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# Factors affecting consumer attitudes towards SMS advertising in the Palestinian banking sector. The moderating role of national culture

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## ABSTRACT

The purpose of this paper is to examine the factors affecting consumer attitudes towards SMS advertising in the Palestinian banking sector: The moderating role of national culture) from a consumers' point of view. An empirical study was conducted using a survey questionnaire to collect primary data in order to test the hypotheses. A structural equation model (SEM) technique is employed to analyze the data collected from 424 banks' clients. The findings show that national culture acts as a moderating variable in managing the relationship between (i.e., relevancy, entertainment, informativeness, irritation, and creditability), and consumer's attitudes towards SMS advertising indicating its importance for marketers when they communicate via SMS with their clients for advertising purposes. While this paper builds on previous work, it also offers results that can help researchers and practitioners in their hunt for SMS advertising success.

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## KEYWORDS

Consumer attitudes;  
palestine; SMS  
advertisement; national  
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## Introduction

The rapid growth in technology facilitated by the growth of number of mobile phone owners and the development of social media channels has redefined new markets and niches (Varnali 2021; Rajesh et al. 2019) and established new channels in marketing like SMS, E-mail, and MMS (Worku et al. 2020). There are more mobile devices on earth than people, and device prevalence continues to grow (Ardelet 2020; Aydin and Karamehmet 2017). According to Statista (2019), in the year 2019, the number of mobile phone users globally has hit 4.68 billion user. Globally, over 90% of mobile phone users indicated they send or receive at least one text message every week. 95% of all mobile users (including Smartphone and non-Smartphone users) have been contacted by businesses who utilize SMS advertising to reach their consumers. This highlights the relevance and popularity of SMS advertising throughout the world (Khasawneh and Shuhaiber 2018). The outburst of the information technology field has also provided different advertising opportunities for

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businesses (Chowdhury et al. 2006). This encouraged the different banks to start using the SMS as a tool for advertisement in order to enhance a positive attitude towards customers. According to Gaber, Wright, and Kooli (2019), the concept “consumers’ attitudes towards different advertisements” could be defined as being ready to positively or negatively respond to a particular advertisement during a particular occasions.

SMS is an important way of advertising (Bakr, Tolba, and Meshreki 2019). According to the International Telecommunications Union (2020), the Mobile-Cellular telephone subscription increased from 2010–2020 by nearly 54.1% to be more than 8,152 million users in 2020, and the use of mobile devices advertisement enlarged due to the increasing use of phone calls (Komulainen, Mainela, and Tähtinen 2016), and particularly SMS which resulted in customers being more involved with the organizations’ products (Eshra and Bashir 2019). As a result, given the relevance of SMS advertising to marketers, understanding the drivers and obstacles to SMS advertising is very critical. Previous research has shown that SMS advertising is effective as a brand vehicle as well as a stimulus for consumer reactions (Dix et al. 2016; Varnali 2014). The ability to reach consumers in a particular way is what makes SMS advertising so unique (e.g., Muk 2007a). Therefore, as Martin et al. (2003) suggest, advertisers will get more value for money because message recipients have already shown an interest in the messages.

Due to its strategic location, Palestine has been a source of conflict throughout history. It is located between the Jordan River and the Southeastern area of the Mediterranean sea and is important to numerous religions. As a developing country, Palestine has an emerging economic situation defined by some characteristics that distinguish it from other economies, such as low per capita income, high unemployment, the lack of a national currency, and inherent weakness as a result of the Israeli occupation, including border closures, labor flow reductions to Israel, tax revenue withholding, and dependency. In addition, the Palestinian economy has endured a series of extraordinarily difficult circumstances over the last few decades. As a result of the Israeli occupation’s power appropriating large portions of Palestinian land, property, and wealth, the Palestinian people have been dispossessed and economically marginalized (Mujahed, Ahmed, and Samikon 2021). Despite the fact that many nations across the world utilize the fifth generation of cellular networks, the Israeli occupation prevents Palestinian telecommunications companies from acquiring third, fourth, and fifth generations. In the Gaza Strip, the Israeli occupation has approved the second generation of cellular networks with severe limitations. After years of negotiations, the Israeli occupation authorized Palestinian cellular operators to acquire third-generation communications equipment for use only in the West Bank, excluding the Gaza Strip. As a result, SMS advertising is comparable to the advantages of second-generation services.

One industry at the center of SMS advertising is the banking sector. Many previous studies (see for example, Solaja 2016; Collins and Sarpong 2014) have been conducted in different countries to investigate consumer attitudes towards SMS advertising in the banking sector. In Palestine, the evolving banking sector is administered by Palestinian Monetary Authority (PMA). The PMA was established as an autonomous organization in 1994 by a presidential order and later by an act of the Palestine Legislative Council. It is regarded as Palestine’s central bank. The act gave the PMA complete control and autonomy over the Palestinian financial system, ensuring its stability and performance. According to the PMA (2020), there are 13 registered banks with 377 branches operating

in the Gaza Strip and West Bank. In addition, there are more than 7354 employees working in the Palestinian banking sector. SMS advertising has grown fast in western and European countries, but it is still in its early stages in the Middle Eastern and Asian countries (Salem 2016).

SMS advertising is one of the most efficient and effective advertising tools used by businesses motivating banks operating in Palestine to use the SMS marketing (Anouze and Alamro 2019). According to established marketing theories such as the theory of reasoned action (TRA) (Fishbein and Ajzen 1975), the theory of planned behavior (TPB) (Ajzen 1985), and the uses and gratifications theory (U&G) (Katz, Haas, and Gurevitch 1974), consumers' attitudes toward advertising impact their behavioral reactions. The technology acceptance model (TAM) (Davis, Bagozzi, and Warshaw 1989) was created based on TRA and extended to explore new technology/medium adoption more recently. Based on the guidelines of these theories, the current paper proposes and measures a research model that incorporates TRA, TAM, U&G, and prior research into SMS advertising.

