



# Content design of advertisement for consumer exposure: Mobile marketing through short messaging service



Mahmud Akhter Shareef<sup>a</sup>, Yogesh K. Dwivedi<sup>b,\*</sup>, Vinod Kumar<sup>c</sup>, Uma Kumar<sup>c</sup>

<sup>a</sup> Sprott School of Business, Carleton University, Ottawa, ON, Canada

<sup>b</sup> Emerging Markets Research Centre (EMaRC), School of Management, Swansea University Bay Campus, Fabian Way, Swansea SA1 8EN, Wales, UK

<sup>c</sup> Sprott School of Business, Carleton University, Ottawa, ON, Canada

## ARTICLE INFO

### Article history:

Received 13 February 2017

Received in revised form 21 February 2017

Accepted 22 February 2017

### Keywords:

SMS

Consumer

Exposure

Promotional marketing

Advertisement

Mobile marketing

## ABSTRACT

The success of mobile phone-based short messaging service (SMS) commercials as a tool of promotional marketing depends upon the wording, statement, language, presentation – in other words, the overall content of the message. If consumers are not exposed to the mobile phone SMS containing promotional offers, marketers would less likely to achieve any benefits by sending SMS to prospective consumers. This study is aimed to identify and empirically examine the critical variables that can attract consumers to open and read the advertisement on the SMS. To address consumer exposure, the study was designed on the conceptual paradigms of the UTAUT2 with the inclusion of three external constructs: personalization, self-concept, and trust. Through a consumer survey, this study found significant variations from the UTAUT2 to provide new constructs to capture consumer intentions for exposure to the product. By doing so, this study has developed and tested an extended version of UTAUT2, which is named as UTAUT-CEMM (Unified Theory of Acceptance and Use of Technology of Consumer Exposure for Mobile Message). It revealed that consumer segmentation and target marketing is the most effective way to communicate with consumers through promotional marketing conducted by the mobile phone SMS. It also suggested that this promotional marketing is valuable only for highly reputable vendors/retailers.

© 2017 Elsevier Ltd. All rights reserved.

## 1. Introduction

The short messaging service (SMS) of mobile phones has been actively used by recent marketers to launch a new media in the consumer communication channel structure. It would be either launched alone or paired with existing channels, for promotional activities of different marketers. An SMS containing advertisements or any promotional offers or relational marketing themes through this virtual mobile channel, can be constantly sent to the prospective customers at a minimal price. Consumers can access these commercial messages delivered by the product/service providers from anywhere and at anytime (Kim, Park, & Oh, 2008; Nasco & Bruner, 2008; Rettie, Grandcolas, & Deakins, 2005). Any product/service manufacturer, retailer, or third party can send messages through SMS to millions of prospective customers with minimal

effort, time, and cost in the hope that customers might respond to the intended meaning of the message. However, excess frequency of a message and messages from unknown parties without prior permission can create a negative attitude in customers toward this innovative and dynamic mobile channel of product/service promotional marketing (Pihlström & Brush, 2008). It can be shown that validity, reputation, and trustworthiness of the message through a mobile phone is a crucial issue for its effectiveness (MMA, 2005; Nasco & Bruner, 2008). It can be inferred that the success of mobile phone-based SMS commercials as a tool of promotional marketing depends upon the wording, statement, language, presentation – in other words, the overall content of the message (Durkin, 2013; Kim et al., 2008; MMA, 2005; Nasco & Bruner, 2008). However, if consumers are not exposed to the mobile phone SMS containing promotional offers, marketers will not achieve any benefits by sending SMS to prospective consumers. This current study is exploring this attitudinal aspect of consumers through the experiment for further extension of the extended theory of Unified Theory of Acceptance and Use of Technology (UTAUT2) (Venkatesh, Thong, & Xu, 2012).

\* Corresponding author.

E-mail addresses: [mahmud\\_akh@yahoo.com](mailto:mahmud_akh@yahoo.com) (M.A. Shareef), [ykdwivedi@gmail.com](mailto:ykdwivedi@gmail.com) (Y.K. Dwivedi), [vinod.kumar@carleton.ca](mailto:vinod.kumar@carleton.ca) (V. Kumar), [uma.kumar@carleton.ca](mailto:uma.kumar@carleton.ca) (U. Kumar).

Analyzing different kinds of promotional marketing through mobile phone SMS, the researchers Barwise and Strong (2002) conducted empirical studies that revealed that, in terms of content, good advertisements have certain characteristics. The authors noted that effective SMS-based promotional offers are mainly short and straight to the issue (28%), funny or entertaining (26%), relevant for the intended customers (20%), eye catching (13%), and informative about prizes and promotions (12%). Several mobile marketing researchers (Durkin, 2013; Kim et al., 2008; Nasco & Bruner, 2008; Rettie et al., 2005) identified, through empirical studies conducted using behavioral theories, that SMS content is the key driving force for the success of launching this promotional channel with the existing marketing channel structure. They examined many other issues that could contribute to the success of an SMS-based mobile marketing channel – such as permission, timely communication, privacy, relevancy, customization, etc. – and these authors stressed that marketers should be careful in designing the content of SMS. SMS has a great potential value for creating positive attitudes toward mobile marketing, which is supported by the principle of expectation-confirmation theory (ECT) (Oliver, 1980). The whole content of the message conveyed by the mobile phone SMS results from a synergistic and comprehensive picture of the statement based on the wording, presentation, organization, and structure of the message.

The mobile marketing researchers reviewed the entire content of SMS (Nasco & Bruner, 2008; Rau, Zhang, Shang, & Zhou, 2011). For instance, Nasco and Bruner (2008) analyzed the effect on consumers of presentation modalities of different contents conveyed through mobile phone SMS. But this research was not focused on exploring the different properties of the content of solely promotional marketing SMS that can influence consumers to notice the advertisements. Many seminal papers (Pihlström & Brush, 2008; Xu, Liao, & Li, 2008) addressing the content of mobile phone SMS examined consumer attitudes toward content such as weather reports, sports, games, ring tones, music, commercials, etc. Nevertheless, to the best of our knowledge, no present literature explicitly focuses on the different issues of content that can draw customer attention toward an SMS promotional offer. This area has potential merit for analysis as one of the significant characteristics of SMS in that an SMS can be barred or erased by potential customers without accessing the message (MMA, 2005). If consumers are not exposed to the mobile phone SMS containing promotional offers, no matter what the intended meaning of the message, marketers will not have any means to contact customers, and ultimately those efforts of sending SMS will be fruitless. Hence, understanding the issues regarding the content of SMS for mobile marketing that attract consumers to the message is the primary goal of marketers; this will help them develop a successful marketing strategy (Rau et al., 2011). In this connection, this research is engaged in identifying issues for the content of mobile phone-based SMS to help persuade the customers to respond positively to promotional marketing. In this context, it is intended to examine the possible extension of UTAUT2 model for consumers' behavior against mobile phone based promotional marketing. This research has potential to contribute to the existing literature about mobile marketing. Companies attempting to design attractive mobile marketing through SMS for a promotional offer can get insight into content issues that drive and promote consumer attraction to the SMS. It is important to understand what drives customers to be exposed to persuasive material in promotional marketing (Nasco & Bruner, 2008). Academics can also benefit from the outcome of this research and get insights into consumer behavioral attitudes, perceptions, and responses to the stimulus in the structured SMS of a mobile phone-based promotional offer.

In the next section of this article, paradigms of model development for behavioral conceptualization are discussed in the light

of the synergism of psychological and marketing theories and mobile marketing literature. The following section then explains the methodology employed by this research. Then the analysis of empirical study for cause-effect relations is illustrated. The implication of this study is explained in the next section, highlighting the contribution of this study to practitioners and scholarly community. The last section outlines the conclusion noting future research directions and the limitations of this research.

### 1.1. Conceptual development for content of SMS for consumer exposure

Researchers (Bagozzi, 2007; Koenigstorfer & Groeppel-Klein, 2012; Park, Roman, Lee, & Chung, 2009; Wu, Zhao, Zhu, Tan, & Zheng, 2011; Yang & Zhou, 2011) conducting studies on different kinds of technology adoption have relied on a technology adoption model (TAM) (Davis, 1989) as the theoretical underpinning. Several researchers (Shareef, Kumar, Kumar, & Hasin, 2013; Shareef, Archer, Fong, Rahman, & Mannb, 2013; Yang & Zhou, 2011) are also motivated to shed light on the theory of planned behavior (TPB) (Ajzen, 1991) to conceptualize psychological behavior for technology acceptance. The recent trend of mobile marketing and consumer behavioral attitudes toward SMS commercials were also investigated in the light of TAM and TPB by many researchers (Yang & Zhou, 2011). However, several researchers claimed that issues related to consumer attitude are not fully covered by the conventional constructs of TAM and TPB (Dwivedi, Shareef, Simintiras, & Weerakkody, 2016; Mallat, 2007; Pavlou & Fygenson, 2006). Other researchers also support the view that in complex consumer behavior, where the effect of the psychological determinant is predominant, traditional conceptualization of the constructs extracted from TAM and TPB cannot predict enough variance of the dependent construct. Other studies (Martins, Oliveira, & Popovič, 2014; Weerakkody, El-Haddadeh, Al-Sobhi, Shareef, & Dwivedi, 2013) have utilized UTAUT (Unified Theory of Acceptance and Use of Technology) to study technology adoption. This present study looked at understanding consumer exposure to mobile phone-based SMS commercials through UTAUT2.

