

Mobile Users' Acceptance of SMS Advertising: A Permission Marketing Approach

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In India, the practice of permission-based SMS advertising is yet to evolve as a marketing practice and mobile users resist SMS advertising in its current format due to unauthorised spamming. Given this context, what factors constitute the acceptance or rejection of SMS advertising is still unclear. So, the study investigated the factors influencing the mobile users' acceptance of the existing system of SMS advertising and permission-based SMS advertising and at the same time analysed the effects of permission marketing approach on SMS advertising acceptance. Hence, a field experiment was conducted in Coimbatore city in Tamil Nadu state of India. The findings reveal that permission marketing approach has significantly impacted the acceptance of SMS advertising. The mobile users significantly differ in their perceptions, attitude, behavioural intention and acceptance/rejection behaviour between the existing system of SMS advertising and permission-based SMS advertising. Credibility, personalisation and informativeness are the key predictors of attitude toward SMS advertising in both the existing and permission-based SMS advertising contexts.

Keywords: Permission marketing, SMS advertising acceptance, Indian setting

Globally, around 95 per cent of the population live in an area that has access to a mobile cellular network (International Telecommunication Union, 2016). The Telecom Regulatory Authority of India's [TRAI] report (2017) shows that there are about 1,078.42 million mobile cellular subscriptions as of October 2016 in India. This widespread adoption of mobile communication has given an opportunity for advertisers to leverage its potentialities as advertising media. In addition, the arrival of smartphone in 2007 with high speed data connectivity, GPS capability, and improved features such as screen size, resolution, increased storage etc. has been fuelling this trend further (Cleff, 2010).

The mobile phones are primarily interactive, ubiquitous and personal in its characteristics (Shankar, Venkatesh, Hofacker, & Naik, 2010; Wei, Xiaoming, & Pan, 2010). Advertisers are more curious to exploit these characteristics to augment the efficacy of their advertising campaign (Wei et al., 2010). The interactive and ubiquitous features of the mobile phones facilitate advertisers to have meaningful interactions with mobile users at anytime and anywhere basis and makes possible the contextualised delivery of mobile advertising to the prospective consumers at right time and location (Shankar et al., 2010). Its personal nature helps advertisers to target mobile users with personalised advertising messages based on their demographics and product preferences (Chen & Hsieh, 2012).

However, gathering information used for targeting mobile users with such contextualised and personalised advertisements necessitate privacy intrusion by advertisers to some extent (Shankar & Balasubramanian, 2009; Tucker, 2012). Privacy intrusion mainly occurs when the information is gathered from mobile users without their knowledge or consent. Consequently, the mobile users tend to have negative perceptions towards such advertising due to their privacy concerns. Especially, in push advertising context, where SMS is the primary mode of sending ad messages, mobile users' privacy concerns are severe as targeting them necessitates prior permission (Cleff, 2007). Previous studies of SMS advertising reveal that privacy concerns of the mobile users affect their attitude towards SMS advertising negatively (Keshtgary & Khajehpour, 2011; Megdadi & Nusair, 2011). Because of this, the mobile users are often reluctant to make use of SMS advertising information when the advertisements are unsolicited (Chen & Hsieh, 2012). Such kind of unsolicited spamming raises credibility issues not only on the advertising message but also on the mobile medium itself (Cleff, 2007). Therefore, in order to address the issues of privacy concerns and to make SMS advertising a meaningful practice, it is essential for the advertisers to contextualise and personalise SMS advertisements upon soliciting prior permission from the mobile users. Conceptually, this has been termed as permission marketing.

Permission Marketing Concept

The concept of permission marketing was first popularised by Seth Godin in 1999 in his book 'Permission Marketing'. He defined permission marketing as 'the privilege (not the right) of delivering anticipated, personal and relevant messages to people who actually want to get them' (Godin, 2008). It protects consumers' right to privacy by respecting them. In response, consumers consent to pay attention to a brand of their choice in a permission marketing programme. According to Mobile Marketing Association (2011), the participation in a permission marketing programme begins with a clear choice of opt-in and consumers will be informed in advance for what reason permission is solicited from them. They will be given explicit control over their personal information and can access and modify their preference profiles, as well as determine the frequency of messaging. If needed, consumers can also opt-out from receiving further messages at any point of time. Earlier studies have substantiated that getting prior consent has a significant positive effect on mobile users' attitude towards SMS advertising (Barwise & Strong, 2002; Unal, Ercis, & Keser, 2011; Wei et al., 2010). So, the adoption permission marketing concept in SMS advertising practice will have positive effects on the acceptance of SMS advertising.

