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The influence of social public announcement on consumers' behavior: A content analysis related to cognitive attitude, affective attitude, behavioral attitude. A study of Bahrain and Malaysia.

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### ABSTRACT

The main purpose of the current research is to investigate the influence of social public announcements on consumers' behavior. The undertaken research is applied affective cognitive theory to understand how social public announcement affects cognitive attitude in order affective attitude which in return influence on the behavioral attitude of the consumers. The study was among drivers with the applied social public announcement "do not text and drive" and "do not drink and drive". The result showed that cognitivist positively influence affective attitude with different feelings of consumers which respectively changing their behavior. The study was with control variables such as gender, age, and driving experience. These kinds of advertisements mostly controversial, moreover, last year's current advertisements have become more and more explicit with the messages and following consequences. The research aims to explore the influence of consumer behavior and how customers alter their behavior. The images of the advertisement and a message containing are remarkably powerful and research of the current area should prove how advertisement impacts all areas of people's lives.

## 1. Introduction

In a dynamic world of technologies and fast-growing businesses, advertisement opportunities can be seen anywhere. The advertisement appears as the latest development and communicative tool with consumers (Shareef, Mukerji, Dwivedi, Rana, and Islam, (2017). However, there are several recourses to communicate with consumers, such as online recourses, for example, internet web sites or through social media, and offline resources such as built boards and posters.

Many researchers (Akar and Topcu, 2011; Kim and Ko, 2012), agreed that online advertisement such as Facebook, in particular, brings enormous spontaneous advertisements which work like brainstorming for the consumers and as a result developing a specific opinion about the specific advertisement.

Moreover, (Kim, Kim M., Choi, and Trivedi, 2017) claimed that marketers mostly recognized lately, only online social advertisements.

However, (Kim, Kim M., Choi, and Trivedi, 2017) study confirms that offline social advertisements and online social advertisements have distinct influences on consumer behavior.

Impact online social advertisement has been studied on consumer behavior ( Kim, and Yoon, 2018; Saunders, Barrington, and Sridharan, 2015; Kaur, H., and Hundal, 2017), however, these studies mostly covered by brand advertisements and consumers behavior purchasing. Finally, previous research in online advertisement also covered the influence between online advertisement and online shopping, and offline advertisement and online shopping and influence on consumer behavior. (Kim, Kim, M., Choi, and Trivedi, 2017; Hoekstra, and Jager, 2013; Jin and Park, 2006; Pappas, Pateli, Giannakos, and Chrissikopoulos, 2014)

Very few studies have been found on social media announcements through online resources and offline recourse and its impact on consumer behavior.

Many researchers have been investigating a variation in the behavioral pattern (Ghorbani, et al., 2019; Zou, and Chan, 2018); however, recent marketing such as online social media advertisement and offline social media announcements influence on consumer perception and their cognitive attitude, affective attitude and behavior attitude in different ways (Zou, and Chan, 2018; Saunders, Barrington, and Sridharan, 2015).

Another concept of consumers' behavior capability is affective-cognitive consistency theory that examines the relationship between attituded and beliefs (Rosenberg, 1956). According to the theory if consumers have not enough knowledge or the current knowledge inconsistent or a subject the relationship between attitude and changing behavior will be unstable. Persuasive communication attempts to change the affective component of an attitudinal system by changing the cognitive component of attitude. In other words, providing an individual with new information that changes the cognitive component of attitude will tend to cause that individual to change overall attitudes towards an object. With reflection on that, while creating the

advertisement, marketers should bring attention to the information delivered to the consumers and there is always will be a possibility that consumers may understand it differently or may not pay attention to the given information.

Therefore, understanding consumers' cognitive attitudes and how social media interact and affect their attitude with the following behavior is essential.

Moreover, the previous study with social media announcements while showing the importance of online advertising based on purchasing brands have assembled the current attitude. Also, decomposing offline social media interaction and online social media interaction and figuring out which is more effective and have more impact on consumers' behavior regarding social media announcements.

