roles of mobile advertising. For example, after examining consumer responses toward advertising and non-advertising mobile communication, Nasco and Bruner II [36] found that the relevance of the message to the consumer is the essence of effective digital advertising. Inconsistent results in the literature indicate that there is still much room for studying consumer responses to mobile advertising. So far little research attention has been given to the mobile market with respect to cross-cultural differences [14]; more specifically, dimensions such as entertainment, credibility, and the effectiveness of advertising in cross-cultural contexts have not received major attention [14]. Thus, the present study is carried out as an endeavor to address this deficiency.

3. RESEARCH MODEL

3.1 Conceptual Research Model

Based on the literature review, we proposed a conceptual model of attitude toward mobile advertising from a cross-cultural perspective. Figure 2 below presents the conceptual model underlying this study. The model postulates the five independent variables (i.e., informativeness, entertainment, credibility, interactivity, and irritation), which are the

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characteristics that might influence attitude toward mobile advertising.

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Our study focuses on consumer attitude toward mobile advertising (ATMA), which depends on the characteristics of advertising (i.e., entertainment, informativeness, credibility, interactivity, and irritation). The conceptual research model proposed in this study assumes that age and gender will influence ATMA as control variables. We draw such an assumption when considering the findings of existing studies as follows. Older consumers show greater dislike for television advertising than younger consumers [37]. Yan [38] explained that age could be one of the most powerful predictors in knowing users' attitude toward the online environment. Meanwhile, there are significant gender differences in the online advertising evaluation process [37]. More specifically, Sun et al. [39] found that informativeness is more important for males than for females, whereas entertainment is more important for females than for males. In addition, the interaction effects of informativeness and entertainment are stronger for females than for males. With respect to mobile commerce, gender appears to play an important role. Yuan et al. [40] found that gender has a significant moderating effect on mobile banking in China. Shavitt et al. [18] discovered that males, younger consumers, and Americans tend to enjoy advertisements and that they tend to find advertising generally informative and useful in guiding their own decisions when reporting more favorable advertising attitudes than others. From the review discussed so far, this study considers two demographic variables, age, and gender, as control variables on ATMA.

3.2 Hypothesis Development

3.2.1 Entertainment

Ducoffe [41] argued that entertaining advertising plays a significant role in traditional advertising. Advertisements need to entertain users while having the potential to communicate with viewers. Moreover, advertisements should be aesthetically pleasing and meaningful to users [42]. Haq [43] argued that marketing messages should be concise and fun while grabbing consumers' attention. Shavitt et al. [18] found that users can become emotionally attached to enjoyable ads, such that these types of ads play an important role in consumers' overall attitude toward advertising. Advertisements targeted at specific customers are more likely to induce positive purchase intentions, especially if the ad content is entertaining, informative or funny [44]. Therefore, we hypothesize the following:

H1: Entertaining mobile advertising will have a positive effect on attitude toward mobile advertising (ATMA).

3.2.2 Informativeness

The quality of information plays a significant role in advertising and relates to the ability to convey beneficial information [45]. Finding that advertisements with high-quality information directly influence customers' perceptions of a company, Brackett and Carr [46] argued that advertisements should be a good source of relevant product information. Mobile advertisements convey information to customers via mobile media and also need to show qualitative features, such as accuracy and usefulness for customers. Customers are interested in receiving messages that are relevant to them [47]. Information can be found as extremely valuable and enticing in online marketing, as recipients may react favorably to ads that seem to give extra incentives [48]. According to Tsang et al. [6], perceived informativeness is a vital factor for mobile advertising since it is one of the most significant aspects affecting respondents' attitude toward mobile advertising. Therefore, we propose the following hypothesis:

H2: Informative mobile advertising will have a positive effect on attitude toward mobile advertising (ATMA).

3.2.3 Credibility

MacKenzie and Lutz [49] characterized credibility in advertising as the degree to which consumers trust retailers' advertising claims about their brands. According to Chowdhury et al. [19] credibility involves consumers' confidence in the honesty and plausibility of the advertisement. Okazaki et al. [50] defined credibility as the extent to which a customer recognizes a company's reputation, and how that company is perceived as a testable source of information. The credibility of an advertisement plays a significant role in the value of advertising [46]. A similar finding was noted in the work of Goldsmith et al. [51]. They argued that several factors influence the credibility of an advertisement; more specifically, a company's reputation and the messenger of the message play vital roles. Therefore, we hypothesize the following:

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H3: Credible mobile advertising will have a positive effect on attitude toward mobile advertising (ATMA).