The UTAUT2 model for consumer behavior indicated a causal relation between consumer acceptance of market phenomenon; there are seven significant determinants to explain user acceptance and usage: performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price and value, and habit. This current research is attempting to understand a specific stage of consumer behavior regarding acceptance of mobile phone-based SMS commercials – whether consumers, after getting access, will view and read (consumer exposure) the message based on the content design of the commercials.

#### 1.1.1. Social influence (SI)

Researchers on consumer behavior for mobile marketing like Mortimer et al. (2015) from cross-cultural examination in Australia and Thailand identified that social influence can be an important predictor for consumers to accept this mobile technology driven marketing. Shedding light on TPB, we can also find logical underpinning that many issues like image, trustworthiness, motivation can be driven by social influence to accept this dynamic and newly invented marketing method. Therefore, this current study illustrates that social influence (SI) can pursue consumers attitude to be exposed to mobile phone based advertisement through SMS

**H<sub>1</sub>.** Social Influence has a positive influence on consumer exposure to SMS commercials due to their content.

**H<sub>1a</sub>.** Social Influence has a positive influence on developing consumer trust to SMS commercials due to their content.

### 1.1.2. Effort expectancy (EE)

TAM and TPB have advocated for long that if consumers find any technology driven system easy to use, they feel confidence to accept that. Several researchers on mobile marketing through SMS (Pihlström & Brush, 2008; Shareef, Dwivedi, & Rana, 2015; Xu et al., 2008) acknowledged that consumers would be focused to any advertisement if the system is user-friendly. UTAUT2 model defined this construct as effort expectancy. This current study is arguing that effort expectancy (EE) is an important predictor for consumers' exposure to SMS based advertisement.

**H<sub>2</sub>.** Effort expectancy has a positive influence on consumers' exposure to SMS commercials due to their content.

### 1.1.3. Performance expectancy (PE)

For mobile phone-based SMS advertisements conveying a promotional offer, the first step for consumers, after opening the message, is to view the SMS and read it (Rau et al., 2011). After reading the message, they may be persuaded or not. However, this research does not identify the successive behavior of consumers, i.e., consumer perceptions, attitudes, and behavioral intention for persuasion. This current research is investigating only consumers first step of perception of SMS commercials – whether they will, after getting access into the SMS, view and read the message; this is termed here as consumer exposure to the SMS-based promotional offer or the process by which customers come into visual contact with the commercials. Previous studies (Kim et al., 2008; Pihlström & Brush, 2008; Rettie et al., 2005) clearly indicated that the content of SMS – statement, language, eye-catching words, presentation, organization, and structure of the message – has enormous impact in motivating consumers to be exposed to the SMS commercials through accessing, viewing, and reading the SMS. Conceptually, these findings clearly asserted that performance expectancy is a motivational factor for consumers to be exposed to mobile phone advertisement. Based on the argument, we propose that performance expectancy (PE) from the SMS advertisement can drive consumers to be exposed to this mobile marketing.

**H<sub>3</sub>.** Performance expectancy has a positive influence on consumer exposure to SMS commercials due to their content.

### 1.1.4. Facilitating condition (FC)

Taylor and Todd (1995) examined the suitability of TPB for consumer behavior and revealed that relative advantage with a special setting of time and space conveniences is an important predictor to capture consumer attention. Mobile marketing researchers (Lee & Park, 2006; Rettie et al., 2005; Shareef et al., 2015) also acknowledged that time- and location-sensitive communication is a unique advantage for marketers to draw consumer attention to SMS-based promotional marketing. Hence, the concept of time and location sensitive communication is included in the revised concept of facilitating the condition of the original construct of UTAUT 2 model. As per the claim of this study, facilitating condition (FC) pursues consumers to be exposed to SMS advertisement. For mobile phone based advertisement, overall technological, social, and behavioral facilitating support can also pursue the belief of effort expectancy (EE).

**H<sub>4</sub>.** Facilitating conditions has positive influences on consumers' exposure to SMS commercials due to their content.

**H<sub>4a</sub>.** Facilitating condition has a positive influence on consumers' perception about EE to SMS commercials due to their content.

### 1.1.5. Habit (HT)

Mobile marketing researchers (Chen, O'Brien, & Guo, 2012; Shareef et al., 2015) revealed that consumers' habit is an important issue to receive and send SMS frequently. Some consumers, due to

their habit in using mobile phone message system, always feel urge to read any received message. Thus, consumers behavior is a fertile area to be explored for consumers exposure to mobile phone base advisement (Chang, 2013; Chellappa & Sin, 2005; Rettie et al., 2005). Under this argument, this study finds it logical to include the construct habit (HT) from UTAUT2 model to predict consumers' exposure behavior.

**H<sub>5</sub>.** Habit has a positive influence on consumer exposure to SMS commercials due to their content.

### 1.1.6. Hedonic motivation (HM)

ICT researchers (Lee & Park, 2006; Pihlström & Brush, 2008; Rettie et al., 2005; Shareef et al., 2015; Xu et al., 2008) acknowledged that consumers urge for enjoyment is a potential issue for them to be exposed to mobile phone based SMS. Many texts are transferred to mobile phones from versatile sources. However, consumers do not find intrinsic motivation to be exposed to all advertisements conducted by SMS (Shareef et al., 2015). For effective exposure, hedonic motivation plays a pursuing role in case of SMS based advertisement which is advocated by UTAUT2 model. Under this context, we argue that hedonic motivation (HM) is a driving factor for proper exposure to any mobile phone based advertisement.

**H<sub>6</sub>.** Hedonic motivation has a positive influence on consumer exposure to SMS commercials due to their content.

### 1.1.7. Price value

Our research is practically focused on the very specific phenomenon of consumers: what factors are associated with content design of promotional marketing conducted through mobile phone SMS that drive consumers to read the SMS. Under this perspective, the price value construct of the UTAUT2 model is not relevant to the focus of this research, as absolute price-value is not an issue for consumers to view and read (exposure) the content of the commercials. This research is not exploring acceptance behavior where the price of acceptance can be a predictor. In addition, in some countries, consumers may pay to view and read any message; nevertheless, it is irrelevant to the content of the message as the maximum limit of SMS is always 160 characters. Hence, this construct was removed from the investigation of causal relations.

### 1.1.8. Trust (TR)

This study has conducted further research to investigate if there are additional causal effects on consumer exposure to SMS-based promotional marketing information. Based on the theory of gratification (LaRose, Mastro, & Eastin, 2001), it can be illustrated that if there is an expectation of a positive outcome – customers may be inclined to accept this promotional message. Conversely, the possibility of spam SMS and occurrence of fraudulent incidents in the SMS can seriously hinder positive consumer outcome expectation. In this situation, the theory of media selection (Daft & Lengel, 1986) can provide a concise view of customer attitudes toward this kind of mobile and dynamic channel. In the light of this theory, if any media used as a marketing channel for promotional offer provides rich information with a social presence of trustworthiness, consumers will prefer that media (Chen et al., 2012; Durkin, 2013; Oliver, 1980; Park & Yang, 2006). Trust – in terms of reliability, authenticity, privacy, and security – is a leading concern of consumers when considering adopting online-based products (AlAlwan, Dwivedi, & Rana, 2017; Gefen, Karahanna, & Straub, 2003; McKnight, Choudhury, & Kacmar, 2002; Shareef, Kumar, Kumar, & Dwivedi, 2011). Researchers like Chen et al. (2012) agreed that trust in terms of credibility is imperative for consumers to accept mobile phone-based SMS commercials. Social influence

from subjective norms (See [Ajzen, 1991](#)) and aspirational and associative reference groups can enhance the development of trust in consumer minds ([Bearden & Etzel, 1982](#)). The switching cost theory ([Burnham et al., 2003](#)) provides the theoretical underpinnings in favor of the argument that consumers will find intrinsic and extrinsic motivation to perceive the system as easy to handle and trustworthy if the content of SMS is facilitated by external settings. The perception of trustworthiness in the SMS commercials is enhanced if the system is compatible with self-image, and social influence is present there.

**H<sub>7</sub>**. Trust has a positive influence on consumer exposure to SMS commercials due to their content.

#### 1.1.9. Personalization (PR)

Mobile marketing researchers exploring consumers attitude toward SMS commercials have sought for a long time to show that the relevance of the commercial message, focusing on personal needs, for example, is an important predictor of a positive reaction by consumers ([Nasco & Bruner, 2008](#)). If the content of the message is designed in such a way that can be compatible with consumer personal requirements, consumers feel a perceived value and usefulness ([Liao, Li, & Xu, 2005; p. 497](#)). Several researchers dealing with consumer acceptance of mobile phone SMS and direct target marketing ([Chang, 2013; Chellappa & Sin, 2005; Rettie et al., 2005](#)) have asserted that personalization is an important causal issue that can be easily conveyed by mobile phone SMS. In theory, personalization (PR) of SMS commercials can enhance consumer ability to remember by reducing cognitive load; this has theoretical underpinnings from cognitive load theory ([Sweller, 1988](#)).