The undertaken research contributes to the extant studies by understanding the influence of offline and online social media announcements on consumers' cognitivism, their affective attitude, and eventually behavior attitude, and how they change their attitude towards the given information.

The empirical analyses the three important findings. Firstly, overall offline and online social media interaction have a positive influence on consumers' behavior. Secondly, a closer study will reveal how social media announcement advertisements influence cognitive attitude, affective attitude, and eventual if it makes to change a behavior attitude towards the information was given. Thirdly, it will show the effectiveness of online or offline social media announcement on consumer behavior.

The undertaken research will try to answer the following questions to contribute and provide deeper understanding of the influence of social media announcements on consumers' behavior and provide the information for the improving advertisement campaign for marketers or non-profit organizations.

The rest of the paper will be organized as follows. Firstly, will be discussed the background and developed hypothesis. Then, will be a description of the research design of the current exploratory study which includes methodology and data collection procedures. Next will be the statistical analysis section, followed by the results and discussion section. Theory development and managerial implication are explained in the following section. Conclusion and future research concepts with providing limitation of the undertaken study will be presented as well.

## **2. Background**

The undertaken research will be focused on three flows of the literature review and will be developed the hypothesis.

An affective-cognitive consistency theory that examines the relationship between attitudes and beliefs (Rosenberg, 1956). According to the theory if consumers have not enough knowledge or the current knowledge inconsistent or a subject the relationship between attitude and changing behavior will be unstable. Persuasive communication attempts to change the affective component of an attitudinal system by changing the cognitive component of attitude. In other words, providing an individual with new information that

changes the cognitive component of attitude will tend to cause that individual to change overall attitudes towards an object.

The discussion will be divided into several sections: 1) nature of social public announcement interactions; 2) how social public announcement affects cognitive attitude 3) how based on social public announcement cognitive of individual will influence affective attitude; 4) and eventually how individuals' behavior will be affected.

### **2.1. Nature of social public interactions.**

Earlier studies in the social and behavioral sciences have highlighted that persuasion research of changing attitudes and subsequently individuals behavior. However, social public announcements are generally created without any applying any information. Such advertisements are based mostly to inspire individuals or provide information which may be essential for their life. However, the majority of social public announcements reached limited success. (Lieberman, and Schroeder, 2019; Wang, and Liu, 2019; Zhang, Pauwels, and Peng, 2019).

Moreover, social public announcement and its design during the preproduction level should be considered about what audience the current information should be reached or provide the information with consequently following changing attitudes and individuals' behavior. Also, it should be carefully investigated the place of the social public announcement to be placed to reach the exact targeted audience. The affective-cognitive theory proposes that individuals are affected with information, with the following affected feeling, which eventually makes them change the behavioural attitude towards the information.

For better understanding, the consequences between inline social media interaction and offline social media interaction (Lieberman, and Schroeder, 2019), claimed there will be differences such as active and non-active social media interactions. The differences may provide systematic consumer behavior and affective attitude that are functional may change the landscape of social life. Also, some researchers divide social media interaction into verbal and non-verbal interaction. Most social media announcement flow with non-verbal interaction offline and online advertisements.

Therefore, social public announcements campaign should be considered all available places as alternative channels to provide the information. The specific targeted audience will provide a successful campaign, especially, if the individuals will participate. (Kim, et al., 2011).

### **2.2. The impact of the public social announcement on cognitive attitude consumers.**

The consequences concerning if consumers are more open to dissenting opinions on the public social announcement are equivocal. On the other hand, when people look at the public social announcement, restricting themselves to their own cultural and ideological thoughts, they are most likely to be exposed

to content from which they dissent. (Hossaine, 2016). Another study (Liu, Xu, and Zhao, 2019), contributes positive knowledge of affecting social media on cognitive attitude consumers, and related factors that drive consumers' attention to the seen advertisement with the following acceptance of the information.