3.2.4 Interactivity

Systems with interactive functionality play a bigger role in bringing proximity to potential consumers [52]. Flow theory states that people become so involved in certain activities that nothing else matters, and the activity seems immensely enjoyable [53]. According to Hoffman and Novak [54], a high level of pleasure and participation found while interacting with computer-based media lead to experiencing a positive effect, such as positive mood and pleasure on the Internet. Interactivity is one of the most commonly cited benefits of mobile advertising, with the reason being that apps on mobile devices assist communication between both advertisers and consumers [55]. Several research works have defined interactivity differently, but the essential meaning has always been the interaction between users and the system [56]. Owing to this interactivity, mobile phones are known as an effective marketing tool [55]. Mobile advertising consists of hyperlinks and other elements (two-way interactive communication) that get consumers more involved in real-time communication [57]. Interactive websites increase user engagement toward such websites beyond information content [58]. In addition, Bucy's [58] research also showed that significantly more participants enjoy reading or staying on an interactive news website than a non-interactive news site. Kalyanaraman and Sundar [59] found strong positive correlations between the perceived interactivity of website content and attitude toward the website. Therefore, we hypothesize the following:

H4: Interactive mobile advertising will have a positive effect on attitude toward mobile advertising (ATMA).

3.2.5 Irritation

Earlier researchers described irritation in advertising as an advertisement that creates annoyance, unhappiness, and brief intolerance [60]. According to Altuna et al. [61], irritation comprises the only negative dimension of consumer attitude toward mobile advertising. According to an e-consultant report [62], irritation in mobile advertising is less desirable than ads that interrupt a favorite television program. Under the circumstance where consumers are believed to hold overall negative attitudes toward mobile advertising, irritation in this context may aggravate consumers' bad feelings about an advertisement [6]. Therefore, we hypothesize the following:

H5: Irritation in response to a mobile advertising message will have a negative effect on attitude toward mobile advertising (ATMA).

3.3 Cultural Influences on Mobile Advertising

Differences in cultural dimensions may result in different impacts on consumers' beliefs and attitudes toward mobile advertising. Durvasula and Lysonski's [13] studies on five different countries showed that, in general, consumers' attitudes toward advertising are different across cultures. More specifically, Wang and Sun [11] compared attitudes toward advertising in Romania and China and found that Romanians tend to hold a more positive attitude toward online advertising, compared with the Chinese.

Many studies have examined the relationships between culture and attitudes toward advertising by using Hofstede's [7] cultural dimension framework. Littrell and Valentine [8] found that a high-power distance index might indicate that consumers are easier to pursue by marketing communication messages. Marinov et al. [63] discovered that consumer cautiousness and attitude toward ads are related to the uncertainty avoidance of a nation. Liu et al. [9] compared consumer perceptions toward mobile advertising between Japan and Austria and found that consumers in the culture with the higher power distance index (e.g., Japan) are likely to hold more positive beliefs about mobile advertising than consumers in the culture with the lower power distance index (i.e., Austria). Other research conducted by Lee et al. [64] and Choi et al. [65] found that UAI affects the acceptance of mobile data service. Moreover, according to Choi et al., [65] groups with higher levels of UAI will look for in-depth information and proper rules for decision-making. In other words, such cultures will tend to avoid uncertain situations by looking for stability, whereas nations with low levels of UAI will accept uncertainty without much discomfort and will take more risks than nations with high UAI.

From the previous studies described so far implying the relationships of cultures with attitudes towards advertising, we propose the following hypotheses. However, there is one thing to mention before providing these hypotheses. In Hofstede's

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[7] study on cultural dimensions (see Figure 1), only two of them, PDI and UAI, show opposite directions (index differences are considerably higher) in values for the countries in which we are interested (i.e., India, Korea, and China). Therefore, it will be more interesting and meaningful to explore those two dimensions in detail.

H6: Power distant index and its moderating effect.

• H6a. Power distant index will have a positive moderating effect on H1.

• H6b. Power distant index will have a positive moderating effect on H2.

• H6c. Power distant index will have a positive moderating effect on H3.

• H6d. Power distant index will have a positive moderating effect on H4.

• H6e. Power distant index will have a positive moderating effect on H5.

H7: Uncertainty avoidance index and its moderating effect.

• H7a. Uncertainty avoidance index will have a positive moderating effect on H1.

• H7b. Uncertainty avoidance index will have a positive moderating effect on H2.

• H7c. Uncertainty avoidance index will have a positive moderating effect on H3.

• H7d. Uncertainty avoidance index will have a positive moderating effect on H4.

• H7e. Uncertainty avoidance index will have a positive moderating effect on H5.

4. RESEARCH METHODOLOGY

4.1 Data Collection

We collected data via online, as well as offline surveys to ensure a high level of return rate of the participants. The population of the study includes consumers using mobile phones and living in India, Korea, or China. The first group of questions in the survey intended to determine the demographic characteristics of the respondents; the second group of questions intended to determine the respondents' experiences regarding mobile advertisements. A questionnaire was developed first in English and then translated into Korean for Korean participants. The translation was conducted by bilingual third parties to improve the translation accuracy. Research participants were mainly students and office employees, and the majority of them were in the age group of 16-24 years (195 samples) and 25-34 years (109 samples). The primary reason for focusing on student- and office worker- samples is that they use smart phones more and do more online shopping, compared to other groups; hence, they are more likely to be exposed to mobile advertising. Overall, 132 questionnaires were collected from Korean, 122 from Indian, and 110 from Chinese participants. To maintain a balance, we used 110 samples per country (see Table 1). Therefore, the total number of samples was 330 for this research.