**H<sub>8</sub>**. Personalization has a positive influence on consumer exposure to SMS commercials due to their content.

**H<sub>8a</sub>**. Personalization has positive influence on consumer EE to SMS commercials due to their content.

#### 1.1.10. Self-concept (SC)

In the underlying concept of cognitive load theory – based on consumer self-consciousness, identity, lifestyle, and personality, i.e. overall personal traits – if promotional marketing conducted by mobile phone SMS is congruent with their self-concept, then consumer working memory will be more active and communication in terms of consumer exposure to SMS commercials will be more effective ([Taylor & Pentina, 2012; p. 39](#)). [Rosenberg \(1979, p.7\)](#) defined self-concept as the “totality of the individual’s thoughts and feelings having reference to himself as an object.” Researchers ([Pihlström & Brush, 2008; Rettie et al., 2005](#)) have argued that if the SMS commercial is compatible with their image, mental settings, and personality, their intrinsic motivation to be exposed to the SMS will be enhanced because they will perceive more controllability and self-capability ([Kim et al., 2008](#)). [Sirgy \(1982\)](#), from the point of view of consumer behavior analysis, recommended that consumer preference is highly congruent with their perceived self-concept (SC) or image.

**H<sub>9</sub>**. Self- concept has a positive influence on consumer exposure to SMS commercials due to their content.

**H<sub>9a</sub>**. Self- concept has a positive influence on developing consumer trust to SMS commercials due to their content.

**H<sub>9b</sub>**. SC has a positive influence on consumer EE to SMS commercials due to their content.

From the theoretical analysis and literature review presented above, the original model of UTAUT2 has been revised with the addition of new theoretical constructs to predict consumer exposure to SMS commercials. This type of refinement is supported

by our literature review and the theoretical justification for the enhancement of statistical explanatory power ([Bagozzi, 2007; Venkatesh, Davis, & Morris, 2007](#)). This is another significant contribution of this research. This research has examined from a literature review and theoretical explanation that three more constructs having direct relations (proposed) with exposure and three indirect causal relations to predict a unique phase of consumer attitude toward SMS-based promotional marketing – consumer exposure to SMS commercials.

## 1.2. Research methodology

This study is designed based on the constructs of the UTAUT2 model to capture consumer exposure to willingly view and read SMS-based advertisements, based on the content of the message, after accessing mobile phone SMS. However, in a broader sense, to capitalize on consumer traits and behavioral characteristics reflecting the specific component of consumer behavior, this study also included three new constructs with several proposed indirect relations among the constructs and excluded one regular construct from the model that is supported by several researchers depicted in the study of the UTAUT2 model.

### 1.2.1. Scale items

The measuring items of the regular construct performance expectancy, effort expectancy, facilitating condition, hedonic motivation, habit, and social influence are directly extracted from the UTAUT2 model; however, these were revised keeping consistent with the present research objective. The measuring items of the added independent constructs – trust, personalization, self-concept, and dependent construct exposure to advertisement – are gathered from our literature review of the several seminal studies shown in [Appendix A](#). However, due to the revisions of those items and to keep it consistent with the revised concepts of the proposed determinants of consumer exposure to SMS advertisements based on the content, a focus group composed of three university professors of marketing who have overall competence in designing country-specific mobile advertisement from Bangladesh, USA, and UK evaluated and modified the scale items, as necessary, for conceptual clarity of understanding. These three university professors were invited to provide their feedback as they are working on the same field for long and have both generalized and country-specific experience. The focus group provided some excellent feedbacks to revise the wording of the questionnaire. The revised questionnaire was distributed among 10 PhD students of marketing in a Canadian university who are engaged in project design of mobile marketing and have practical experience of getting mobile phone-based promotional offers from different manufacturers, retailers, or third parties. This procedure was followed to get specific suggestions from a practical point of view for the intended meaning and interpretation of the measuring items.

The final questionnaire is shown in [Appendix A](#). Following the arguments from the previous ([Dwivedi, Kapoor, Williams, & Williams, 2013; Kim, Oh, Shin, & Chae, 2009](#)), the scale items of the independent and dependent variables were measured by a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) for their significance and meaning. A total of nine independent constructs are measured by 36 scale items and the dependent construct is measured by six scale items.

### 1.2.2. Sample selection

Since consumer exposure to SMS commercials on mobile phone depending on the content of the SMS is a very precise and focused issue of consumer response to stimulus, the study needed a group of consumers who have practical experience in receiving and interacting with mobile phone-based promotional marketing conducted

by SMS in the real market. This market phenomenon is quite popular, prominent, and extended in Asian countries like Bangladesh. So, as the representation of population, this study has been designed to capture response from consumers in the Bangladeshi market.

Bangladesh has six main mobile phone operators – Grameenphone, Robi, Banglalink, Airtel, Teletalk, and Citycell – send commercials to prospective customers. Different manufacturers and retailers send SMS commercials to consumers through these mobile operators without prior permission. This is a common trend in Bangladesh for promotional marketing through mobile phone SMS. The researchers initially randomly collected phone numbers of five hundred potential customers from the six mobile phone operators without any bias. These customers are habituated to receiving frequent commercial messages like all other users in Bangladesh. The addresses were also collected from the mobile operators of those five hundred prospective customers who primarily live in Dhaka city. Those prospective customer addresses, phone numbers, and brief backgrounds were verified to authenticate their experience in actual mobile marketing through receiving promotional offers in the form of mobile phone SMS; however, they were not informed of the actual motive of the researchers.

Fifty commercial messages, specifically designed for this research with the help of three marketing managers in Bangladesh who have expertise in designing SMS commercials, were sent to those five hundred customers at different times of day with different content of statement, wording, language, symbols used in presentation, organization, and structure. Some commercials were designed to send general messages and some targeted specific customized information. Those fifty messages were sent to them in a row on five consecutive days from Tuesday to Saturday (three weekdays and two weekend days). Some messages (Total 10) contained traditional personal greetings, some conveyed general advertisements (Total 15), and some delivered customized benefit offerings (Total 25). For instance, several examples of sent messages are listed in the following paragraph. It is worth noting here that messages were sent in the name of different marketing entities such as manufacturers, retailers, and third parties. These were displayed in the mobile phone of the prospective customers with a title of general keywords, specific keywords, attractive greetings, personal greetings, reputable company names, unfamiliar company names. They also had different presentations such as pictures, Bengali words, English words, Arabic words, the trade mark of the company, etc. This was done to accomplish a generalized response for varying contents in terms of exposure for viewing and reading after getting access to the message.

### 1.3. Some examples of these messages

Dear MTB Cardholders, make a pre-booking of SAMSUNG S6 & S6 EDGE within July 10, 2015 & get special discount with an exclusive free gift. Pls call 16219.

Enjoy 10% off @ Celebrations, Anyamela & Bibiana for today. Show the coupon number 162H35.

Only for fashion conscious customers. Come Aarong and get any trousers @ 10% discount. Valid for 8 PM to 10 PM, only today.

Carrefamily Eid Offer! Panjabi: Tk. 498, ladies Shoe: Tk. 150, Sharee: Off, 40%, Fresh Soyabean Oil 5L: Tk. 480, Ruhi: Tk. 165/kg, Bagda Chingri: Tk. 399/kg, Watermelon: Tk. 23/kg, Tang 2.5 kg: Off Tk. 150 & lot more. Valid: 14 July.

After sending these messages through the mobile phone, the questionnaire was sent to those five hundred prospective customers on Saturday afternoon through special messengers of a courier service. They were asked to respond based on their experience of receiving SMS containing promotional marketing offerings through their mobile phone in the last five days. An envelope with return mail postage was included with the questionnaire. The

prospective customers were requested to answer the questions based on their last five days' experience of receiving SMS and to return the completed questionnaire through mail.