Want, and Saiphoo, (2017) study shows that social comparisons with media images are rapid and minimally demanding of mental effort, then virtually every image we encounter daily, whether we are idly flicking through a magazine or walking past a billboard while thinking about something else, could potentially affect us. Cognitive efficiency would also make combatting the detrimental effects of social comparisons with such images difficult in that the effects would be produced without apparent mental effort. Alternatively, if – as is suggested by the present research – such comparisons with media images are not efficient, then only those images to which we devote our at least some time and attention will impact us.

Empirical studies suggest that social media information can be positively associated with consumers' cognitive attitudes and relatively influence their perspectives (Ceran, et al., 2019).

Hence, Hypothesis 1 below formalizes this inference:

*H1. The public social announcement is positively associated with cognitive attitude.*

### **2.3. The impact of perceived cognitivism on affective (emotional response) attitude, with subsequent changing behavioral attitude.**

Ortegón-Cortázar, and Royo-Vela, (2018) indicated that cognitive attitude influences the creation of affective response, which also impacts behavioral intention. A related study was conducted by Fiore and Kim (2007) where they also observe cognitive attitudes that subsequently create effective consumers' attitudes and influence the behavioral attitude of the customers.

Petty, et al., (2017), were conducted several studies among consumers and their affective attitude subsequently changing behavioral attitude related to the social media announcement. Several studies have shown that they are positively related, however, different researches have shown that consumers may not always be able to change their evaluation of goals. In different words, people may sometimes show different attitudes that would better serve their purpose. Empirical evidence from the literature revise with following several authors and researches (Petty, et al., 2017; Luo, and Chea, 2018; Lee, 2016; Wigboldus, et al., 2006), have shown that people not always can shift theirs to the level with the following impact on behavioral attitude.

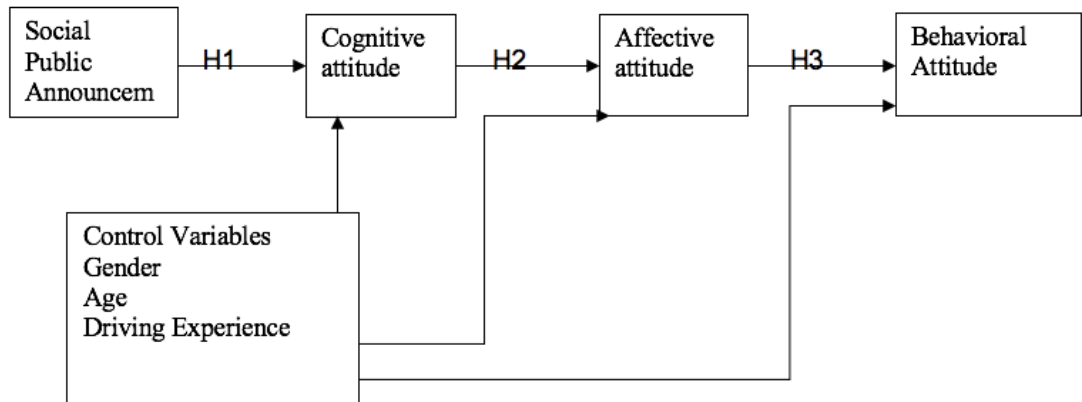
Petty, et al., (2017), argued that sometimes people's affective attitude fails to predict their behaviour. Consumers pursue the attitudes they wish to hold, and in doing so, can sometimes act in opposition to the attitudes they endorse.

In this sense Hypothesis 2 and 3 can be derived as follows:

*H2: Perceived cognitivism is positively associated with affective attitude.*

*H3: An affective attitude is positively associated with behavioural attitude.*

**Figure 1: Research Model.**



### 3. Methodology

#### 3.1. Survey Design and Data Collection.

The undertaken research was designed to reveal the effect of a public special announcement on consumers' behavior through exploratory investigation. The research initially attempts to capture consumers' cognitive, affective, and behavioral attitudes towards PSA, and how it may change their lives. Moreover, the undertaken research design to which advertisement makes an effect of influencing consumers' behavior.

##### 3.1.1. Measurement Items.

Several demographic characteristics of the respondents were drawn, such as 1) gender; 2) age; 3) the experience of driving. These variables measured by the following questions are applied to variables and described in the preceding section.