<< Table 1 needs to be here. >>

4.2 Scale Development

Items for entertainment, informativeness, and irritation were derived from Ducoffe's [42] scales for advertising on the World Wide Web. The credibility scale was based on MacKenzie and Lutz [49]. The scales for advertising credibility and ATMA were based on Alwitt and Prabhaker [66]. All measures were assessed via a five-point Likert-type scale ranging from "strongly agree" (1) to "strongly disagree" (5).

5. RESULTS

In this study, principal axis factor analysis with Varimax rotation was conducted using IBM SPSS 20.0 to examine the underlying structure of those 17 items measuring ATMA. The rule of a minimum eigenvalue of 1.0 was referenced for extracting factors. The reliability scores and factor loadings were presented in Table 2. High scores on these factors (entertainment, informativeness, credibility, and interactivity) indicated consumers' perception that mobile advertising is entertaining, informative and credible, and also that consumers prefer to have interactive mobile advertising. Factor five (irritation) consists of three items and represents one's view as to whether or not mobile advertising is irritating. High factor scores on irritation indicated that consumers feel high irritation in response to mobile advertising. A single item questionnaire was used to measure ATMA on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

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5.1 Measurement Model

A one-way analysis of variance, ANOVA, was performed to examine the overall significance of the models. Table 3 summarizes all of the four models and their significant F change. In table 3, model 1, which represents the control variables (age and gender) showed no such significant (.072) relationship at a significance level of 0.001. Model 2 (representing our research independent variables) shows all independent variables, which are entertainment, informativeness, credibility, interactivity, and irritation. Some of these have a significant impact (0.000) on ATMA at a significance level of 0.001.

<< Table 3 needs to be here. >>

To test hypotheses H1, H2, H3, H4 and H5, regression analysis has been performed. Table 4 shows that informativeness (Beta=3.3094, $p<0.05$), credibility (Beta =3.035, $p<0.05$) and interactivity (Beta=1.837, $p<0.05$) have a significant positive influence on consumers' ATMA. These results provide reasonable support for H2, H3, and H4. On the other hand, entertainment (Beta =-1.057, $p<0.05$) and Irritation (Beta=1.446, $p< 0.05$) have no significant relationship with ATMA. Therefore, hypotheses H1 and H5 ware not supported.

<< Table 4 needs to be here. >>

5.2 The Moderating Effect of National Culture (PDI and UAI) on ATMA (H6 and H7)

Hypotheses H6b and H6c posit that the positive influence of informativeness and credibility on ATMA is likely to be greater with high PDI. As shown in Table 4, the results indicate that PDI has moderating effects on informativeness ($t=2.856$, $p<0.05$) and credibility ($t=3.077$, $p<0.05$) with respect to ATMA. These results provide reasonable support for H6b and H6c. On the other hand, the results did not show moderating effects on entertainment ($t=-1.365$, $p<0.05$), interactivity ($t= 1.834$, $p<0.05$) and irritation ($t=1.701$, $p< 0.05$) with respect to ATMA. The results in Table 4 also indicate that UAI has a negatively significant influence (0.041) on interactivity ($t=-2.056$, $p<0.05$) with respect to ATMA. This finding specifically implies that advertisers should pay specific attention to those countries having a high uncertainty avoidance index in order to avoid customer loss. The results in Table 4 did not support any other moderating effects of UAI on entertainment (H7a.), informativeness (H7b), credibility (H7c) or irritation (H7e) with respect to ATMA.

6. DISCUSSION

As Choi et al. [14] pointed out, "a clearer understanding of mobile marketing can be achieved by investigating differences in the effectiveness of mobile advertising across countries or cultures." This study contributes to advancement of the mobile advertising research by examining the effectiveness of mobile advertising among different cultures. The specific contributions of this study are as follows: first, this study uncovers the types of advertising characteristics that make consumers willing to accept mobile ads. According to the study, when consumers believe that mobile advertising is informative, credible and interactive, they tend to have favorable perceptions about the values of advertising. The results coincide with findings of previous studies in the literature [11; 50]. The results obtained also provide results similar to studies conducted by Barwise and Strong [4], in that interactive short-length mobile advertising will attract more consumers. Xu et al. [67] suggested that multimedia mobile messages with high levels of informativeness lead to favorable ATMA. Chowdhury et al. [19], Okazaki et al. [50] and Tsang et al. [6] have pointed out comparable facts.

Second, this study finds the influence of national culture on consumers' ATMA. According to the study, PDI has moderating effects on the relationships of informativeness and credibility with respect to ATMA, while UAI has a negative influence on the relationship of interactivity with respect to ATMA. This finding implies that marketers should use different advertising strategies when sending mobile ads to consumers in different cultures. This research gives a better understanding of the cultural differences among Korea, India, and China regarding ATMA. The findings of this research can be useful for marketing managers to obtain more innovative ideas on how to design and develop products and services to meet customer needs and expectations in different cultures.