This study contributes to the field of SMS advertising research in multiple ways. First, SMS advertising is a unique advertising tool undermines the relevance of previous studies on advertising effectiveness. The advancement of new technology is reflected in the growth of TAM. However, it has been used to investigate new technologies in general rather than focusing on a specific medium. To gain insight into the success of SMS advertising, we start by understanding the unique characteristics of SMS communication. Given the fact that the SMS medium is personal, highly interactive and localization sensitive, factors such as relevancy, entertainment, informativeness, irritation, and credibility may become influential variables. Second, analyzing Palestinian attitudes toward SMS advertising adds to existing SMS advertising research. It is critical to comprehend consumer attitudes toward SMS advertising, as this knowledge could help in the development of policies aimed at improving advertisement distribution through mobile technology (Chang and Villegas 2008). Consumer attitudes toward SMS advertising, like other interactive advertising, are likely to affect mobile advertising intentions and use (Salem 2016). Third, with a thorough understanding of advertising effectiveness from consumers perspective, certain useful hints may help marketers to develop successful marketing strategies.

The general consensus among academics and practitioners is that SMS advertising is an ideal way of targeting customers (Van der Waladt, Rebello, and Brown 2009). This study is therefore a partial reproduction of the study performed by Tsang, Ho, and Liang (2004) but in a Palestinian context. As a current trend, SMS advertisements is a well-known and widely cited concept by researchers studying consumer attitudes towards them. Replicating that research with an updated perspective can advance the academic discipline of mobile advertising. Tsang, Ho, and Liang (2004) has been used in over 1,000 researches, and their structural equation modeling results are still employed by academics to establish linkages between attitudes, intention, and behavior in regard to mobile phones (Aramendia-Muneta and Olarte-Pascual 2019). Furthermore, to accept the findings of landmark researches, no matter how meticulously it has been conducted, replications are still essential (Eisend, Franke, and Leigh 2016).

Our study was based on the work of Tsang, Ho, and Liang (2004) linking entertainment, informativeness, irritation, and credibility as independent variables with the consumer attitudes toward SMS advertising. However, we extended the theoretical framework by adding relevancy to the independent variables and assessed the moderating role of the national culture in the relationship between the independent variables and the consumer attitudes toward SMS advertising. Our contribution, therefore is of three aspects, adding a fifth independent variable (relevancy), adding a moderating factor (national culture), and using more modern data and reporting results from a different country.

Despite the fact that the internet has provided marketers with more channels to reach consumers, SMS advertising remains one of the most effective ways to reach a larger range of customers, regardless of age, location, and time. As a result, it can be stated that SMS advertising is still alive and widely used, and that customers have both favorable and negative feelings towards it (Aramendia-Muneta and Olarte-Pascual 2019). This study has contributed to a better understanding of how SMS advertising is perceived.

The aims of this research is to (a) investigate the relationship between the independent variables (i.e., relevancy, entertainment, informativeness, irritation, and credibility) and the dependent variable (i.e., consumer attitudes towards SMS advertising) in the Palestinian banking sector, and (b) examine the moderating role of national culture in the relationships between these independent variables and the dependant variable. This is the first study within the Palestinian context investigating the factors affecting the attitudes of customers towards SMS advertising in the banking industry, taking the national culture as a moderating variable.

## Theoretical framework

### *Theories and models of technology use*

In order to predict adoption of SMS advertising communications, we created a model that incorporates the TRA (Fishbein and Ajzen 1975), the TAM (Davis, Bagozzi, and Warshaw 1989), and the U&G (Katz, Haas, and Gurevitch 1974). According to the TRA, consumer's beliefs (an individual's subjective likelihood of a particular behavior's consequence) affect attitude (an individual's positive and negative feelings about a particular behavior), which leads to establishing a certain behavior. People are more likely to behave in line with their attitudes, according to Fishbein and Ajzen (1975). As a result, predicting an intention entails the assessment of attitudes related to this intention.

The TRA was used by Davis, Bagozzi, and Warshaw (1989) to define the relationships between attitudinal beliefs (consumer perceived usefulness and perceived ease of use), attitude, and users' adoption of a technology. Davis (1989) proposed the TAM, which was derived from TRA and is by far the most commonly used model in information systems research to forecast technology acceptance and usage. TAM was originally developed for the field of information systems management, but subsequent research has shown that it can be used to forecast consumer acceptance of content delivered by mobile technology, such as mobile surveillance (Bouwman et al. 2007), mobile advanced services (Bouwman

et al. 2012), and even mobile advertising (Wang and Genç 2019). Therefore, we have a better justification for using expanded TAM as part of our conceptual context to clarify some of our model's relationships.

According to the U&G (Katz, Haas, and Gurevitch 1974), individuals reveal themselves to the medium to satisfy a series of needs that motivate them to deliberately pursue gratification of their particular needs in that medium. Uses and gratifications research has recently been extended to the adoption and usage of mobile services (Kim, Lee, and Contractor 2019; Ghazali, Mutum, and Woon 2019), and it has discovered a combination of utilitarian and non-utilitarian motivations for using mobile services in daily life settings (Wei, Xiaoming, and Pan 2010). Thus, there are intrinsic motivations for using mobile services that go well beyond the instrumentality of usefulness, flexibility, and availability proposed by rational ICT adoption theory.

Internal gratifications, such as emotions, fun, and socialization with other customers (Babin, Darden, and Griffin 1994), are examples of intrinsic motivations. Davis, Bagozzi, and Warshaw (1992) described entertainment as the degree to which an activity is considered to be entertaining without regard to its intrinsic benefits. Davis and his colleagues proposed that by using perceived entertainment in TAM, they were able to show that both usefulness and entertainment played significant roles in describing behavioral intentions to use the technology.

### ***Attitudes towards SMS advertising***

Attitude is a hypothetical construct forms a pattern where people infer the degree of likeness or dislikeness an individual has towards a particular topic (Obilo and Alford 2020). That is why many researchers believe that the attitude is dynamic, and a person may capture different attitudes towards the same object due to change in internal or external variables (Strachan and Ip 2020). For instance, Barwise and Strong (2002) pointed out that the majority of respondents (82%) believed that receiving three permission-based advertising texts per day is "about right". The younger customers are the more receptive to SMS advertisement. Therefore, the SMS advertisement can benefit both the customers and the advertisers.