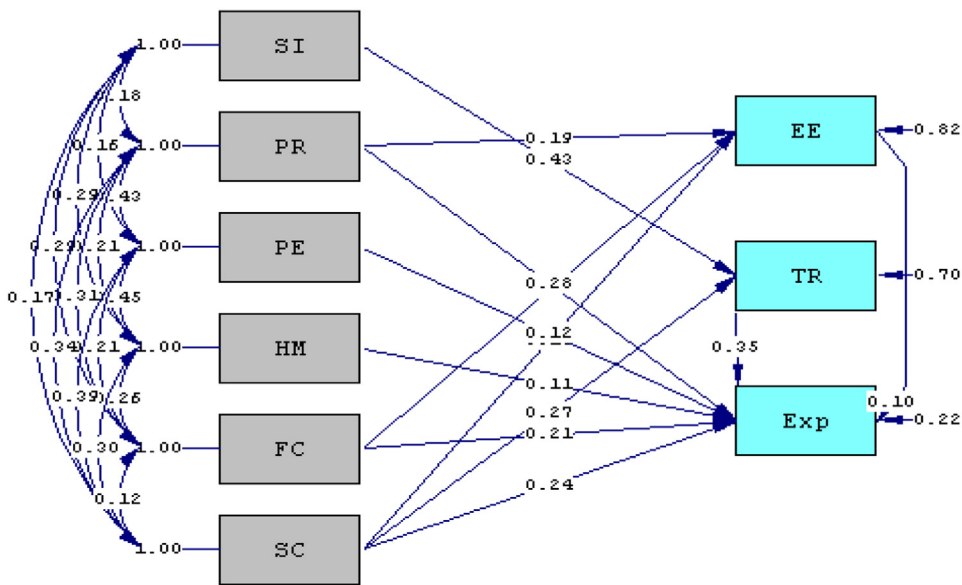
A total of 229 respondents returned the questionnaire to the researchers; however, eight questionnaires were found to be almost blank. So, this research could use these 221 responses for data analysis and interpretation, a response rate of 44.2%. Since we have nine cause-effect relations to measure consumer exposure to mobile phone SMS containing promotional marketing offer, a sample size of any number close to 180 or higher is adequate for the measurement method (Hu & Bentler, 1999).

### 1.4. Analysis for verification of causal relation

The authors first conducted a demographic analysis of the sample collected from the actual consumers of Bangladesh. Although the original UTAUT2 models used gender, age, and experience as moderating variables, the authors did not attempt to evaluate the impact of those moderating variables on the independent constructs as the initial step of investigation of the current study. However, demographic information for those three variables were collected to evaluate the representation of the collected sample. The respondents' average age was 35. In Bangladesh, for average age of consumers, this can be considered appropriate as by this age majority of consumers are economically active and have family structure and likely to have phone and active consumption habit. Among respondents, the male versus the female ratio was 1:0.69. Although for Bangladesh, this ratio does not represent the population, considering the general trend of attitudes of females in a developing country to respond to a survey, it is considered acceptable based on previous experience (See Dwivedi et al., 2016). The average experience of receiving and interacting with mobile phone commercials was around 5.4 years. This is almost the maximum span of experience considering the time mobile phone SMS commercials have been popular in Bangladesh.

All the scale items were primarily taken either from the UTAUT2 model with the required revisions keeping consistent with the original version or from the recommendation of the focus group and pilot study with the help of literature review, as mentioned before. A Confirmatory Factor Analysis (CFA) was conducted for all the dependent and independent constructs individually to verify grouping and the loading pattern of measuring scale items.

All the constructs with the measuring items showed an over-identified model and satisfied both requirements of the CFA. Researchers argue that in the CFA, any scale item that loaded less than 0.50 on the respective construct should not be considered to be a meaningful contribution to measure that observed construct, and thus should be removed (Fornell & Larcker, 1981; Kline, 2005). We noted that one item from trust (TR4) and one item from habit (HT4) were loaded with value less than 0.50, and thus were dropped. All other measuring items were loaded appropriately to measure the respective constructs. The final measuring times are shown in Appendix A. Different fitness indices were verified, such as root mean square error of approximation (RMSEA), comparative fit index (CFI), normed fit index (NFI), and goodness of fit index (GFI) as the model fitness in the CFA for each independent and dependent construct (Kline, 2005). From CFA analysis, this study only retained those scale items with the respective construct which have loading factor and average variances extracted (AVE) of at least 0.50. This finding can justify the convergent validity of the measuring items for the respective construct (Fornell & Larcker, 1981). We also observed discriminant validity among the nine independent constructs as the largest shared variance between these factors that is lower than the least AVE value for each factor and its measures (Espinoza, 1999).



Chi-Square=14.35, df=9, P-value=0.11037, RMSEA=0.052

Fig. 1. Final Causal Relations of the Model.

(Legend: SI=Social Influence; PR=Personalization; PE=Performance expectancy; HM=Hedonic motivation; FC=Facilitating conditions; SC=Self-concept; EE=Effort expectancy; TR=Trust; Exp.=Exposure to advertisement)

The reliability of all the constructs through Cronbach’s alpha was verified and ranged from 0.76 to 0.93. By this way, the reliability of the constructs was assured (Nunnally & Bernstein, 1994). The correlation matrix of the sample for the nine independent constructs and one dependent construct was thoroughly examined and a consistent relation was observed reflecting theoretical underpinnings.

1.5. Path analysis

Since the data was not perfectly continuous, as it was collected through Likert Scale 1–5, structural measurement through SEM by maximum likelihood (ML) is not appropriate (Kline, 2005; pp. 219). So the authors have used LISREL for the Path Analysis to test the causal relationships of the model, which is a member of SEM, using the correlation matrix as the input.

The analysis was conducted in three phases. In the first phase, it was found that the loading value of the constructs habit (HT) and social influence (SI) are not enough to contribute to the causal relations. The authors have checked the ‘t’ values for all the independent variables. These two relations are non-significant at 0.05 level (shown in Appendix B). Hence, their correlation coefficients with other constructs were verified. Habit (HT) is highly correlated with social concept (SC), performance expectancy (PE), and trust (TR). Social influence (SI) is highly correlated with TR. The model fitness indices were also checked. Values of the unstandardized factor loadings estimate the change in the dependent variable for unit change on the respective independent variable if the effects of other factors are constant. We have found Chi-Square statistic 32.37, degree of freedom (df) 12, 0.00121, and RMSEA=0.088. All other independent constructs were observed to be significant at the 0.05 level. Therefore, the model did not fit well. So these relations were removed from the model and was run again. Again, in the second phase, the model fitness indices represented by Chi-Square=31.63, df=11, P-value=0.00087, RMSEA=0.092 indicate the model still did not fit well (shown in Appendix B). Based on modification indices to improve the model fitness, we have added causal relations from personalization (PR) and social con-

cept to effort expectancy (EE). In this connection, we have verified the correlations of these newly proposed causal relations. We also examined the theoretical underpinnings of the relations as to whether personalization of the content of the message and consumer behavioral and attitudinal traits can contribute in the perception of effort expectancy. Then we ran the model again. This time we got a better model where the independent constructs were fitted in the model reasonably. The standardized path coefficients, Chi-Square statistic, df, p-value, and RMSEA of the final accepted model are shown in Fig. 1.

The  $\chi^2$  statistic of 14.35 (df=9, p value 0.11037) indicates that the null hypothesis of the model is a good fit for the data, or at least cannot be rejected. Other fit measures, shown in Table 1, indicate that the model fit compares reasonably with the literature (Hu & Bentler, 1999; Kline, 2005; pp.133–144).

The new model constructs including their conceptual definitions with all causal relations are shown in Table 2.

2. Results and discussion

Finally, the statistical analysis through path model of SEM identified that performance expectancy, effort expectancy, facilitating condition, hedonic motivation, trust, personalization, and self-concept are the driving issues for the content design of SMS commercials for attracting consumer exposure to SMS commer-

Table 1 Model Fitness Values for Causal Relations.

Fit Measures	Recommended Values	Observed Fit Indices
P value	$p \geq 0.05$	0.11037
$\chi^2$ /Degree of Freedom (DF)	$\leq 3.0$	1.5944444
Comparative Fit Index (CFI)	$\geq 0.90$	0.99
Incremental Fit Index (IFI)	$\geq 0.90$	0.99
Relative Fit Index (RFI)	$\geq 0.90$	0.92
Goodness of Fit Index (GFI)	$\geq 0.90$	0.99
RMSEA	$< 0.06$	0.052
Normed Fit Index (NFI)	$\geq 0.90$	0.98