The results of this study do not support some of the hypotheses proposed in the conceptual research model. Unexpectedly, the results do not support the effects of entertainment on ATMA, that is, consumers' willingness to receive mobile ads. This result is contradictory, compared to earlier

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research done by Bauer et al. [68]. This may be due to cultural factors. Bauer et al. [68] work was based on US data, whereas our data are purely from Asian countries. Consumer from India, China or Korea found that mobile ads were not very entertaining. Unlike TV or PC advertising, which appear when consumers are watching those devices, mobile ads are delivered to consumers when they are doing something else; therefore, such advertising may intervene in the real-time of consumers' lives. From the consumers' point-of-view, mobile ads may need to be so valuable as to interrupt the activity in which they are currently engaged. Results of this study discover that consumers seem to think that informative, credible, and/or interactive mobile ads are worth the interruption, while entertaining ones are not. Interestingly, the results indicate that consumers consider interactivity is an important function in mobile advertising. This result can be explained in conjunction with the informativeness of mobile advertising. In general, interactive mobile ads are hyperlinked to Web/mobile pages that provide detailed information or ask consumers to do something that is important to them. Therefore, consumers may think that interactivity is valuable.

Another result contrary to our expectations is that there is no significant relationship between irritation and ATMA. Past literature has shown that irritation negatively affects advertising value and attitudes toward World Wide Web advertising [42]. On the other hand, research results [19] have also found no direct significant relationship between consumer attitude and mobile advertising, which coincides with our result. This result may be interpreted as follows: even though consumers do not welcome the irritation of ads in the mobile channel, they may also think that such an irritation of mobile ads is inevitable. The findings of this study, which are inconsistent with the literature, might suggest new insights into mobile advertising. Further studies are necessary to generalize these findings.

7. CONCLUSION

This study has investigated the characteristics of advertising that affect the willingness of consumers to accept mobile ads, and the impacts of national culture on this relationship. Results of the study show that informative, credible, and interactive ads create positive ATMA and national culture has moderating effects on this relationship. Some of the results, which are not consistent with the literature, imply new insights on the mobile advertising research. Despite the interesting findings and implications described so far, this study has limitations and a need for additional research. First of all, the results of this study are not free from the generalizability issue. The research participants consisted mainly students and office workers. This study incorporated them because they are the two major groups who use mobile phones most actively in their everyday lives; thus, they are more likely to be exposed to mobile advertising than other groups. Nevertheless, it is necessary to test the hypotheses with samples consisting of a broader range of mobile consumer groups in order to generalize the results of this study. Another limitation lies in the sample composition, in which all research participants came from Eastern cultures. The present study was worth doing because the three cultures show meaningful differences in the cultural dimensions considered in this study. Comprehensive studies that consider Eastern and Western cultures and that examine the similarities and differences between/within them will be necessary in the future. Among the five cultural dimensions of Hofstede's [7] framework, this study used only the two dimensions (i.e., PDI and UAI) that showed opposing directions in values for the three Asian cultures considered in the study, as moderating variables. In fact, PDI is the most important dimension in Hofstede's [7] cultural dimension framework, and UAI values differ significantly among India, Korea and China. These are the main reasons for considering the two dimensions in this study. Further research should be done by incorporating other cultural dimensions, namely MAS, IDV, and LTO. Finally, the present study examines the relationships only between the characteristics of advertising and ATMA; however, future research could also include an investigation of the links between attitude and real purchasing intention.

REFRENCES:

[1] J.W. Jun, S. Lee, "Mobile media use and its impact on consumer attitudes toward mobile advertising", *International Journal of Mobile Marketing*, Vol. 2, Issue 1, 2007, pp. 50-58.

[2] C. Campbell, "The Multi-purpose Mobile Phone", Editorials, Streetdirectory.com, https://www.streetdirectory.com/travel_guide/156383/cell_phones/the_multi_purpose_mobile_phone.html, Retrieved: February 7, 2019.

[3] IDC (2017). https://www.idc.com/getdoc.jsp?containerId=US42776317, Retrieved: January 24, 2019.

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

[4] P. Barwise, C. Strong, "Permission-based Mobile Advertising", *Journal of Interactive Marketing*, Vol. 16, Issue 1, 2002, pp. 14-24.

[5] M.M.T. Wong, E.P.Y. Tang, "Consumers' Attitudes Towards Mobile Advertising: The Role of Permission", *Review of Business Research*, Vol. 8, Issue 3, 2008, pp.181-187.

[6] M.M. Tsang, S. Ho, T. Liang, "Consumer Attitudes toward Mobile Advertising: An Empirical Study", *International Journal of Electronic Commerce*, Vol. 8, Issue 3, 2004, pp. 65–78.

[7] G. Hofstede, Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations, 2nd ed., Thousand Oaks, CA: Sage, 2001.

[8] R.F. Littrell, L.N. Valentin, "Preferred leadership behaviors: Exploratory result from Romania, Germany, and the UK", *Journal of Management Development*, Vol. 24, Issue 5, 2005, pp. 421-442.

[9] C. Liu, R.R. Sinkovics, N. Pezderka, P. Haghirian, "Determinants of Consumer Perceptions toward Mobile advertising - A comparison between Japan and Austria", *Journal of Interactive Marketing*, Vol. 26, Issue 1, 2012, pp. 21-32.

[10] A. Marcus, E.W. Gould, "Crosscurrents: Cultural Dimensions and Global Web User-Interface Design", *Interactions*, Vol. 7, Issue 4, 2000, pp. 32–46.