This research considers only the SMS advertising as it forms a small part of the whole mobile advertising options that constitutes the largest share of the total digital advertisements (Kushwaha and Agrawal 2016). Qousa and Wady (2018) found that people like to know about new information and offers by receiving SMS. The popularity of SMS mobile advertising stems from its accessibility to consumers. Besides the fact that the mobile is a pocket portable device that is attached to the prospective consumer all the time. In a country like Palestine with all the limitations in dealing with the new generation of broadband cellular network technology due to political restrictions, SMS advertising tends to be the most popular and easiest to reach mobile advertising tool (Sbeih and Hijazi 2013). Yet, because of the fact that consumer attitude is the motive to consumer actions; researchers such as (Oh and Lee 2020) have agreed that advertising efforts are lost through perceptual blocking and selective distortion if they don't urge the positive attitude to shine brighter than the negative one.

## **Factors affecting SMS advertising**

### **Relevancy**

Relevant content of SMS advertising can be described from two viewpoints: (a) sending SMS adverts relevant to consumers' interest will have an impact on perceiving SMS advertising as valuable service, (b) SMS adverts introduce added value for consumers when it is conveyed timely and suitably (Varnali 2014; Merisavo et al. 2007). Relevancy plays a crucial role in realizing the advertisements. From the consumers' perspective, SMS advertisements are appreciated when they are received at critical time and location (Barwise and Strong 2002). Merisavo et al. (2007) state that marketers should take into account the consumers' circumstances by sending relevant SMS advertisements comprising valuable contents or reducing the time to benefit from the sellers' services. Accordingly, we hypothesize that:

**H1:** The perceived relevancy is positively related to consumer attitudes towards SMS advertising.

### **Entertainment**

Entertainment is the desire to meet the need for escape, diversion, esthetic gratification, or emotional enjoyment of an audience (Huq et al. 2015). According to Ducoffe (1996), the entertainment used in advertising is substantially related to the advertising value of conventional advertising. Entertainment has become one of the key advertising building criteria and is used as a method to draw customer attention and improve advertising effectiveness (Haider and Shakib 2018). SMS advertising entertainment had positive impact on consumers' attitudes. The positive relationship between SMS entertainment and consumers attitudes is the most important relation among other factors (Tsang, Ho, and Liang 2004). Therefore, the following hypothesis can be stated:

**H2:** The perceived entertainment is positively related to consumer attitudes towards SMS advertising.

### **Informativeness**

Delivering information by advertising about products features to consumers which achieve their potential satisfaction is known as informativeness (James, DuyBinh, and Giang 2016). Advertising is designed to inform consumers about novelty of products, their specifications, and prices. By supplying consumers with useful information, informativeness can be considered as a valuable criteria of the advertising (Fern et al. 2018). Consumers' recognition about a company is affected by the quality of information found on its website. SMS information conveyed to consumers should be timely, accurate and useful to motive the consumer to deal with advertisements (Wei and Long 2015). Informativeness is able to change recognition, attitude, satisfaction, and effect of providing resources. In short, informativeness perception is considered as the evaluation of people whether all of the information that they receive is useful or useless (Wang and Lan 2018). Thus, we hypothesize that:

**H3:** The perceived informativeness is positively related to consumer attitudes towards SMS advertising.

### *Irritation*

Consumers usually have negative attitudes toward mobile advertising unless they have consented to it (Tutaj and Van Reijmersdal 2012). Therefore, SMS advertisements to potential customers should always be preceded by their prior consent. Otherwise, consumers may respond negatively towards the SMS advertising. Consumer's consent could be an important factor that could impact consumer's attitude towards SMS advertising (Uddin et al. 2019). Therefore, having an interactive two-way SMS service would allow the advertiser to establish a communication channel via SMS with the target audience in which the audience is expected to respond to SMS message in order to express satisfaction in participating in the SMS marketing campaign (Qousa and Wady 2018). Based on the above, we hypothesize that:

**H4:** The perceived irritation is negatively related to consumer attitudes towards SMS advertising.

**Credibility.** Credibility can be defined as 'the degree to which the consumer perceives truthful and credible claims made about the brand in the advertisement' (Keshavarz 2020). Panie, Ahmed, and Kasuma (2014) stated that the credibility of an advertisement is affected by numerous factors, especially the credibility of the business itself and the advertisement carrier. Besides, Haider and Shakib (2018) state that the means by which the message is sent often biases credibility. For instance, unless the message is communicated in written form by an influential brand, email messages do not have any credibility. Consumer expectations of the credibility value of SMS advertising are found to be strongly associated with the general attitudes of consumers towards SMS advertisements (Van der Walddt, Rebello, and Brown 2009). However, if consumers are not confident that the advertisements are credible, their attitude towards them will have a negative effect (James, DuyBinh, and Giang 2016). Therefore, we hypothesize that:

**H5:** The perceived credibility is positively related to consumer's attitude towards SMS advertising.

### *Role of national culture*

Culture is defined as the interacting elements of shared features that impact a group's response to its environment (Hofstede 1980). The most essential element influencing consumer behavior and international marketing on the Internet is culture (Shankar and Batra 2009). Advertising and culture are inextricably linked (Wang and Sun 2010). Cultural impacts on customers' perceptions and attitudes regarding advertising have been investigated in the marketing literature during the last decade (Liu et al. 2012). Culture is a set of values held by all members of a society, and these underlying values shape people's attitudes and behaviors (Straub et al. 2002). Using Hofstede's cultural dimensions to map

national culture's values can assist explain cultural variances in consumers' inventive behavior (La Ferle, Edwards, and Mizuno 2002). Variances in consumer behavior between nations may be explained by national cultural patterns, and these differences in innovation adoption can be traced back to particular countries' cultures (Muk 2007b). Successful international advertising requires an understanding of cultural variations. The relationship between SMS advertising and consumer attitudes might be moderated by national culture. As a result, more researches are needed to gain a more comprehensive understanding of the link (Sabokwigina, Malima, and Mpogole 2013).