Indian Scenario

In India, the practice of Unsolicited Commercial Communications (UCCs) has become common in the recent times, which includes both SMS ads and voice calls. A report from India Today states that Indian mobile users are being bombarded with over 168,000 million spam messages every year and is valued at over 335 crore rupees (Singh, 2012). These spam messages further amplifies the privacy concerns of the Indian mobile users and puts the credibility of SMS advertising at stake. Hence, in order to control the UCCs, Telecom Regulatory Authority of India has issued 'The Telecom Commercial Communications Customers Preference Regulations, 2010' (TRAI, 2010).

The regulations were put in place in the year 2011. According to the regulations, mobile users can register with the National Customer Preference Register (NCPR) through

a call or by sending SMS to 1909 (toll free) to either fully block all UCCs or partially block if they wish to receive only SMS ads with regard to some specific categories such as Banking/Insurance/Financial products/credit cards; Real estate; Education; Health; Consumer goods and automobiles; Communication/Broadcasting/Entertainment/IT; and Tourism and Leisure (TRAI, 2010). Besides these, the registration of telemarketers has also been made compulsory under the regulation. However, only some did register as telemarketers while most of others didn't. Consequently, the UCC menace have persisted and leading to more complaints. So, TRAI has responded to such concerns with significant measures such as blocking of UCCs sent via other than domestic routes, restriction on 100 SMSs per day for a SIM, bulk SMSs signature verification, generating consumer awareness, easy registration of complaints, disconnection and blacklisting of unregistered telemarketers etc. (TRAI, 2013).

Despite various measures, the mobile users' dissatisfaction regarding UCCs still continues as the unregistered telemarketers masquerade themselves as normal subscribers. Owing to more number of such complaints, TRAI has subsequently amended the regulations and has reduced the registration fee and initial security deposit to attract the registration of unregistered telemarketers. Taking into cognizance the current practices of UCCs, Kumar and Srihari (2013) conducted a critical review of TRAI's regulations and suggested the reforming of current regulations and practices of SMS advertising in line with permission marketing concept.

Statement of Research Problem

SMS advertising in Indian context primarily lacked in relevance and utility, and is irritating in nature (Tripathi & Siddiqui, 2008). Due to unauthorised spamming, the mobile users generally have negative attitude towards SMS advertising and are not willing to receive it, which resulted in the rejection behaviour like ignoring of received SMS advertisements (Haq, 2012). It implies that SMS advertising in its current format is unacceptable to the mobile users. However, what factors influence the acceptance of existing system of SMS advertising is still unclear from the earlier studies.

If SMS advertising needs to be successful, it is important that mobile users should have positive attitude towards it, which in turn would reinforce their intention to receive SMS advertisements and act on it over the time (Bamoriya & Singh, 2012). For that the advertisers should refrain themselves from sending unsolicited SMS ads to the mobile users and try to increase its relevance and utility. Hence, embracing a new mode of SMS advertising based on permission marketing concept could be ideal for improving the current state of SMS advertising acceptance. This is because Permission-based SMS advertising reduces the mobile users' resistance towards SMS advertising by personalising and contextualising the advertising messages based on the information gathered from mobile users upon their prior explicit consent and by giving them full control over their personal information (Tucker, 2012; Wei et al., 2010).

Considering the fact that the practice of permission-based SMS advertising is yet to emerge in Indian scenario (Kumar & Srihari, 2013) and mobile users resist SMS advertising in its current format, the present study investigates the factors influencing mobile users' acceptance of existing system of SMS advertising and permission-based SMS advertising and at the same time analyses the effects of permission marketing approach on SMS advertising acceptance. From the above discussion, the following research questions are raised:

RQ1: What factors influence the mobile users' acceptance of existing system of SMS advertising?