[11] Y. Wang, S. Sun, "Examining the Role of Beliefs and Attitudes in Online Advertising: A comparison between the USA and Romania", *International Marketing Review*, Vol. 27, Issue 1, 2010, pp. 87–107.

[12] W. Wells, S. Moriarty, J. Burnett, Advertising: Principles and Practice, 7th ed., New Jersey: Pearson/Prentice-Hall, 2006.

[13] S. Durvasula, S. Lysonski, "Are there global dimensions of beliefs toward advertising in general: a multicultural investigation", In C.P. Rao (Ed.), Globalization and Its Managerial Implications, Westport, CT: Quorum Books, 2001, pp. 184–202.

[14] Y.K. Choi, J.S. Hwang, S.J. McMillan, "Gearing up for mobile advertising: A cross-cultural examination of key factors that drive mobile messages home to consumers", *Psychology and Marketing*, Vol. 25, Issue 8, 2008, pp. 756–768.

[15] K.C.C. Yang, "Exploring Factors Affecting Consumer Intention to Use Mobile Advertising in Taiwan", *Journal of International Consumer Marketing*, Vol. 20, Issue 1, 2007, pp. 33-49.

[16] H. Li, S. Brian, "Parameters of Mobile Advertising: A Field Experiment", *International Journal of Mobile Marketing*, Vol. 2, Issue 1, 2007, pp. 4-11.

[17] M.J. Dutta-Bergman, "The Demographic and Psychographic Antecedents of Attitude toward Advertising", *Journal of Advertising Research*, Vol. 46, Issue 1, 2006, pp. 102-112.

[18] S. Shavitt, P. Lowrey, J. Haefner, "Public attitudes toward advertising: More favorable than you might think", *Journal of Advertising Research*, Vol. 38, Issue 4, 1998, pp. 7-22.

[19] H.K. Chowdhury, N. Parvin, C. Weitenberner, M. Becker, "Consumer attitude toward mobile advertising in an emerging market: An empirical study", *International Journal of Mobile Marketing*, Vol. 1, No. 2, 2006, pp. 33–41.

[20] M. Leppäniemi, H. Karjaluoto, "Factors influencing consumers' willingness to accept mobile advertising: a conceptual model", *International Journal of Mobile Communications*, Vol. 3, No. 3, 2005, pp. 197-213.

[21] B.A.M. Al-alak, I.A.M. Alnawas, "Mobile Marketing: Examining the Impact of Trust, Privacy Concern and Consumers' Attitudes on Intention to Purchase", *International Journal of Business and Management*, Vol. 5, No. 3, 2010, pp. 28-41.

[22] Y.J. Kim, J.Y. Han, "Why smartphone advertising attracts customers: A model of Web advertising, flow and personalization", *Computers in Human Behavior*, Vol. 33, 2014, pp. 256-269.

[23] S.J. Barnes, "Wireless digital advertising: nature and implications. International Journal of Advertising", Vol. 21, 2004, pp. 399-420.

[24] D.J. Xu, S.S. Liao, Q. Li, "Combining empirical experimentation and modeling techniques: A design research approach for personalized mobile advertising applications", *Decision Support Systems*, Vol. 44, Issue 3, 2008, pp. 710–724.

[25] C.N. Ververidis, G.C. Polyzos, "Mobile marketing using a location based service", *Proceedings of the First International Conference on Mobile Business*, 2002.

[26] S. Chakrabarty, R. Yelkur, "The effects of ad irritation on brand attitudes", *Journal of*

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

Promotion Management, Vol. 11, Issue 2-3, 2008, pp. 37-48.

[27] J.E. Calfee, D.J. Ringold, "The 70% majority: Enduring consumer beliefs about advertising", *Journal of Public Policy and Marketing*, Vo. 13, No. 2, 1994, pp. 228-238.

[28] M.A. Fishbein, I. Ajzen, Belief, attitude, intention and behavior: An introduction to theory and research, Reading, MA: Addisson-Wesley, 1975.

[29] J.L. Aaker, "Accessibility or Diagnosticity? Disentangling the Influence of Culture on Persuasion Processes and Attitudes", *Journal of Consumer Research*, Vol. 26, Issue 4, 2000, pp. 340–357.

[30] D. Straub, K. Loch, J. Evaristo, E. Karahanna, M. Srite, "Toward a theory-based measurement of culture", *Journal of Global Information Management*, Vol. 10, No. 1, 2002, pp. 13-23.

[31] R.A. Bauer, S.A. Greyser, Advertising in America: The Consumer View, Boston, MA: Harvard University, 1968.

[32] Recode (2018), https://www.recode.net/2018/3/26/17163852/online-internet-advertisers-outspend-tv-ads-advertisers-social-video-mobile-40-billion-2018, Retrieved: January 8, 2019.

[33] Business of Apps, "Mobile and in-App Advertising Trends 2019", businessofapps.com, http://www.businessofapps.com/ads/research/mobile-app-advertising-trends/, Retrieved: February 7, 2019.

[34] K. Hart, "Advertising sent to cell phones opens new front in war on spam", Washington Post, March 10, 2008, p. A1.