Although there are points of explanation about the conceptualization and determination of culture, the commonly used definition of culture as a method of conditions, habits, opinions, and behavioral patterns are passed on from a generation to another (Thomas and Peterson 2016). Culture has developed as 'a primary candidate' in reference to attitudes and behaviors varieties and characteristics. Culture can change attitudes and behaviors by influencing individual thoughts, characters, and opinions and through the societal legitimization of attitudes and behaviors habits, values, and patterns. These cultural influences, indeed, can affect different individual attitudes and behaviors (Ollier-malaterre et al. 2013). Studies have thus begun to examine the function of culture in attitudes and behaviors effectiveness (Suseno and Nguyen 2021), attitudes and behaviors changes (Chudzikowski et al. 2009), and attitudes and behaviors objects (Claes and Ruiz-quintanilla 1998). It is shown that culture can influence the baseline relationship between proactive attitudes and behaviors and individual performance in various ways, depending on the social information processing system and proactivity. Thus, we hypothesize that:

**H6:** National culture strengthens the relationship between the independent variables (i.e., relevancy, entertainment, informativeness, irritation, and credibility) and dependent variable (i.e., consumer attitude towards SMS advertising).

The conceptual framework of the study is seen in the [Figure 1](#). The independent variables (i.e., relevancy, entertainment, informativeness, irritation, and credibility), and the dependent variable (i.e., consumer attitudes towards SMS advertising) are related by this model. The moderation influence practiced by national culture is also seen.

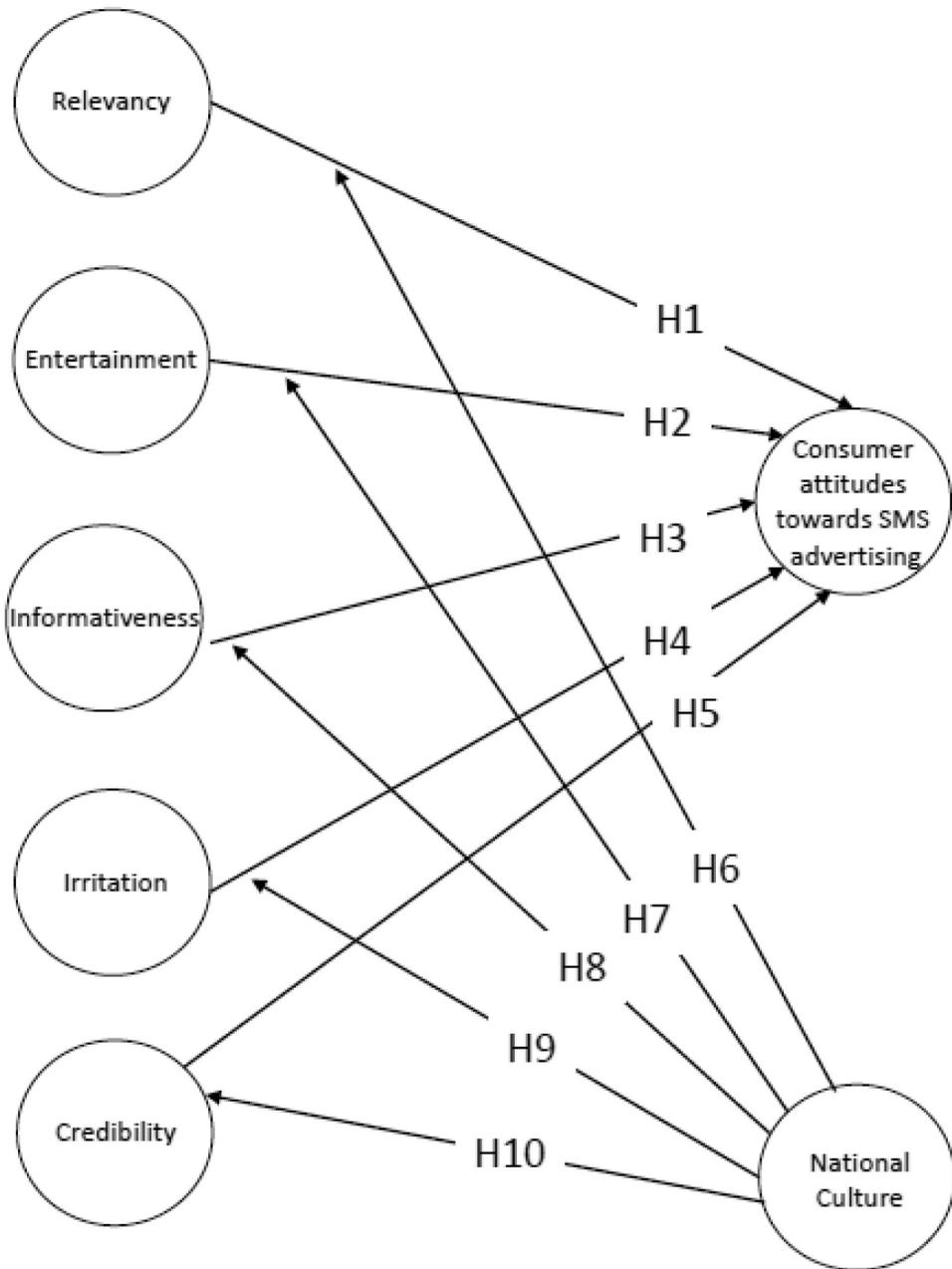
## Methodology

### Participants

In total 424 respondents have completed and returned the questionnaire. [Figure 2](#) below shows that 261 of the respondents were males, while 163 were females. The majority of respondents (281) held Bachelor's degree while 307 respondents were below the age of 39 years.