In the undertaken study was applied affective-cognitive consistency theory and the questionnaire was adapted from several researchers.

The participants ( N=350; 60.5% female; 39.5% male actively driving) voluntarily participated.

To measure attitude towards SPA was adopted standardize scale to measure believability and irritation ( Bhat, Leigh, and Wardlow, 1998).

The project technique was adopted to measure cognitive attitude towards SPA ( Norman, 1975; Ostrom, 1969). The effective attitude measurement with a positive or negative attitude towards SPA was adopted from (Norman, R. 1975; Ostrom, T. M. 1969; Midden and Huijts (2009) and Merk and Pönitzsch (2017); Finally, Behavioural attitude questions were modified from (Choi and Ji 2015; and Gefen et al. 2003); Norman, R. 1975; Ostrom, T. M. 1969).

Participants were informed that safe driving is compulsory and was acknowledged with SPAs “do not text and drive”, and “do not drink and drive”.

**Table 1. Constructs and their items.**

Construct	Item description	Source
SPA “do not text and drive”; “do not drink and drive”	To what extent do you like or dislike these ads? The affection of the participants’ cognitivism.	Adapted from Bhat, Leigh, Wardlow, 1998.
Cognitive attitude	I believe, drivers should not be concerned about PSA. I believe, drivers should be concerned about PSA. I believe, if I follow the information it may not be caused by harm. I believe, if I do not follow the information it may not be caused by harm.	Adapted from Norman, R. 1975; Ostrom, T. M. 1969
Affective attitude (positive, negative)	When I think about these SPAs, I feel: happy, satisfied, fearful, angry, disgust, worry, anxious.	Adapted from Norman, R. 1975; Ostrom, T. M. 1969; Midden and Huijts (2009) and Merk and Pönitzsch (2017)
Behavioural attitude	I intend to text and drive in the future. I intend not to text and drive in the future. I will recommend my family and friends not to text and drive in the future.	Modified from Choi and Ji 2015, and Gefen et al. 2003); Norman, R. 1975; Ostrom, T. M. 1969).

### 3.2. Data analysis.

Partial least square (PLS3) was applied to test the reliability and validity of the measurement model and the structural model. Also was used a bootstrap procedure to test the hypothesis. To evaluate the research model were passed two stages: firstly, assessment of measurement of the model, secondly, evaluation of the structural model ( Hair Jr, Hult, Ringle, and Sarstedt, 2016). Before moving into the main analysis, mean centering had to be implemented for the collected data to eliminate the possibility of bias due to multi-collinearity (Kromrey and Foster-Johnson,1998). In the first stage of analysis, an assessment of the measurement model, reliability, and validity were evaluated, and then the research hypotheses were tested (Hair Jr et al., 2016).

To validate internal consistency was assessed Cronbach's alpha, with 0.7 or higher (Nunnally, 1978). Items loading is recommended to exceed 0.5 according to (Truong and McColl, 2011). The average variance extracted (AVE) according to (Hair, Black, et al., 2009) should exceed 0.5. The composite reliability values are recommended to exceed 0.7.

As shown in Table 2, all item loadings exceeded 0.5. AVEs are greater than 0.5. The composite reliability and Cronbach's Alpha are exceeded 0.7. The shown results apply good reliability and convergent validity according to (Hair, 2016; Bagozzi and Yi, 1988; Gefen et al., 2000).

**Table 2.**  
**Results of item loadings, Cronbach's alpha, AVE, CR for the measurement model based on the data collected.**

Constructs	Item	Loading	CR	AVE	Cronbach's alpha
SPA	SPA1	0.98	0.998	0.997	0.978
CA	CA1	0.760	0.810	0.681	0.78
	CA2	0.886			
	CA3	0.889			
AA	AA1	0.999	0.560	0.502	0.863
	AA2	0.778			
BA	BA1	0.894	0.905	0.826	0.791
	BA2	0.924			
	BA3	0.998			

*Note:* CR= composite reliability; AVE= average variance extracted; SPA= social public announcement; CA= cognitive attitude; AA= affective attitude; BA= behavioural attitude.