[35] E.J. Zanot, "Public attitudes toward advertising: The American experience", *International Journal of Advertising*, Vol. 3, Issue 1, 1984, pp. 3-15.

[36] S.A. Nasco, G.C. Bruner II, "Comparing consumer responses to advertising and non-advertising mobile communications", *Psychology & Marketing*, Vol. 25, Issue 8, 2008, pp. 821- 837.

[37] F.D. Gregorio, Y. Sung, "Understanding attitudes toward and behaviors in response to product placement", *Journal of Advertising*, Vol. 39, Issue 1, 2010, pp. 83-96.

[38] Z. Yan, "What Influences Children's and Adolescents' Understanding of the Complexity of the Internet?", *Developmental Psychology*, Vol. 42, Issue 3, 2006, pp. 418-428.

[39] Y. Sun, K.H. Lim, C. Jiang, J.Z. Peng, X. Chen, "Do males and females think in the same way? An empirical investigation on the gender differences in Web advertising evaluation", *Computers in Human Behavior*, Vol. 26, Issue 6, 2010, pp. 1614-1624.

[40] S. Yuan, Y. Liu, R. Yao, J. Liu, "An Investigation of users' continuance intention towards mobile banking in China", *Information Development*, Vol. 32, Issue 1, 2016, pp. 20-34.

[41] R.H. Ducoffe, "How Consumers Assess the Value of Advertising," *Journal of Current Issues and Research in Advertising*, Vol. 17, Issue 1, 1995, pp. 1 - 18.

[42] R.H. Ducoffe, "Advertising Value and Advertising on the Web", *Journal of Advertising Research*, Vol. 36, No. 5, 1996, pp. 21-35.

[43] Z. Haq, "E-mail advertising: A study of consumer attitude toward e-mail advertising among Indian users", *Journal of Retail & Leisure Property*, Vol. 8, Issue 3, 2009, pp. 207-223.

[44] A. Scharl, A. Dickinger, J. Murphy, "Diffusion and success factors of mobile marketing", *Electronic Commerce Research and Applications*, Vol. 4, Issue 2, 2005, pp. 159–173.

[45] T. Daugherty, K. Logan, S.C. Chu, S.C. Huang, "Understanding consumer perception of advertising: A theoretical framework of attitude and confidence", *Proceedings of American Academy of Advertising conference*, 2008, pp. 308-312.

[46] L.K. Brackett, B.N. Carr, "Cyberspace Advertising vs. Other Media: Consumer vs. Mature Student Attitudes", *Journal of Advertising Research*, Vol. 41, Issue 5, 2001, pp. 23 - 32.

[47] G.R. Milne, M.E. Gordon, "Direct Mail Privacy-Efficiency Trade-Offs within an Implied Social Contract Framework", *Journal of Public Policy & Marketing*, Vol. 12, No. 2, 1993, pp. 206 – 215.

[48] U. Varshney, "Location Management for Mobile Commerce Applications in Wireless Internet Environment", *ACM Transactions on Internet Technology*, Vol. 3, Issue 3, 2003, pp. 236 - 255.

[49] S.B. MacKenzie, R.J. Lutz, "An empirical examination of the structural antecedents of attitude toward the ad in an advertising pretesting context", *Journal of Marketing*, Vol. 53, No. 2, 1989, pp. 48-65.

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

[50] S. Okazaki, A. Katsukura, M. Nishiyama, "How Mobile Advertising Works: The Role of Trust in Improving Attitudes and Recall", *Journal of Advertising Research*, Vol. 47, Issue 2, 2007, pp. 165-178.

[51] R.E. Goldsmith, B.A. Lafferty, S.J. Newell, "The impact of corporate credibility and celebrity credibility on consumer reaction to advertisements and brands", *Journal of Advertising*, Vol. 29, No. 3, 2000, pp. 43-54.

[52] V. Cauberghe, P.D. Pelsmacker, "Telescopic Ads on Interactive Digital Television", In M. Khosrow-Pour (Ed.), Encyclopedia of Information Science and Technology, 2nd ed., Hershey, PA: Information Science, 2009, pp. 3734-3738.

[53] M. Csikszentmihalyi, Flow: The Psychology of Optimal Experience, New York: Harper and Row, 1990.

[54] D.L. Hoffman, T.P. Novak, "Marketing in hypermedia computer-mediated environments: conceptual foundations", *Journal of Marketing*, Vol. 60, No. 3, 1996, pp. 50-68.

[55] R. Vatanparast, A.H. Butt, "An empirical study of factors affecting use of mobile advertising", *International Journal of Mobile Marketing*, Vol. 5, 2009, pp. 28-40.

[56] S.J. McMillan, J.S. Hwang, "Measures of Perceived Interactivity: An Exploration of the Role of Direction of Communication, User Control, and Time in Shaping Perceptions of Interactivity", *Journal of Advertising*, Vol. 31, Issue 3, 2002, pp. 29-42.

[57] R. Lothia, N. Donthu, E.K. Hershberger, "The impact of content and design elements on banner advertising click-through rates", *Journal of Advertising Research*, Vol. 43, Issue 4, 2003, pp. 410-418.