**Table 2**  
Concepts and Causal Relations of Revised UTAUT–CEMM Model.

Constructs	Definition	Hypothesis	Relations
Social Influence (SI)	The degree to which consumers perceive that important reference groups believe they should view and read SMS-based mobile phone advertisement due to its content	H <sub>1</sub> : SI has a positive influence on consumer exposure to SMS commercials due to their content H <sub>1a</sub> : SI has a positive influence on developing consumer trust to SMS commercials due to their content	Hypothesis H <sub>1</sub> is NOT significant H <sub>1a</sub> is significant at the 0.05 level
Effort Expectancy (EE)	The degree of ease consumers perceive from the SMS-based mobile phone advertisements due to its content	H <sub>2</sub> : EE has a positive influence on consumers' exposure to SMS commercials due to their content	Significant at the 0.05 level
Performance Expectancy (PE)	The degree to which consumers believe that content of SMS-based mobile phone advertisements are designed in such a way that will help them to attain gains from the outcome performance	H <sub>3</sub> : PE has a positive influence on consumer exposure to SMS commercials due to their content	Significant at the 0.05 level
Facilitating Conditions (FC)	The degree to which the content of SMS-based mobile phone advertisements can be compatible with consumers' resources including location and time sensitive communication to facilitate viewing and reading of the advertisements	H <sub>4</sub> : FC have positive influences on consumers' exposure to SMS commercials due to their content H <sub>4a</sub> : FC have a positive influence on consumers' EE to SMS commercials due to their content	Both relations are significant at the 0.05 level
Habit (HT)	The extent to which consumers tend to view and read SMS-based mobile phone advertisements automatically because of learning from its content	H <sub>5</sub> : HT has a positive influence on consumer exposure to SMS commercials due to their content	Hypothesis H <sub>5</sub> is NOT significant
Hedonic Motivation (HM)	The degree of affective fun or pleasure derived from the content of SMS-based mobile phone advertisements	H <sub>6</sub> : HM has a positive influence on consumer exposure to SMS commercials due to their content	Significant at the 0.05 level
Trust (TR)	The degree to which consumers perceive authenticity and reliability of the content of SMS-based mobile phone advertisements	H <sub>7</sub> : TR has a positive influence on consumer exposure to SMS commercials due to their content	Significant at the 0.05 level
Personalization (PR)	The degree to which consumers perceive that content of SMS-based mobile phone advertisements is designed to focus on their personal external requirements	H <sub>8</sub> : PR has a positive influence on consumer exposure to SMS commercials due to their content H <sub>8a</sub> : PR has positive influence on consumer EE to SMS commercials due to their content	Significant at the 0.05 level This is newly identified causal relation, significant at the 0.05 level
Self-concept (SC)	The degree to which consumers' internal lifestyle, image, and personality is perceived to be congruent with the content of SMS-based mobile phone advertisements	H <sub>9</sub> : SC has a positive influence on consumer exposure to SMS commercials due to their content H <sub>9a</sub> : SC has a positive influence on developing consumer trust to SMS commercials due to their content H <sub>9b</sub> : SC has a positive influence on consumer EE to SMS commercials due to their content	Both relations (H <sub>9</sub> and H <sub>9a</sub> ) are significant at the 0.05 level This is newly identified causal relation, significant at the 0.05 level
Exposure to Advertisement (Exp)	The degree to which consumers are automatically willing to view and read SMS-based mobile phone advertisements after getting access to the SMS	Dependent variable	

cial. These proposed hypotheses are found significant at the 0.05 level. It was also identified that habit and social influence do not have direct causal effects on consumer exposure to SMS commercials due to their content. Habit has a strong correlation with self-concept, performance expectancy, and trust. Consequently, these three constructs account for enough variance on consumer exposure to SMS commercials due to their content, so the original construct habit of the UTAUT2 model is found to be non-significant. From empirical findings and the theoretical point of view, this identification is justified. Social influence is strongly correlated with trust, and, thus, the direct relation of social influence with consumer exposure is found to be non-significant (an original construct of the UTAUT2 model). However, the relation of social influence with developing consumer trust to SMS commercials due to their content is found to be significant. It indicates that social influence is not a direct factor for creating consumer exposure; however, it can contribute to developing consumer trust due to the content of SMS commercials, which ultimately drive consumer exposure to SMS. Self-concept has a direct relation for creating consumer exposure due to the content of SMS commercials. At the same time, this concept reflects the internal personal trait of human beings that is responsible for developing consumer trust (proposed) and effort expectancy (newly identified) to SMS commercials. Another new relation was identified. Personalization, in addition to its direct

relation in pursuing consumer exposure to SMS commercials, has a positive influence on developing effort expectancy to SMS commercials due to their content. This is also theoretically explainable.

Most of the respondents in our sample are receiving mobile phone based commercials for around last five years. They are engaged as well as interested in promotional marketing through mobile phone SMS. Significant relations of hedonic motivation and self-concept provided deep insight in this context. However, marketers should be warned from these findings that only commercial nature of the content of SMS might not generate exposure of the consumers. In that case consumers might be opted out from this mobile advertisement and be irritated.

Since we observed significant deviations of the newly identified model from UTAUT2 model for consumer exposure to mobile phone-based SMS commercials due to their content, we have revised the model name as well to become UTAUT–CEMM: Unified Theory of Acceptance and Use of Technology (UTAUT) of Consumer Exposure for Mobile Message (CEMM). The squared multiple correlation coefficient ( $R^2$ ) explaining the amount of variance that the independent constructs performance expectancy, effort expectancy, facilitating condition, hedonic motivation, trust, personalization, and self-concept – the driving issues for the content design of SMS commercials for pursuance of consumer exposure to SMS commercials – is 0.773. It means that 77.3% of variance

on consumer exposure to SMS commercials due to their content is explained by the direct causes of seven independent variables. This is another significant contribution of this present research and the UTAUT–CEMM model. Refinement of the original model UTAUT2 constructs for consumer exposure to SMS commercials due to their content has significantly increased variance explained by the independent constructs; for UTAUT2 model behavioral intention was explained by 74% variance and technology use was explained by 52% variance.

In this connection, the contribution of different constructs directly caused consumer exposure to SMS commercials for their content should be explained; this can provide significant insights to recognize and conceptualize consumer behavior for promotional marketing design through mobile channels. This has immense potential value to the marketing professionals and academics. The newly included construct trust (TR) has the highest loading value – 0.35. This reflects that a unit positive change on consumer trust causes a 0.35-unit positive change on consumer exposure to SMS commercials due to their content when the effects of other constructs were kept constant. The second highest driving force is personalization (PR) (0.28), which is also newly included in the model to reveal consumer exposure. The third important construct is self-concept, which is also a newly included concept in this model with a loading value of 0.24. The contributions of all independent constructs in the identified model are shown in [Appendix B](#).

### 2.1. Theoretical development

The identified model UTAUT–CEMM, with significant revision from the original UTAUT2 model, has substantial implications for the academics and marketing professionals responsible for the content design of mobile phone-based SMS to pursue consumer exposure. The most significant contribution of this research is that, it has revealed the extended version of UTAUT model for consumers' exposure to mobile marketing. Therefore, obviously, a new theoretical model is presented here for the researchers to examine its acceptance for different kinds of mobile phone based promotional marketing among consumers. Researchers, from an extensive analysis of consumer behavior, have revealed that consumers are genuinely selective of their exposure to any commercials conveyed by the marketers through any interactive medias ([Jarad, 2014](#); [Lai & Chang, 2011](#)). If consumers are not physically exposed to learn from the stimulus through any of their five senses, ultimately marketer use of this promotional marketing will become useless. Consumers will be exposed to any commercials, if they find that information is helpful in achieving their targeted goals ([Lai & Chang, 2011](#); [Oliver, 1980](#)). Researchers exploring consumer behavior postulated that mass communication for any intended message through any conventional media cannot directly influence consumer final behavior; rather it reinforces consumer predisposition toward the message ([Jarad, 2014](#)). So it is clearly acknowledged by researchers that without attracting consumers to be exposed, sending any message to them is inevitably meaningless, as the consumers will not have the scope to be persuaded through learning the intended meaning. Now consumers can be very selective of different commercials introduced by many medias based on their desired outcome expectation ([Oliver, 1980](#)). They can avoid many commercial messages dedicated to promotional marketing by fast forwarding of the channel (zipping) and switching of the channel (zapping). In mobile phone SMS, consumers have more controlling power to avoid exposure to any commercial by not viewing, barring, deleting, etc. ([Shareef et al., 2015](#)). Hence, the potential implication of this study is to identify the factors for content of the SMS commercials that can provide consumers the sense of achieving desired goals so that they will be exposed to the SMS-based promotional marketing.

Shedding light on the first three constructs, it has been clearly identified that the epistemological paradigms of the first three constructs get rid of the significance of personal traits. Researchers of consumer trust disposition behavior ([Chen et al., 2012](#); [Gefen et al., 2003](#)) for online or mobile interaction postulated that trustworthiness is the kind of behavior that substantially expresses and streamlines consumer personal traits. Personalization and relevance of the content of an SMS promotional offer also has a potential relation with consumer personal images and cognitive attitudes ([Jarad, 2014](#); [Shareef et al., 2015](#); [Xu et al., 2008](#)) about the content of the message including statement, language, words, organization, presentation, and structure. Self-concept denotes the notion of consumer personal identity, characteristics, personality, and self-consciousness for the content of SMS ([Taylor & Pentina, 2012](#); p. 39). So the most important three constructs combined reflect that, for consumers to be exposed to commercials, the content of the commercials must be significantly related to their personal preference. The necessity of market segmentation, therefore, is extremely important for content design. For mobile marketing to be successful and effective through SMS commercials, consumer exposure is greatly dependent on and distinguished by the consumer personal behavioral traits composed of their lifestyle, personality, image, and self-identity (also supported by [Taylor & Pentina, 2012](#)). Marketers should segment consumers for sending commercials through mobile phone based SMS based on their personal behavior, attitude and compatibility with SMS advertisement. Personalization of the content is extremely important for prospective consumers to be primarily exposed to the message. Therefore, marketers should analyze consumers previous marketing experience and style. Based on that, they should prepare and send commercials to the prospective buyers to fulfill, their personal requirements. Under this context, segmentation of prospective consumers for mobile phone based promotional marketing has unique conceptual definition. It should consider two important issues of consumers: i) Psychological traits and ii) Consumers intended requirements at just present moment.