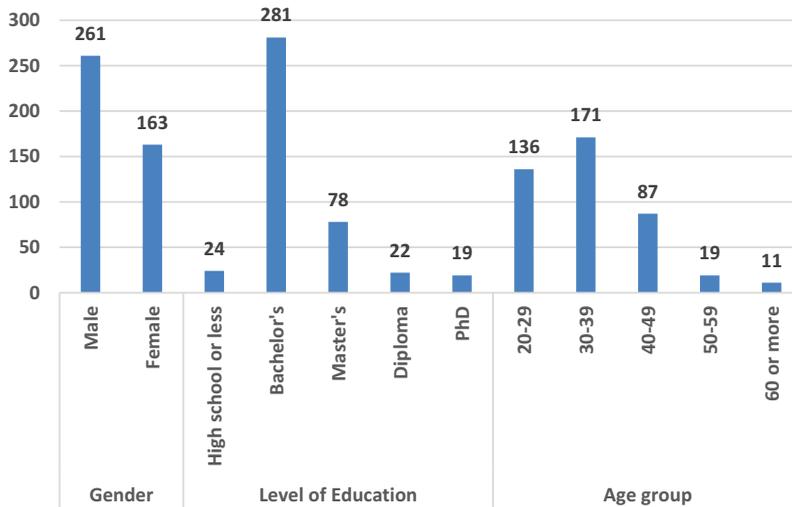
### Procedure

The research approached respondents who have bank accounts in one of the banks operating in Palestine via the researchers' social media networks by posting a questionnaire for three weeks. The questionnaire was written in English and then was



**Figure 1.** The research framework.

translated into Arabic using Brislin’s approach (Brislin 1976). According to previous research, convenience sampling is suitable and useful for multivariate data analysis for assessing attitudes toward online shopping (Dix et al. 2016; UI Haq 2012; Phau and Teah 2009). Furthermore, due to the restricted avenues for data gathering during the COVID-19 pandemic, leveraging social media channels to collect data was crucial. Respondents were



**Figure 2.** Respondents' demographics.

asked to share the questionnaire with those who have bank accounts from their network. The questionnaire was developed for the purpose of this research using Google Forms to collect primary data in order to test the hypotheses. The first question stated clearly whether the participant has a bank account in one of the banks operating in Palestine or not. If the answer was 'No', then the participant was asked not to proceed to access the questionnaire's questions. Therefore, the population of this study represents all the individuals holding a bank account with any bank operating in Palestine. In total 424 responses were received and analysed for this study. An a priori power analysis was conducted using R software in order to determine a minimum sample size for Structural Modeling and for Confirmatory Factor Analysis (Soper 2018; Preacher and Coffman 2006). The code argument contained the following minimum specifications for fit indices; power = 0.80, RMSEA = 0.05, alpha = 0.05, and df = 311 (Cohen 1988; Westland 2010). The degrees of freedom (df) were calculated using Degrees of Freedom Calculator (Cortina et al. 2017). The results showed that a minimum sample size of 88 was required. It could be noticed that our sample is more than four times the minimum sample size.

### **Measures**

The survey tool was a 5-point Likert scale questionnaire (1 = strongly disagree, 2 = disagree, 3 = no opinion/neutral, 4 = agree, and 5 = strongly agree). It was split into seven parts, the first part tests the relevancy by using 3 items stemmed from Qousa and Wady (2018). The second part measures the entertainment using 4 items and was adapted in reference to Aydin and Karamehmet (2017). For the third part that tackled the informativeness, 3 items were developed in compliance with Qousa and Wady (2018). While the fourth part examined the level of irritation through adopting 4 items stemmed from Rajesh et al. (2019). Additionally, the fifth measured the credibility by utilizing 5 items

adapted from Zabadi, Shura, and Elsayed (2012). The sixth part used 5 items to deal with national culture, and lastly the seventh part used 5 items to fetch the attitude toward SMS advertising and was adapted from Eshra and Bashir (2019).

To ensure validity, three academics and three marketing specialists from the relevant field checked the questionnaire's appropriateness and structure. The researchers altered, removed, and added the necessary portions of the questionnaire in accordance to the experts' recommendations. After reviewing previous empirical and theoretical work on consumers' attitudes toward SMS advertising, a pilot study was conducted, using a 25-respondent pretest to assure data accuracy, and feedback was utilized to fine-tune the questionnaire before it was delivered. The internal consistency of the dataset was determined using Cronbach's alpha coefficient. Cronbach's alpha ranges from 0 to 1. The closer the coefficients to 1, the stronger the internal consistency of the variables in the scale. The coefficients are all more than 0.70, which is regarded as appropriate.

## Results

### *Measurement model assessment*

PLS-SEM model fitting was used in analyzing the collected data. The analysis followed the two-step approach to evaluate the structural equation models recommended recently in similar research by Smid and Rosseel (2020). In this research, the evaluation scheme follows criteria suggested by Nunnally and Bernstein (1994), which indicates a high reliability as the values of Cronbach alpha (used to test construct reliability) are higher than the (0.7), as seen in Table 1. Similarly, by adopting another evaluation criterion proposed by Henseler, Ringle, and Sinkovics (2009) to measure the convergent validity, the AVE values of all constructs are greater than the 0.5 level, confirming the convergence validity of the measurement instrument.

On the basis of the Fornell-Larcker criteria, the discriminant validity was tested (Fornell and Larcker 1981). The criteria specify that AVE should be greater than the highest squared correlation among all other constructs for each latent construct as this is evident in the study as seen in Table 2.

### *Structural model assessment*

The study findings indicate positive relationship between attitude toward SMS advertising and the following: relevancy ( $\beta = 0.117$ ,  $t = 2.158$ ,  $p < 0.031$ ), entertainment ( $\beta = 0.162$ ,  $t = 2.236$ ,  $p < 0.026$ ), informativeness ( $\beta = 0.200$ ,  $t = 3.058$ ,  $p < 0.002$ ), and credibility ( $\beta = 0.449$ ,  $t = 7.590$ ,  $p < 0.000$ ) as shown in Table 3. In contrast, the findings indicate negative relationship between attitude toward SMS advertising and irritation ( $\beta = 0.156$ ,  $t = 3.982$ ,  $p < 0.000$ ). These provide sufficient evidence to support hypotheses H1, H2, H3, H4, and H5. The findings also support the moderating role of national culture in the relationships between relevancy ( $\beta = 0.113$ ,  $t = 2.028$ ,  $p < 0.043$ ), entertainment ( $\beta = 0.106$ ,  $t = 2.273$ ,  $p < 0.034$ ), and credibility ( $\beta = 0.098$ ,  $t = 2.084$ ,  $p < 0.024$ ), lending support to H6, H7, and H10.