[58] E.P. Bucy "The Interactivity Paradox: Closer to the News but Confused", In E.P. Bucy and J.E. Newhagen (Eds.), Media Access: Social and Psychological Dimensions of New Technology Use, Mahwah, NJ: Erlbaum, 2003, pp. 47-72.

[59] S. Kalyanaraman, S.S. Sundar, "The Psychological Appeal of Personalized Content in Web Portals: Does Customization Affect Attitudes and Behavior?", *Journal of Communication*, Vol. 56, Issue 1, 2006, pp. 110-132.

[60] D.A. Aaker, D.E. Bruzzone, "Causes of irritation in advertising", *Journal of Marketing*, Vol. 49, No. 2, 1985, pp. 47-57.

[61] O.K. Altuna, F.A. Konuk, "Understanding consumer attitudes toward mobile advertising and its impact on consumers' behavioral intentions: a cross-market comparison of United States and Turkish consumers", *International Journal of Mobile Marketing*, Vol. 4, No. 2, 2009, pp. 43-51.

[62] E-consultant report (2012). http://econsultancy.com/blog/11332-mobile-ads-are-more-annoying-than-television-ads-report, Retrieved: January 24, 2019.

[63] M.A. Marinov, S.T. Marinova, L.A. Manrai, A.K. Manrai, "Marketing implications of communist ideological legacy in culture in the context of Central and Eastern Europe: A comparison of Bulgaria, Romania, and Ukraine", *Journal of Euromarketing*, Vol. 11, Issue 1, 2002, pp. 7-35.

[64] Y. Lee, J. Kim, I. Lee, H. Kim, "A cross-cultural study on the value structure of mobile internet usage: comparison between Korea and Japan", *Journal of Electronic Commerce Research*, Vol. 3, No. 4, 2002, pp. 227–239.

[65] B. Choi, I. Lee, J. Kim, "Culturability in mobile data services: a qualitative study of the relationship between cultural characteristics and user-experience attributes", *International Journal of Human Computer Interaction*, Vol. 20, Issue 3, 2006, pp. 171–203.

[66] L.F. Alwitt, P.R. Prabhaker, "Identifying who dislikes television advertising: Not by demographics alone", *Journal of Advertising Research*, Vol. 34, No. 6, 1994, pp. 17–29.

[67] H. Xu, L. Oh, H. Teo, "Perceived effectiveness of text vs. multimedia Location-Based Advertising messaging", *International Journal of Mobile Communications*, Vol. 7, No. 2, 2009, pp. 154-177.

[68] H.H. Bauer, S.J. Barnes, T. Reichardt, M. Neumann, "Driving consumer acceptance of mobile marketing: A theoretical framework and empirical study", *Journal of Electronic Commerce Research*, Vol. 6, No. 3, 2005, pp. 181-192.