This is an interesting as well as important outlook on attracting consumers to mobile marketing. For consumers to be exposed to any SMS commercials, marketers need to address critical consumer differences, both cognitive and affective, and design the content language, wording, presentation, organization, and structure to be relevant and compatible to consumer preferences, reflecting their characteristics. Media selection theory and the theory of gratification provide explicit evidence supporting this idea. Shedding light on the underlying concept of reinforcement sensitivity theory (RST) ([Gray, 1990](#)), we find supporting arguments that personality is rationally associated with the reinforcing behavior of human beings. Personal cognition and emotions connecting consumer personalities to outcome expectations from SMS commercials and the ability to achieve personal goals related to the content of SMS, will reinforce consumer attraction to promotional marketing conducted by mobile phone SMS. The self-efficacy theory ([Bandura, 1997](#)) asserted that psychological motivation of consumers will be developed as a reinforcing behavior if they believe that learning from a certain procedure is within their control based on their personal traits. Researchers like [Kim et al. \(2008\)](#) also affirmed this argument by investigating controllability and self-efficacy for mobile phone-based SMS promotional marketing. Other researchers ([Pihlström & Brush, 2008](#)) also asserted that consumer lifestyles, cognitive thinking, personality, etc., which together reflect a consumers' personal identity, can be a driving force to attract them to the content of SMS.

In addition to the general requirements of consumer effort expectancy, performance expectancy, facilitating conditions, and hedonic motivations, the overall personal identity and personality of consumers has significant implications for drawing their



attention to the content of SMS commercials. Consumers will be motivated to view and read a message if the design of content of SMS commercials can be easily communicated and its organization, structure, and presentation supports their outcome expectation. Also, important to consumers is wording and language that is congruent with their personal traits, desire, image, and lifestyle. Therefore, the important learning of this study embedded in the UTAUT-CEMM model is that consumer segmentation has immense importance for the effectiveness of promotional marketing. If the content is compatible and relevant to their own characteristics, consumers will feel the urge to view and read the SMS. Since this mobile marketing is engaged in target marketing, this direct and one-to-one marketing is feasible if it is done through enough research about consumers personal traits. The content of promotional marketing through SMS should be designed by considering customer personality and outcome expectations.

## 2.2. Managerial implications

The findings of this study contribute some very precise implications to managers. They should be aware that any attempt for a general promotional offer is not quite suitable for this dynamic and virtual mobile marketing through SMS. As the first step, marketers should differentiate among consumers according to their self-identity and requirements when they design the content of the promotional offer launched through mobile phone SMS. This consumer segmentation is the initial step for effective communication with consumers through SMS. If the design of the content – in terms of statement, language, wording, presentation, organization, and structure – is not compatible with target customer personal traits and requirements, they will not be able to attract customers to view and read the valuable information in their SMS. So, it is important for marketers to conduct consumer segmentation based on the content of the message. Marketers should also focus on target marketing, perhaps one-on-one or with a group that has similar characteristics. However, time- and location-sensitive communication is also important to attract consumers to the message.

As a single variable for attracting consumer attraction, trust is extremely important. It alone directly contributes to reinforce consumer attraction to read the content of the message. A trusting disposition is a trait dependent on several internal and external characteristics including personal traits, motives, attitudes, and cognition (Park & Yang, 2006; Shareef, Kumar et al., 2013; Shareef, Archer et al., 2013). Trust is influenced by self-concept and by society; this has been demonstrated by many seminal studies and supported by this study. For managers, this finding implies that if consumers do not have enough trust in SMS content, consumers will not be exposed to the message conveyed and will not receive the intended meaning. This finding is supported from the underlying conceptual revelation of several seminal studies (McKnight et al., 2002) who advanced this concept. This finding is also supported by the underlying principle of expectation-confirmation theory (Oliver, 1980). Arguably, we can comment with certain reservations that mobile phone-based promotional marketing through SMS will be able to attract consumer attention if it comes from a reliable source. This indicates that this promotional marketing may be most helpful for highly reputable companies, but not for newly launched companies or retailers. Hence, if any member in the distributional channel has market familiarity and reputation among consumers, it is better for that member to conduct this promotional channel flow/function. This will ensure consumer trust and they will be attracted to the promotional stimulus conveyed through SMS.

Marketers also need to focus on the affective motivation and hedonic enjoyment of consumers while designing the message (Nysveen, Pedersen, & Thorbjørnsen, 2005a,b). Consumers need to

seek enjoyment from this interaction which is supported by many researchers (Pihlström & Brush, 2008). From the findings, it is also asserted that sending countless messages without considering consumers personal trait, trustworthiness on the sender, and personal requirements may create negative impact on consumers attitude.

## 3. Conclusion, future research direction, and limitation

Finally, we conclude that this present research identified a specific stage of consumer response to the promotional offer conducted by mobile phone SMS. This is the first step for consumer communication through mobile phone SMS. Precisely, this study has attempted to understand the effects of promotional marketing conducted through mobile phone SMS. It examined how the content can draw consumer attention and the critical driving variables which attract consumers to view and read the SMS commercials. This study is not focused on whether consumers will be persuaded by the message.

To address and conceptualize consumer judgment from the content of the message, the study was primarily designed on the conceptual paradigms of the UTAUT2 model. In addition to the constructs of this model (excluding price value), from the review of mobile marketing literature and psychological theories, we also included three other constructs: personalization, self-concept, and trust. The study was based on an extensive market study among consumers in Bangladesh who reportedly receive numerous promotional offering on SMS from several marketers. The study then developed a parsimonious and significantly exhaustive model by refining and revising the original UTAUT2 model under the name UTAUT-CEMM.

The model indicates that performance expectancy, effort expectancy, facilitating conditions, hedonic motivation, trust, personalization, and self-concept taken together have a strong effect on consumer exposure to SMS commercials due to their content. The finding of this study is focused on the unique issue of consumer behavior. We have defined the driving forces attracting consumers to view and read the promotional marketing on SMS through mobile phone communications considering the message content. These findings also have potential value to academics and marketers. The causal relations of the UTAUT-CEMM model suggest that consumer segmentation is the top priority for the marketers. This is based on consumer lifestyle, personality, and traits compatible with the content design that considers the wording, language, presentation, organization, and structure of the message. If the market segmentation is not appropriate and the message is not relevant to consumer external requirements and internal characteristics, consumers will not view and read those messages. In those cases, sending the message will not be effective.

After market segmentation, target marketing is very appropriate for this type of promotional marketing. One-to-one marketing can be effective. While communicating with consumers, time- and location-sensitive communication has potential value for drawing consumer attention. Since consumers often read messages selectively, the reputation of the message sender is extremely important in persuading consumers to view and read the message. This is the first step in motivating consumers to learn the intended meaning from the message. If no members of the distribution channel – including manufacturers, wholesalers, and retailers – have enough market reputation and familiarity, promotional offers through SMS can be conveyed through a reputable third party; this has recently been termed to be performance marketing.

However, this study has certain limitations in terms of generalizability. This study did not evaluate the impact of sending too many messages to the customer. Many multicultural researchers have pointed out that this issue is culture bound, which means that

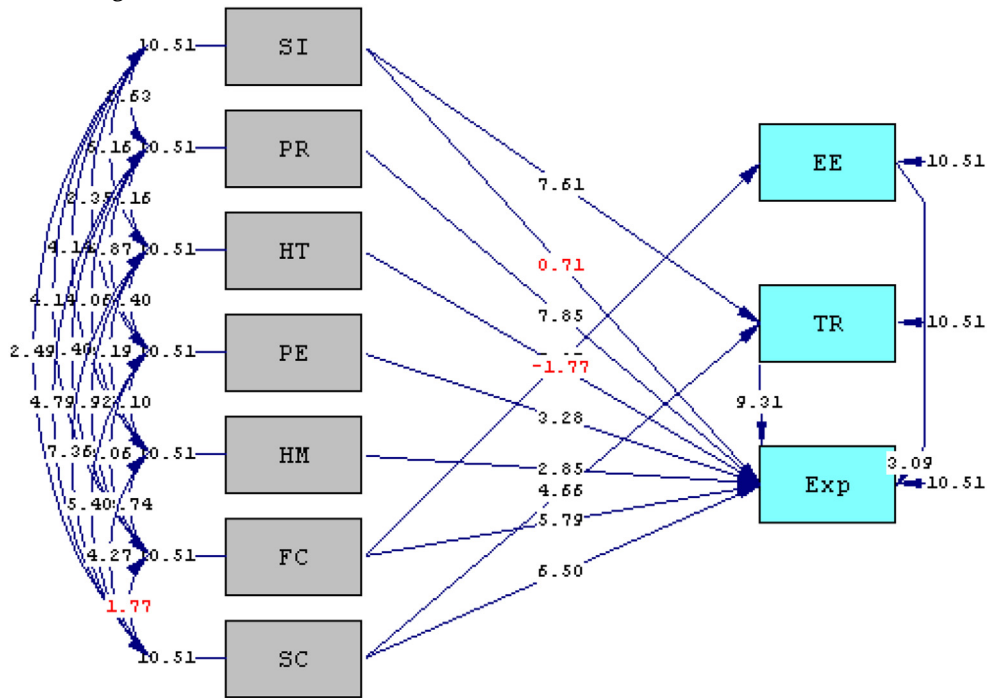
the finding from one culture cannot be a generalized phenomenon until it has been replicated in different cultural settings. Hence, this UTAUT-CEMM model should be explored in different cultural settings, including developed countries. The independent constructs of this model can also be governed by several moderating variables such as age, education, and income, and the effect of those variables can be explored in future research.