Finally, to test the fit model in PLS, the Stone-Geisser Q2 (predictive relevance) (Geisser 1975) and the standardized root mean square residual (SRMR) were used. Q2 is a calculation of how accurately the model and its predicted parameters represent the

**Table 1.** Reliability and loading values of the constructs.

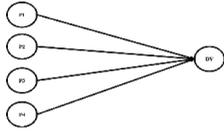
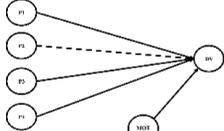
| <b>Construct</b>                       | <b>Item</b>  | <b>Factor Loading "FL"</b> | <b>Composite Reliability "CR"</b> | <b>Cronbachs Alpha "CA"</b> | <b>Average Variance Extracted "AVE"</b> |
|--|--|----------------------------|-----------------------------------|-----------------------------|---|
| <b>Relevancy</b>                       | 1.1 I like to receive SMS advertising which is relevant to my needs.                                     | 0.909                      | 0.889                             | 0.752                       | 0.800                                   |
|  | 1.2 I like to receive SMS advertising which is relevant to my job and activities.                        | 0.880                      |                                   |                             |   |
|  | 1.3 I like to receive SMS advertising which is relevant to my location.                                  | 0.893                      |                                   |                             |   |
| <b>Entertainment</b>                   | 2.1 I enjoy SMS advertising  | 0.811                      | 0.879                             | 0.793                       | 0.707                                   |
|  | 2.2 Receiving SMS advertisements is entertaining.  | 0.831                      |                                   |                             |   |
|  | 2.3 SMS advertising is usually attractive  | 0.852                      |                                   |                             |   |
| <b>Informativeness</b>                 | 2.4 SMS advertising satisfy my needs.  | 0.860                      | 0.869                             | 0.773                       | 0.689                                   |
|  | 3.1 SMS advertising provides timely information  | 0.852                      |                                   |                             |   |
|  | 3.2 SMS advertisements provide the information I need  | 0.851                      |                                   |                             |   |
| <b>Irritation</b>                      | 3.3 Information in SMS advertising is easy to understand   | 0.786                      | 0.920                             | 0.870                       | 0.793                                   |
|  | 4.1 I feel that SMS advertising is irritating  | 0.900                      |                                   |                             |   |
|  | 4.2 I feel that SMS advertisements are almost everywhere   | 0.886                      |                                   |                             |   |
|  | 4.3 Contents in SMS advertisements are annoying.   | 0.890                      |                                   |                             |   |
|  | 4.4 SMS advertising disturbs me when I am using mobile devices   | 0.881                      |                                   |                             |   |
| <b>Credibility</b>                     | 5.1 I use SMS advertising as a reference for purchasing  | 0.821                      | 0.908                             | 0.865                       | 0.712                                   |
|  | 5.2 I am impressed by the SMS advertisements   | 0.850                      |                                   |                             |   |
|  | 5.3 I trust SMS advertising  | 0.845                      |                                   |                             |   |
|  | 5.4 SMS advertising provides appropriate evidence to believe   | 0.858                      |                                   |                             |   |
|  | 5.5 I prefer that the sender of SMS advertising should be known to me                                    | 0.834                      |                                   |                             |   |
| <b>Cultural Context</b>                | 6.1 SMS advertising should respect the social values and beliefs   | 0.718                      | 0.841                             | 0.779                       | 0.561                                   |
|  | 6.2 SMS advertising should reflect our norms and traditions  | 0.746                      |                                   |                             |   |
|  | 6.3 The content of SMS advertising should be acceptable to the different religious groups of the society | 0.7640                     |                                   |                             |   |
|  | 6.4 The content of SMS advertising should be acceptable to both males and females                        | 0.808                      |                                   |                             |   |
|  | 6.5 I am proud to be a member of this society  | 0.726                      |                                   |                             |   |
| <b>Attitude toward SMS advertising</b> | 7.1 Overall, I like SMS advertising  | 0.784                      | 0.826                             | 0.690                       | 0.613                                   |
|  | 7.2 I like to look at SMS advertising.   | 0.814                      |                                   |                             |   |
|  | 7.3 On average, brands that are advertised on mobiles are better in quality.                             | 0.793                      |                                   |                             |   |
|  | 7.4 Most of the products perform as well as the mobile ads claim.  | 0.740                      |                                   |                             |   |
|  | 7.5 SMS advertising is a good platform to get ideas about products                                       | 0.815                      |                                   |                             |   |

**Table 2.** Discriminant validity of the constructs.

|            | RE     | EN     | IN     | IR     | CR     | NC    | AT     | ME1    | ME2    | ME3    | ME4    | ME5   |
|------------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|-------|
| <b>RE</b>  | 0.895  |        |        |        |        |       |        |        |        |        |        |       |
| <b>EN</b>  | 0.608  | 0.841  |        |        |        |       |        |        |        |        |        |       |
| <b>IN</b>  | 0.494  | 0.642  | 0.830  |        |        |       |        |        |        |        |        |       |
| <b>IR</b>  | -0.425 | -0.515 | -0.366 | 0.890  |        |       |        |        |        |        |        |       |
| <b>CR</b>  | 0.538  | 0.711  | 0.562  | -0.451 | 0.844  |       |        |        |        |        |        |       |
| <b>NC</b>  | 0.312  | 0.318  | 0.314  | -0.169 | 0.278  | 0.752 |        |        |        |        |        |       |
| <b>AT</b>  | 0.489  | 0.601  | 0.552  | -0.252 | 0.667  | 0.382 | 0.783  |        |        |        |        |       |
| <b>ME1</b> | 0.251  | 0.098  | 0.037  | -0.039 | 0.068  | 0.222 | 0.025  | 1.000  |        |        |        |       |
| <b>ME2</b> | 0.100  | 0.066  | 0.033  | -0.043 | 0.034  | 0.274 | 0.091  | 0.628  | 1.000  |        |        |       |
| <b>ME3</b> | 0.039  | 0.034  | 0.034  | -0.179 | 0.086  | 0.141 | 0.034  | 0.490  | 0.518  | 1.000  |        |       |
| <b>ME4</b> | -0.043 | -0.046 | -0.185 | 0.030  | -0.075 | 0.063 | -0.033 | -0.169 | -0.455 | -0.059 | 1.000  |       |
| <b>ME5</b> | 0.076  | 0.037  | 0.091  | -0.077 | 0.069  | 0.196 | 0.021  | 0.607  | 0.754  | 0.491  | -0.359 | 1.000 |