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

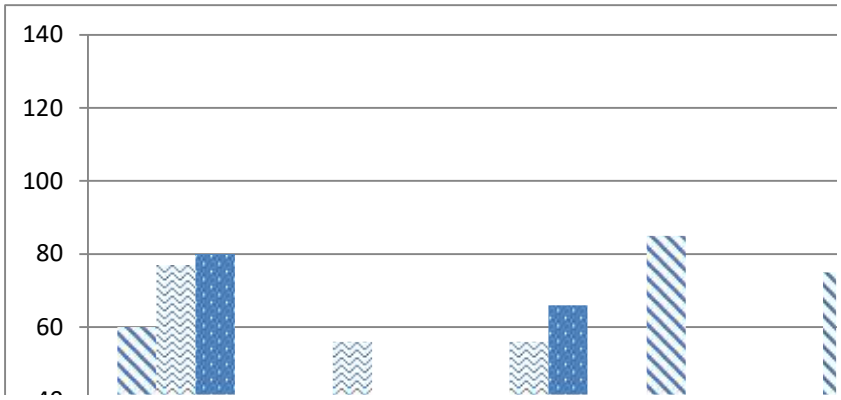

Figure 1: Hofstede's Cultural Dimensions Of Three Different Countries

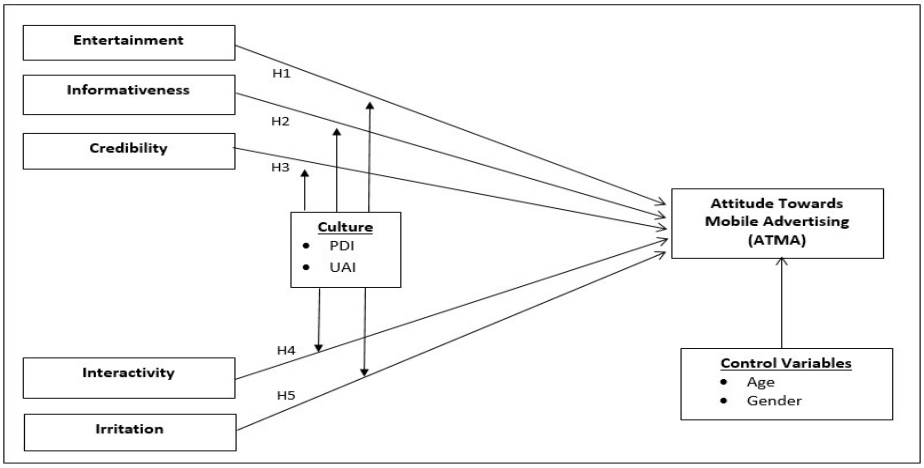

Figure 2: Conceptual Research Model

Table 1: Demographic Data of Respondents

Item	Category	Frequency (Total No.=330)		Percent	
Age	16~24 years	195		59.1	
	25~34 years	109		33.0	
	35~44 years	22		6.7	
	45~54 years	2		0.6	
	55~64 years	2		0.6	
Gender	Male	206		62.4	
	Female	124		37.6	
Nationality		Male	Female	Male	Female
	Korean (110)	61	49	55.45	44.54
	Indian (110)	78	32	70.9	29.09
	Chinese (110)	67	43	60.9	39.09

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Table 2: Reliability and Factor Loading of Scale Items

Variables and Items	Factor loadings	Korea		India		China		Cronbach's α
		Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev	
Entertainment								
I feel that receiving mobile advertising is enjoyable and entertaining.	0.740							
To me, it is amusing to receive mobile advertising.	0.847					2.24		.834
I take pleasure in recalling mobile advertising.	0.430	1.78	.785	2.05	1.02		1.15	
Mobile advertising is more enjoyable than other media.	0.575							
Informativeness								
Mobile advertising keeps me up to date about products/services available in the marketplace.	0.762							
Mobile advertisement provides valuable information.	0.795	2.28	.912	2.60	1.09	3.04	1.14	.839
I feel that mobile advertising is a good source for timely information.	0.678							
Mobile advertising provides the information I need.	0.682							
Credibility								
Mobile advertising is credible.	0.766							
Mobile advertising is trustworthy.	0.835	2.12	.767	2.46	.88	2.49	.966	.869
The mobile advertising is believable.	0.831							
Interactivity								
I like advertising with feedback forms, chat forums, downloads, etc.	0.802							
I prefer advertising with more than 3 hyperlinks in it.	0.854	3.45	1.13	3.71	1.06	2.80	0.95	.636
Irritation								
I feel that mobile advertising is irritating.	0.780							
Contents in mobile advertising are often annoying.	0.862	2.44	.827	3.08	1.05	2.95	.973	.817
Mobile advertisements are excessive and out of control.	.845							
ATMA								
I am willing to receive advertising based on my prior permission.	0.875	3.06	.836	2.06	.990	2.49	1.04	1
Cultural Dimensions				Index				
Power Distance	0.973	60 (PDI)		77 (PDI)		80 (PDI)		1
Uncertainty Avoidance	-0.975	30 (UAI)		40 (UAI)		85 (UAI)		1

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.126[a]	.016	.010	1.285	.016	2.657	2	327	.072
2	.385[b]	.148	.130	1.204	.132	10.018	5	322	.000
3	.402[c]	.162	.138	1.199	.013	2.540	2	320	.080
4	.455[d]	.207	.158	1.185	.045	1.759	10	310	.067

Dependent variable: ATMA

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Table 4: Results of Regression

	M1	M2	M3	M4	M5	M6
Constant	2.996(11.413)	0.990(2.227)	0.586(1.109)	0.686(1.256)	0.996(1.760)	1.198(2.070)
Age	0.227(2.137)	0.145(1.415)	0.103(0.964)	0.065(0.587)	0.058(0.526)	0.029(0.262)
Gender	-0.231(-1.501)	-0.124(-0.842)	-0.051(-0.328)	0.046(-0.292)	-0.084(-0.550)	-0.077(-0.503)
H1		-0.120(-1.057)	-0.155(-1.353)	-0.185(-1.524)	-0.145(-1.290)	**-0.202+(-1.710)**
H2		**0.331**(3.094)**	0.307(2.855)	0.336(2.997)	**0.256**(2.305)**	**0.311**(2.721)**
H3		**0.325**(3.036)**	0.329(3.077)	0.323(2.921)	**0.416***(3.431)**	**0.423**(3.414)**
H4		**0.140*(1.837)**	0.140(1.839)	0.127(1.656)	**0.181**(2.493)**	**0.172*(2.342)**
H5		0.114(1.446)	0.134(1.692)	0.141(1.751)	0.094(1.208)	0.078(1.005)
PDI			0.015(1.715)	0.017(1.804)		
PDI*H1				-0.157(-1.365)		
PDI*H2				**0.307**(2.856)**		
PDI*H3				**0.329**(3.077)**		
PDI*H4				0.139(1.834)		
PDI*H5				0.015(1.715)		
UAI					-0.001(-0.283)	-0.004(-1.040)
UAI*H1						-0.096(-0.719)
UAI*H2						0.095(0.717)
UAI*H3						-0.017(-0.157)
UAI*H4						**-0.177*(-2.056)**
UAI*H5						0.050(0.555)
R-Square	.016	.148	.156	.170	.156	.170
Adjusted R- Square	.010	.130	.135	.136	.135	.136

Dependent variable: ATMA
+p<0.1
*p<0.05
**p<0.01
***p<0.001