## Appendix A.

Measuring Item	Reference
<b>Social Influence (SI)</b>	<a href="#">Venkatesh et al. (2012)</a>
SI1. People who are important to me think that due to its content I should read SMS based mobile phone advertisements.	
SI2. People who influence my behavior think that due to its content I should read SMS based mobile phone advertisements.	
SI3. People whose opinions that I value prefer that due to its content I should read SMS based mobile phone advertisements.	
<b>Effort Expectancy (EE)</b>	<a href="#">Venkatesh et al. (2012)</a>
EE1. Learning how to get access to SMS based mobile phone advertisements is easy for me due to its content.	
EE2. My interaction with SMS based mobile phone advertisements is clear and understandable due to its content.	
EE3. I find content of SMS based mobile phone advertisements easy to understand.	
EE4. It is easy for me to become skilful at receiving, viewing, and reading SMS based mobile phone advertisements due to its content.	
<b>Personalization (PR)</b>	<a href="#">Chellappa and Sin (2005)</a> , <a href="#">Xu et al. (2008)</a>
PR1. The content of SMS based mobile phone advertisements is relevant to my personal requirements.	
PR2. The language of SMS based mobile phone advertisements is prepared to focus on my personal requirements.	
PR3. The statement of SMS based mobile phone advertisements is prepared to focus on my personal requirements.	
PR4. The content of SMS based mobile phone advertisements can specifically fulfill my personal requirements.	
<b>Habit (HT)</b>	<a href="#">Venkatesh et al. (2012)</a>
HT1. Reading of SMS based mobile phone advertisements has become a habit for me due to its content.	
HT2. I am addicted to reading SMS based mobile phone advertisements due to its content.	
HT3. I must read SMS based mobile phone advertisements due to its content.	
HT4. Reading of SMS based mobile phone advertisements is natural to me due to its content. (Dropped)	
<b>Performance Expectancy (PE)</b>	<a href="#">Venkatesh et al. (2012)</a>
PE1. I find content of SMS based mobile phone advertisements useful in my understanding of product/service offerings.	
PE2. Reading SMS based mobile phone advertisements increases my chances of understanding of product/service offerings that are important to me.	
PE3. Reading SMS based mobile phone advertisements helps me accomplish my understanding of product/service offerings more quickly.	
PE4. Reading SMS based mobile phone advertisements increases my performance to understand product/service offerings.	
PE5. I find language of SMS based mobile phone advertisements useful in my understanding of product/service offerings.	
<b>Hedonic Motivation (HM)</b>	<a href="#">Venkatesh et al. (2012)</a>
HM1. Content of SMS based mobile phone advertisements is fun.	
HM2. Content of SMS based mobile phone advertisements is enjoyable.	
HM3. Content of SMS based mobile phone advertisements is very entertaining.	
<b>Facilitating Conditions (FC)</b>	<a href="#">Venkatesh et al. (2012)</a>
FC1. I have the resources necessary to read SMS based mobile phone advertisements due to its content.	
FC2. I gathered the knowledge necessary to read SMS based mobile phone advertisements.	
FC3. Content of SMS based mobile phone advertisements is compatible with my location at the time of receiving the advertisements.	
FC4. Content of SMS based mobile phone advertisements is compatible with the time the advertisement was sent to me.	
FC5. I can get help from others due to its content when I have difficulties understanding SMS based mobile phone advertisements.	
<b>Self-concept (SC)</b>	<a href="#">Dwivedi et al. (2016)</a>
SC1. I like the content of SMS based mobile phone advertisements.	
SC2. The content of SMS based mobile phone advertisements is compatible with my lifestyle.	
SC3. I feel adherence with the content of SMS based mobile phone advertisements due to my personality.	
SC4. My personal attitude is congruent with the content of SMS based mobile phone advertisements.	
<b>Trust (TR)</b>	<a href="#">Chen et al. (2012)</a> , <a href="#">Gefen et al. (2003)</a> , <a href="#">Shareef et al. (2011)</a>
TR1. I have trust on the SMS based mobile phone advertisements due to its content	
TR2. I have trust on the provider of the SMS based mobile phone advertisements due to its content	
TR3. The content of the SMS based mobile phone advertisements is reliable due to its content	
TR4. I feel the SMS based mobile phone advertisements is authenticated due to its content (Dropped)	
<b>Exposure to Advertisement (Exp)</b>	Revised items in the light of measuring items of behavioral intention ( <a href="#">Ajzen, 1991</a> ; <a href="#">Chen et al., 2012</a> ; <a href="#">Davis, 1989</a> ; <a href="#">Venkatesh et al., 2012</a> ; <a href="#">Xu et al., 2008</a> )
Exp1. I intend to view SMS based mobile phone advertisements.	
Exp2. I intend to read SMS based mobile phone advertisements	
Exp3. I will always try to view SMS based mobile phone advertisements in my daily life.	
Exp4. I will always try to read SMS based mobile phone advertisements in my daily life.	
Exp5. I plan to continue to view SMS based mobile phone frequently.	
Exp6. I plan to continue to read SMS based mobile phone frequently.	

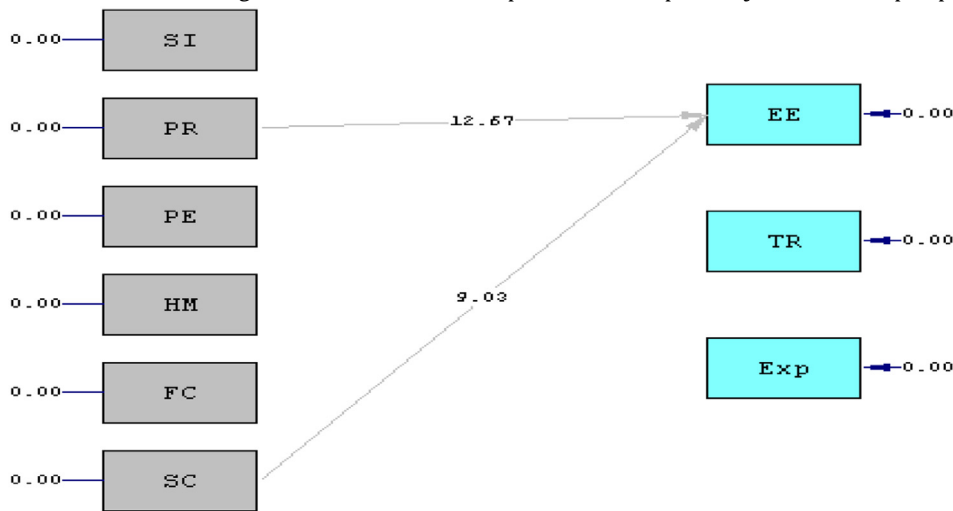
**Appendix B.**

First Phase: Non-significant Relations.



Chi-Square=32.37, df=12, P-value=0.00121, RMSEA=0.088

Second Phase: Recommendation for Model Improvement ((SI, Social Influence; PR, Personalization; PE, Performance expectancy; HM, Hedonic motivation, FC, Facilitating condition; SC, Self-concept; EE, Effort expectancy; TR, Trust; Esp Exposure to advertisement).