Note: RE = Relevancy; EN = Entertainment; IN = Informativeness; IR = Irritation; CR = Credibility; NC = National Culture; AT = Attitude toward SMS advertising; ME1= Moderating Effect 1; ME2= Moderating Effect 2; ME3= Moderating Effect 3; ME4= Moderating Effect 4; ME5= Moderating Effect 5.

**Table 3.** Results of structural equation modeling.

| Dependent variable : Attitude toward SMS advertising                                |         | Model (1) |          | Model (2) |          |
|---|---------|-----------|----------|-----------|----------|
| Path model (n, model fit indices)   |         | Coef.     | t-value  | Coef.     | t-value  |
| <b>(1) Base model (SRMR = 0.072, d_ULS = 0.899, d_G = 0.366, NFI, 0.770)</b>        |         |           |          |           |          |
|    | RE      | 0.117     | 2.158*   | 0.124     | 2.421*   |
|   | EN      | 0.162     | 2.236*   | 0.152     | 2.345*   |
|   | IN      | 0.200     | 3.058**  | 0.177     | 3.346**  |
|   | IR      | -0.156    | 3.982*** | -0.171    | 4.177*** |
|   | CR      | 0.449     | 7.590*** | 0.426     | 7.025*** |
| <b>(2) National Culture (SRMR = 0.079, d_ULS = 1.444, d_G = 0.467, NFI, 0.729)</b>  |         |           |          |           |          |
|  | NC      |           |          | 0.151     | 3.454**  |
|   | RE × NC |           |          | 0.113     | 2.028*   |
|   | EN × NC |           |          | 0.106     | 2.273*   |
|   | IN × NC |           |          | 0.023     | 0.649    |
|   | IR × NC |           |          | -0.003    | 0.008    |
|   | CR × NC |           |          | 0.098     | 2.084*   |

Note: RE = Relevancy; EN = Entertainment; IN = Informativeness; IR = Irritation; CR = Credibility; NC = National Culture; AT = Attitude toward SMS advertising; ME1= Moderating Effect 1; ME2= Moderating Effect 2; ME3= Moderating Effect 3; ME4= Moderating Effect 4; ME5= Moderating Effect 5.

\*  $p < 0.05$ .

\*\*  $p < 0.01$ .

\*\*\*  $p < 0.001$ .

observed values. A value of Q2 higher than 0 reveals predictive relevance. The composite model SRMR value of independent and dependents variables was 0.072, which is less than the suggested value of 0.08 by Hu and Bentler (1999), representing a strong model suit. The value of adjusted R2 was 0.518, meaning that the independent variables account for 51.8% of the difference in attitude toward SMS advertising. The composite model SRMR value in the existence of the moderating variables was 0.079, which is less than the suggested value of 0.08 by Hu and Bentler (1999), showing a strong model suit. The value of adjusted R2 was 0.564, indicating that the independent variables taking into consideration the moderating impact of national culture account for 56.4% of the difference in attitude toward SMS advertising.

## Discussion

### *Discussion of findings*

This research investigates the moderating role of national culture in the relationships between (relevancy, entertainment, informativeness, irritation, and credibility), and consumer attitudes towards SMS advertising. This has been done with a reliable and validated statistical analysis of the obtained data through the methodology mentioned above.

Results demonstrate that relevancy has a significant positive relationship with attitudes towards SMS advertising. Customers who received SMS advertising which is relevant to their needs, jobs, activities and locations, tend to like and interact with SMS advertising. Barwise and Strong (2002) underline that, SMS advertisements are more valuable to consumers, when taking into account location and time critical events. This is consistent with Merisavo et al. (2007) who argued that advertisers have to send relevant SMS advertisements with helpful information and benefits which is time saving based on consumers' location and condition.

Besides, results underline that entertainment has a positive and significant relationship with attitudes towards SMS advertising. The exciting, interesting, enjoyable and attractive content of SMS advertisements will make consumers more likely to accept SMS as an advertising approach, and will in turn increase the attitude to SMS advertising. Wei and Long (2015) argued that entertaining SMS advertisements attract consumers' attention. Thus, it is essential that the advertising message is concise and funny, and can immediately capture the consumer's attention.

Also, results suggest a positive relationship between informativeness and attitudes towards SMS advertising. Informativeness is a valuable incentive in SMS advertising (Fern et al. 2018). Wang and Lan (2018) stated that informativeness is able to change recognition, attitude, satisfaction, and effect of providing resources. Therefore, the quality of information delivered by SMS advertising messages should be given greater priority.

In addition to the above, results revealed a significant and negative relationship between irritation and attitude towards SMS advertising. Irritative contents and frequencies used by marketers in their SMS advertising will negatively affect attitude towards SMS advertising. Many researchers assume that irritation impacts on advertising avoidance on mobile social platforms (Uddin et al. 2019). However, Tsang, Ho, and Liang (2004) underline the negative relationship between irritation and consumer attitude. In fact, consumers have negative attitudes toward SMS advertising unless this can be preceded by their prior permission and consumers may respond negatively towards the SMS advertising, which is consistent with (Uddin et al. 2019).

Findings also show that credibility has a significant positive relationship with attitude towards SMS advertising. Highly trustable and credible content will lead to positive attitude towards SMS advertising. When consumers do not ascertain that the advertisements are credible, this will negatively affect their attitude towards it (Van der Walddt, Rebello, and Brown 2009; Tsang, Ho, and Liang 2004).