According to Table 2, all item loadings exceed 0.6. AVEs are greater than 0.5. The composite reliability and Cronbach's alpha exceed 0.7. The listed results show good reliability and convergent validity according to (Hair, 2016).

To assess discriminant validity according to (Fornell & Larcker, 1981; Gefen et al., 2000) if the correlation value between latent variables is lower than 0.7, accordingly multicollinearity issues should be avoided. Thus, the measurement model was proven to be reliable and valid for the study.

**Table 3.**  
**Discriminant Validity Fornell- Larcker.**

Construct	1	2	3	4
SPA	0.825			
CA	0.125	0.998		
AA	0.169	0.206	0.708	
BA	0.259	0.033	0.170	0.909



#### 4. Structural model analysis and testing hypothesis.

The hypothesized relationship between the latent construct in the undertaken research is comprised. Was used bootstrap sampling that can obtain the path coefficient and it corresponding with T – value and p-value. With these values, it will be available to assess statistical conclusion validity by testing the hypothesis for each path coefficient.

R<sup>2</sup> can be observed for the estimated model or validity. Table 4 shows that the R<sup>2</sup> values for trust, perceived usefulness, and behavioral attitude that is 0.469, 0.350, and 0.650 respectively. According to Miller (1992) for R<sup>2</sup> to be pointed adequately it should be at least 0.10.

Table 4 show all path coefficient and their significance. A t-test was conducted to the significance of the path coefficient based on significance level 0.05. Hypothesis 1 and 3 are supported, and hypothesis 2 is rejected.

The analysis implied that social public announcement has a significant positive relationship with cognitive attitude (H1 was supported:  $t = 24.438$ ,  $p = 0.01$ ). The consumers who consume public social announcements while driving or aware of information “do not text and drive” or “do not drink and drive”, tend to know the possible consequences. The next hypothesis that perceived cognitive attitude is positively related to affective attitude (H2 was supported  $t = 3.841$ ;  $p = 0.004$ ). The result shows that even drivers aware of the possible consequence of the public social announcement “do not text and drive” or “do not drink and drive” statistically shows that the information affects their feeling in a different way (positive or negative).

Furthermore, when the conscious is affected consequently it affected behavioral attitude which can be supported next hypothesis (H3 was supported:  $t = 25.458$ ,  $p = 0.039$ ).

Also was checked whether the control variables had any impact on cognitive attitude. Firstly, was remarkably found impact from age ( $p = 0.016$ ;  $t = 2428$ ), and experience ( $p = 0.002$ ;  $t = 3051$ ). The result shows that cognitive attitude may be affected by those people who have driving experience, as people may recognize and clearly understand the possible consequences. Moreover, they may keep in mind that driving and texting or driving after consuming alcohol may cause harm.

Next, it was checked whether the control variables had any impact on the affective attitude. Surprisingly the result, shows that either age ( $p = 0.003$ ;  $t = 2.890$ ), and driving experience have affected drivers ( $p = 0.002$ ;  $t = 3.046$ ). This implies that it may be clear understanding the information and understanding the following consequences may affect their feeling and even if they see the public social announcement during their driving, the feeling will remain controlled, however, the understanding of the image will be reached.

Thirdly, was observed control variables on behavioral attitude. Surprisingly, all three control variables affect consumers' behavioral attitude, after