Chi-Square=31.63, df=11, P-value=0.00087, RMSEA=0.092

**Final Causal Relations with Contribution of Independent Constructs on Dependent Variable (SI, Social Influence; PR, Personalization; PE, Performance expectancy; HM, Hedonic motivation, FC, Facilitating condition; SC, Self-concept; EE, Effort expectancy; TR, Trust; Esp Exposure to advertisement).**

$$Exp = 0.103*EE + 0.349*TR + 0.283*PR + 0.118*PE + 0.115*HM + 0.211*FC + 0.236*SC.$$

## References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211.
- AlAlwan, A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management*, 37(3), 99–110.
- Bagozzi, R. P. (2007). The legacy of the technology acceptance model and a proposal for a paradigm shift. *Journal of the AIS*, 8(4), 244–254.
- Bandura, A. (1997). *Self-efficacy: the exercise of control*. New York: W.H. Freeman.
- Barwise, P., & Strong, C. (2002). Permissionbased mobile advertising. *Journal of Interactive Marketing*, 16(1), 14–24.
- Bearden, W. O., & Etzel, M. (1982). Reference group influence on product and brand decisions. *Journal of Consumer Research*, 9(April), 183–194.
- Burnham, T. C., Chapman, J. F., Gray, P., McIntyre, M., Lipson, S., & Ellison, P. (2003). Men in committed, romantic relationships have lower testosterone. *Hormones and Behavior*, 44(2), 119–122.
- Chang, Y. M. (2013). Age matters: Short message service advertising reading behaviors. *International Journal of Mobile Communications*, 11(2), 159–175.
- Chellappa, R. K., & Sin, R. G. (2005). Personalization versus privacy: An empirical examination of the online consumer's dilemma. *Information Technology and Management*, 6, 181–202.
- Chen, C., O'Brien, M., & Guo, L. (2012). Consumer trust and loyalty in e-Tail. In A. G. Close (Ed.), *Online consumer behavior: Theory and research in social media, advertising, and E-Tail* (pp. 297–322). NY, USA: Taylor & Francis Group.
- Daft, R. L., & Lengel, R. H. (1986). Organizational information requirements: Media richness and structural design. *Management Science*, 32(5), 554–572.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Durkin, M. (2013). Tweet me cruel: Perspectives on battling digital marketing myopia. *The Marketing Review*, 13(1), 51–63.
- Dwivedi, Y. K., Kapoor, K. K., Williams, M. D., & Williams, J. (2013). RFID systems in libraries: An empirical examination of factors affecting system use and user satisfaction. *International Journal of Information Management*, 33(2), 367–377.
- Dwivedi, Y. K., Shareef, M. A., Simintiras, A. C., & Weerakkody, V. (2016). A generalized adoption model for services: A cross-Country comparison of mobile health (m-Health). *Government Information Quarterly*, 33(1), 174–187.
- Espinoza, M. M. (1999). Assessing the cross-cultural applicability of a service quality measure A comparative study between Quebec and Peru. *International Journal of Service Industry Management*, 10(5), 449–468.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, 7(1), 51–90.
- Gray, J. A. (1990). Brain systems that mediate both emotion and cognition. *Cognition & Emotion*, 4(3), 269–288.
- Hu, Li-tze, & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55.
- Jarad, G. A. (2014). Marketing over social media networks. *European Journal of Business and Management*, 6(13), 114–118.
- Kim, G. S., Park, S. B., & Oh, J. (2008). An examination of factors influencing consumer adoption of short message service (SMS). *Psychology & Marketing*, 25, 769–786.
- Kim, C., Oh, E., Shin, N., & Chae, M. (2009). An empirical investigation of factors affecting ubiquitous computing use and U-business value. *International Journal of Information Management*, 29(6), 436–448.
- Kline, R. B. (2005). *Principles and practice of structural equation modeling*. NY: The Guilford Press.
- Koenigstorfer, J., & Groeppel-Klein, A. (2012). Consumer acceptance of the mobile Internet. *Marketing Letters*, 23(4), 917–928.
- LaRose, R., Mastro, D. A., & Eastin, M. S. (2001). Understanding Internet usage: A social cognitive approach to uses and gratifications. *Social Science Computer Review*, 19, 395–413.
- Lai, J.-Y., & Chang, C. Y. (2011). User attitudes toward dedicated e-book readers for reading. The effects of convenience, compatibility and media richness. *Online Information Review*, 35(4), 558–580.
- Lee, S., & Park, S. (2006). Improving accessibility and security for mobile phone shopping. *Journal of Computer Information Systems*, 46, 124–133.
- Liao, S., Li, Q., & Xu, D. (2005). A Bayesian network-based framework for personalization in mobile commerce applications. *Communications of the Association for Information Systems*, 15, 494–511.
- MMA. (2005). *Wireless definitions: MMA privacy and spam definitions. mobile marketing association*. [Retrieved on April 26, 2006, from <http://mmaglobal.com/modules/content/index.php?id=6>]
- Mallat, N. (2007). Exploring consumer adoption of mobile payments – A qualitative study. *Journal of Strategic Information Systems*, 16, 413–432.
- Martins, C., Oliveira, T., & Popovič, A. (2014). Understanding the Internet banking adoption: A unified theory of acceptance and use of technology and perceived risk application. *International Journal of Information Management*, 34(1), 1–13.
- McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). Developing and validating trust measures for e-commerce: An integrative typology. *Information Systems Research*, 13, 334–359.
- Mortimer, G., Neale, L., Hasan, S. F. E., & Dunphy, B. (2015). Investigating the factors influencing the adoption of m-banking: A cross cultural study. *International Journal of Bank Marketing*, 33(4), 545–570.
- Nasco, S., & Bruner, G. C., II. (2008). Comparing consumer responses to advertising and non-advertising mobile communications. *Psychology & Marketing*, 822–838.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory*. New York: McGraw-Hill.
- Nysveen, H., Pedersen, P., & Thorbjørnsen, H. (2005). Explaining intention to use mobile chat services: Moderating effects of gender. *Journal of Consumer Marketing*, 22, 247–256.
- Nysveen, H., Pedersen, P. E., & Thorbjørnsen, H. (2005). Intention to use mobile services: Antecedents and cross-service comparisons. *Journal of the Academy of Marketing Science*, 33, 330–347.
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17(4), 460–469.
- Park, J., & Yang, S. (2006). The moderating role of consumer trust and experiences: Value driven usage of mobile technology. *International Journal of Mobile Marketing*, 1, 24–32.
- Park, N., Roman, R., Lee, S., & Chung, J. E. (2009). User acceptance of a digital library system in developing countries: An application of the Technology Acceptance Model. *International Journal of Information Management*, 29(3), 196–209.
- Pavlou, P. A., & Fygenon, M. (2006). Understanding and predicting electronic commerce adoption: An extension of the theory of planned behavior. *MIS Quarterly*, 30(1), 115–143.
- Pihlström, M., & Brush, G. J. (2008). Comparing the perceived value of information and entertainment mobile services. *Psychology & Marketing*, 25(8), 732–755.
- Rau, P.-L. P., Zhang, T., Shang, X., & Zhou, J. (2011). Content relevance and delivery time of SMS advertising? *International Journal of Mobile Communication*, 9(1), 19–38.
- Rosenberg, M. (1979). *Conceiving the Self*. New York: Basic Books.
- Rettie, R., Grandcolas, U., & Deakins, B. (2005). Text message advertising: Response rates and branding effects. *Journal of Targeting, Measurement and Analysis for Marketing*, 13(4), 304–312.
- Shareef, M. A., Kumar, U., Kumar, V., & Dwivedi, Y. K. (2011). E-government adoption model (GAM): Differing service maturity levels. *Government Information Quarterly*, 28(1), 17–35.
- Shareef, M. A., Kumar, V., Kumar, U., & Hasin, A. A. (2013). Application of behavioral theory in predicting consumers adoption behavior. *Journal of Information Technology Research*, 6(4), 36–54.
- Shareef, M. A., Archer, N., Fong, W., Rahman, M., & Mann, I. J. (2013). Online buying behavior and perceived trustworthiness. *British Journal of Applied Science & Technology*, 3(4), 662–683.
- Shareef, M. A., Dwivedi, Y. K., & Rana, N. P. (2015). Consumer behaviour in the context of SMS-based marketing. *The Marketing Review*, 15(2), 135–160.
- Sirgy, M. J. (1982). Self-Concept in consumer behavior: A critical review. *Journal of Consumer Research*, 9(December), 287–300.
- Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, 12(June (2)), 257–285.
- Taylor, D. G., & Pentina, I. (2012). Source characteristics in online shopping: DO avatar expertise, similarity, and attractiveness affect purchase outcomes? In A. G. Close (Ed.), *Online consumer behavior: Theory and research in social media, advertising, and E-Tail* (pp. 35–54). USA: Taylor & Francis Group, NY.
- Taylor, S., & Todd, P. (1995). Decomposition and crossover effects in the theory of planned behavior: A study of consumer adoption intentions. *International Journal of Research in Marketing*, 12, 137–155.
- Venkatesh, V., Davis, F. D., & Morris, M. G. (2007). Dead or alive? The development, trajectory and future of technology adoption research. *Journal of the AIS*, 8(4), 268–286.
- Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly*, 36(1), 157–178.
- Weerakkody, V., El-Haddadeh, R., Al-Sobhi, F., Shareef, M. A., & Dwivedi, Y. K. (2013). Examining the influence of intermediaries in facilitating e-government adoption: An empirical investigation. *International Journal of Information Management*, 33(5), 716–725.
- Wu, K., Zhao, Y., Zhu, Q., Tan, X., & Zheng, H. (2011). A meta-analysis of the impact of trust on technology acceptance model: Investigation of moderating influence of subject and context type. *International Journal of Information Management*, 31(6), 572–581.
- Xu, D., Liao, S., & Li, Q. (2008). Combining empirical experimentation and modeling techniques: A design research approach for personalized mobile advertising applications. *Decision Support Systems*, 44(3), 710–724.
- Yang, H., & Zhou, L. (2011). Extending TPB and TAM to mobile viral marketing: An exploratory study on American young consumers' mobile viral marketing attitude, intent and behavior. *Journal of Targeting, Measurement and Analysis for Marketing*, 19(2), 85–98.