Additionally, regarding the moderation effect of national culture between (relevancy, entertainment, informativeness, irritation, and credibility) and attitudes towards SMS advertising, results suggest that the national culture strengthens the relationships

between relevancy, entertainment, and credibility on one side and attitudes towards SMS advertising on the other side. At variance, the result shows that national culture has no effect on the relationships between informativeness and irritation and attitudes towards SMS advertising. Finally, it could be concluded that national culture moderates the relationship between the above-mentioned factors and attitudes towards SMS advertising.

With regard to control variables, males are more likely to show positive attitude towards SMS advertising than female as shown by the results of the independent samples test [ $F = .181$ ,  $t = 3.68$ , Sig. (2-tailed) = 0.000]. This is consistent with Brackett and Carr (2001), and Shavitt, Lowery, and Haefner (1998) who indicated that gender is considered as the one that directly influences attitude toward web advertising. In the context of marketing communications, Wolin (2003) reported a difference in customers' responses to an advertisement between male and female customers. Female customers are more restrictive to show favourable attitudes towards an advertisement than male customers, accordingly, males are predicted to have more significant connection with advertisements than females. Mukherjee (2012) reported that male consumers have a more favourable attitude towards mobile advertising than women. The results of his study indicated that males make their decisions based on the credibility of the sender and the attractiveness of the message. On the other hand, women make decisions based on the content of the cognitive and affective cues provided in the marketing communication messages. A study by Karjaluoto et al. (2006), indicated the opposite, namely that females are more promising segment of mobile phone users than males. Despite these contrasting reports, the literature suggests that gender does seem to play a role in consumers' attitudes towards SMS advertisements (Mukherjee 2012).

The effect of attitude towards SMS advertising is significantly different for different demographic segments, specifically age [ $p < 0.027$ ], and level of education [ $p < 0.006$ ], as confirmed by post hoc LSD tests that followed ANOVA.

The LSD test confirmed that individuals aged 20 to 29 are more likely to be influenced by factors affecting attitude towards SMS advertising than those aged 50–59 years. This may be due because mobile services tend to attract a younger audience (Dickinger et al. 2004). Usually, people of younger age use mobile phones consistently (Scharl, Dickinger, and Murphy 2005). They use mobile devices as communication devices and also as a fashion (Robins 2003). Gao and Zang (2016) noted that youngsters are the most frequent users of mobile devices and are more likely to view mobile advertisements. This shows that youngsters are the major portion of the target group for mobile advertising (Lee, Lee, and Yang 2017; Yang, Kim, and Yoo 2013), accordingly, mobile advertisements are mainly focused on youngsters (Zhang and Mao 2008). As youngsters are technology savvy, they are more comfortable with new advertising media (e.g., mobile advertising) (Lee, Lee, and Yang 2017), thus, they might have more favourable attitudes towards, and intention to receive mobile advertisements than the older cohorts.

The LSD test also confirmed that both bachelor's degree holders, and also high school or lower degree holders are more likely than master's degree holders, to be influenced by factors affecting attitude towards SMS advertising. Furthermore, differences between diploma holders and PhD degree holders were statistically significant, in favor of master degree holders. This is consistent with prior research (Zabadi,

Shura, and Elsayed 2012; Ozhan 2004; Shavitt, Lowery, and Haefner 1998) that found that persons with a high level of education may have information or awareness regarding SMS advertising that may include bad attitudes. As a result, they refuse to reply to the SMS advertising that have been delivered to them. Some people may delete them as soon as they receive them. People with a poor level of education, on the other hand, may take action.

### ***Managerial implications***

From a managerial standpoint, this research has significant contribution to the understanding of the relationships between (relevancy, entertainment, informativeness, irritation, and credibility), and attitudes towards SMS advertising. In fact, much of the prior literature confirms the relationships between (relevancy, entertainment, informativeness, irritation, and credibility), and attitudes towards SMS advertising. However, there are still answers to be reached regarding the variables and how they could moderate this relationship and affect the way by how this relationship occurs. There is a lack of knowledge about what strengthens these relationships especially in the Palestinian context. This research aimed to examine the effect of national culture as a moderator of the addressed relationship, thus adding to the few researches that have already attempted to understand what influence the relationship. The results of this research have indeed offered some new insight, proving that national culture acts as a moderating variable, in the relationship between (relevancy, entertainment, informativeness, irritation, and credibility), and attitudes towards SMS advertising, as measured in the Palestinian banking sector. This leads to the importance of national culture considerations to be taken into account while marketers communicate via SMS with their clients for advertising purposes.

### ***Practical implications***

This research has concluded a set of important practical implications that are relevant to SMS advertising. The results revealed the importance role of the national culture. Although efforts in the designing of SMS advertising usually emphasize on relevance, entertainment, informativeness, and credibility. Marketers should pay more attention to the national culture in terms of values, beliefs, norms and traditions when they plan and develop a content to be used in SMS advertising.

### ***Limitations and further research***

Empirical findings of the study had contextual and applicability limits. Firstly, a convenience sample technique was used to collect data and conduct the research in a timely and cost-effective manner. The use of a convenience sampling approach might lead to biased findings (Safeena, Kammani, and Date 2014). Secondly, the research was conducted in the banking sector which limits the ability of the results to be generalized to all sectors in Palestine.

Future research work should consider other sampling techniques (i.e., systematic sampling, stratified simple sampling, and simple random sampling). There is no mention of any specific product category as a control or moderating variable that might

influence customers' reactions to SMS advertisements for specific products. Individual attitudes regarding SMS advertising may differ depending on the product. TPB, TRA, TAM, and U&G were utilized as theoretical lenses in this study to assess customers' attitudes of SMS advertising in Palestine. Other factors that may impact customer attitudes may be included in these models in future studies (i.e., perceived risk, perceived usefulness, perceived ease of use, technological support and government support). Future research might enhance the existing study model to predict people's attitudes by concentrating on other aspects of mobile advertising rather just SMS advertising (i.e., voice advertising messages, video advertisements, pictorial advertisements).

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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