RQ2: What extent the existing system of SMS advertising is effective?

RQ3: How far permission marketing approach will have an effect on mobile users' acceptance of SMS advertising?

RQ4: What factors influence the mobile users' acceptance of permission based SMS advertising?

Objectives

- (i) To investigate the factors influencing the mobile users' acceptance of the existing system of SMS advertising
- (ii) To investigate the factors influencing the mobile users' acceptance of the Permission based SMS advertising
- (iii) To analyse the effects of Permission marketing approach on mobile users' acceptance of SMS advertising

Literature Review

A comprehensive review of the existing literature on SMS advertising acceptance was done to identify the influencing factors. In SMS advertising acceptance research, the behavioural theories such as Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), and Theory of Planned Behaviour (TPB) are the most commonly used theoretical frameworks. These theories were used as a basic framework to study the acceptance of SMS advertising with the help of three major constructs; namely attitude, behavioural intention and actual behaviour.

Constructs of SMS Advertising Acceptance

Attitude is the most researched concept in SMS advertising research. Fishbein and Ajzen (1975) defined attitude as a learned predisposition to respond in a consistently favourable and unfavourable manner with respect to a given object. The mobile users' positive and negative tendencies, likes and dislikes, and good and bad about SMS advertising form their attitude towards it. Behavioural intention is the person's subjective probability that he will perform the behaviour in question (Fishbein & Ajzen, 1975). The mobile users' willingness to receive and use SMS advertisements determines their intention. Finally, behaviour refers to observable acts that are studied in their own right (Fishbein & Ajzen, 1975). The mobile users' reading and usage nature of SMS advertising contribute to its acceptance and rejection behaviour. Empirical evidences have demonstrated that there is a direct causal relationship between mobile users' attitude and their intention to use SMS advertising; and also between intention to use SMS advertising and its acceptance/rejection behaviour (Almossawi, 2014; Dix, Jamieson, & Shimul., 2016; Haq, 2012; Izquierdo-Yusta, Olarte-Pascual, & Reinales-Lara, 2015; Keshtgary & Khajehpour, 2011; Saleem, 2013; Unal et al., 2011).

Factors Influencing Major constructs of SMS advertising Acceptance: There are a number of antecedents found to influence the three major constructs of SMS advertising acceptance. From the literature, the factors are identified as informativeness, entertainment, irritation,

credibility, interactivity, personalisation, user control, incentives, privacy concerns and self-efficacy. These factors represent the mobile users' various perceptions of SMS advertising.

Informativeness is the ability of the SMS advertising to provide relevant information with quality features such as accuracy, timeliness and usefulness (Siau & Shen, 2003). Entertainment is the messages' ability to fulfil mobile users' needs for escapism, diversion, aesthetic enjoyment and emotional release (McQuail, 1983). Credibility is the mobile user's perceptions of truthfulness and believability of the SMS advertising and its source (Mackenzie & Lutz, 1989). Irritation is the unwanted influence of the SMS advertising on the mobile users when it employs techniques that annoys, offend, insult or overly manipulative (Ducoffe, 1996). Interactivity is the extent to which the communicator and the audience respond to each other's communication need (Ha & James, 1998, as cited in Gao, Rau, & Salvendy, 2010). Interactive elements in SMS advertising helps mobile users to connect with the product and provides an opportunity to give their feedback through various means such as placing a call, sending a reply SMS, connect to a website etc. Personalisation refers to providing information on products that interest mobile users (Chen & Hsieh, 2012). Advertisers can personalise text messages based on the mobile users' local time, location and preferences. User control refers to mobile users perceived control over SMS advertising as to when to receive, how much to receive and what to receive with a clear choice of opt-in and opt-out facilities (Tucker, 2012). Incentives are specific tangible and intangible rewards given to the mobile users for a possible purchase of products or services. The free gifts, vouches, discounts, free trial etc are part of it (Pietz & Storbacka, 2007, as cited in Keshtgary & Khajehpour, 2011). Privacy concerns refer to mobile users' resistance to SMS advertising regarding the misuse of their personal data for advertising purpose (Cleff, 2007). Self-efficacy refers to the degree to which a mobile user perceives him or herself to be able to understand and use SMS advertising effectively (Lee, Hsieh, & Huang, 2011).