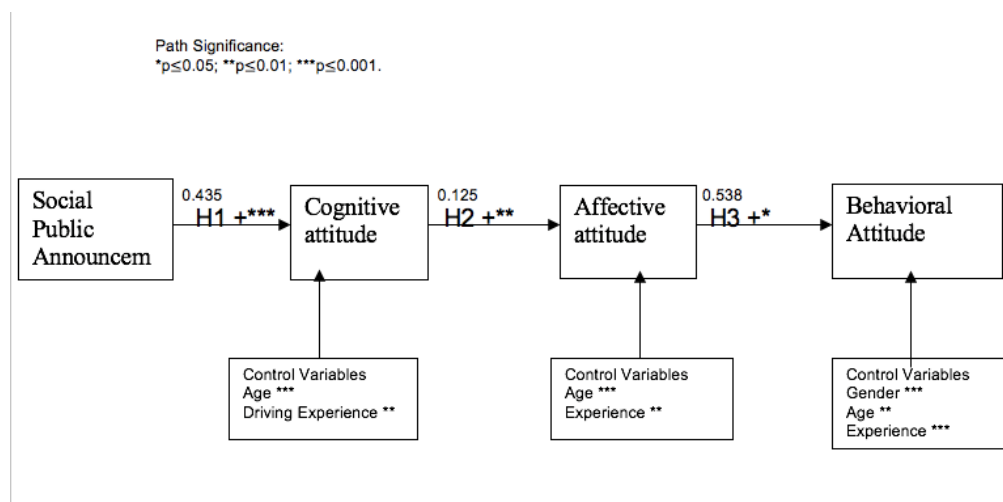
understanding information of social public announcement passing their feelings. First control variable is gender (  $p=0.000$ ;  $t= 6137$ ). In the undertaken research more than 50% were participants women, however, can be said that women are more careful drivers than men. It means that all drivers are willing to change their driving behavior after specific information has been learned. Secondly, age is a control variable is willing to affect consumers behaviour ( $p= 0.004$ ;  $t= 2.916$ ). And last control variable will be experience of driving ( $p= 0.001$ ;  $t= 3.419$ ).

Besides, a more experienced driver is more likely the action of the changing behavior will be applied.

### 5. Discussion and Conclusion.

The current research was conducted to understand how social public announcement affects drivers behavior. To prevent drivers from accidents was used two types of social public announcements, “do not text and drive” and do not drink and drive”. Was applied theory of consumer behavior: affective cognitive consistency theory. According to (Ostrom, T., M, 1969), cognitive attitude should affect the affective attitude of the consumers which eventually turns up to changing behavioral attitude. However, according to (Norman, R, (1975), in one of the experiments he may be concerning that the proposition of that consistency of cognition, where the cognitive index can be used to change behavioral attitude. The result of the undertaken research has shown that cognition affects affective attitude positively which in turn influences behavioral attitude.

**Figure 2. Influence SPA on consumer behaviour**



According to the results of the undertaken research, social public announcement do affect the cognitive attitude of the consumers, the information they receive affects their feeling which can be positive or negative. However, the cognitive attitude has less captured and influence affective

attitude because, as verified with the current study, it is less relatively utilized by consumers and it cannot be intense affection. Furthermore, any affective attitude (positive or negative), has an impact on the consumers' behavior, which eventually means that drivers will change their attitude even though they had been driving and texting and did not follow the rules.

Since individual perception and behavior was verified by previous literature mainly using lab experimental setting, the current research may confront the impact of the individual characteristic which have been not completely identified.

For the practical implication, the current study suggests based on the results, that during the driving individual may still use their phone, even knowing that it may cause harm, however, if at the same time they see the sign of public social announcement it may affect their feeling which eventually changes their behavior instantly. Individuals will be able to continue driving as according to the study their feeling is not intense, but strong enough to impact their behavior. As a result, as many individuals can see the right signs of social public announcement, as much can be affected their behavior.

The current study may provide some future research direction.

Last, the current research has some limitations. Firstly respondents were just controlled with main variables such as age and gender and experience of driving. Maybe added more control variables. In the current study, several female participants were slightly higher than the number of male participants. The number of the age distribution of respondents was mostly from 25 to 35 years is relatively higher than the other number of respondents. Thus, the results can be biased towards older respondents, which may be added more driving experience. Secondly, the model does not include relevant variables. Future researchers may test the possible inclusion of other external or internal variables such as positive affect or negative affect. Also, researchers may test a different kind of social public announcement, as in the undertaken study was only two different PSA. Therefore, more researchers are needed to validate, and expand, and generalize the current study.

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