The mobile users' perceptions of informativeness, entertainment, credibility, interactivity, personalisation, user control, incentives, and self-efficacy were found to have positive influence on attitude toward SMS advertising, while the perceptions of irritation and privacy concerns were found to have negative effects on attitude toward SMS advertising (Almossawi, 2014; Choi, Hwang, & McMillan, 2008; Keshtgary & Khajehpour, 2011; Kolla, 2014; Megdadi & Nusair, 2011; Ranjbarian, Gharibpoor, & Lari, 2012; Unal et al., 2011; Wei et al., 2010; Xu, Liao, & Li, 2008). The perceptions of incentives and self-efficacy, apart from influencing attitude, were also found to influence intention to receive and use SMS advertising directly (Lee, Hsieh, & Huang, 2011; and Unal et al., 2011).

Theoretical Framework

Based on the hypothetical relationships drawn from the literature, a theoretical framework of SMS advertising acceptance is presented in Figure 1. The behavioural theories such as TRA, TAM and TPB have been adopted as a basic framework in the proposed model.

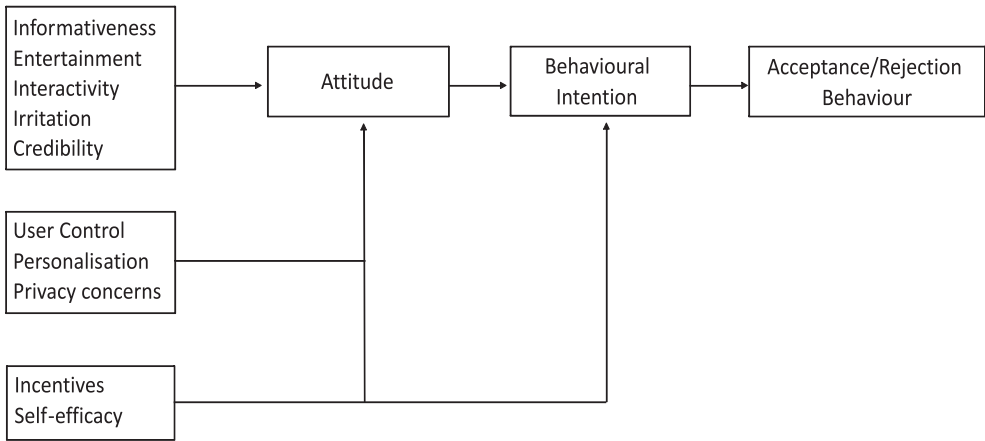


Figure 1. Theoretical framework of SMS advertising acceptance

The following major null hypotheses are constructed based on the review of literature and research objectives (i) and (ii).

- H₀₁: The mobile users' perceptions of informativeness, entertainment, irritation, credibility, interactivity, personalisation, user control, incentives, privacy concerns and self-efficacy will not have any significant influence on their attitude toward the existing system of SMS advertising
- H₀₂: The mobile users' perceptions of incentives, self-efficacy and their attitude will not have any significant influence on their behavioural intention to use the existing system of SMS advertising
- H₀₃: The mobile users' behavioural intention to use the existing system of SMS advertising will not have any significant influence on their acceptance behaviour
- H₀₄: The mobile users' perceptions of informativeness, entertainment, irritation, credibility, interactivity, personalisation, user control, incentives, privacy concerns and self-efficacy will not have any significant influence on their attitude toward Permission based SMS advertising
- H₀₅: The mobile users' perceptions of incentives, self-efficacy and their attitude will not have any significant influence on their behavioural intention to use Permission based SMS advertising
- H₀₆: The mobile users' behavioural intention to use Permission based SMS advertising will not have any significant influence on their acceptance behaviour

Effects of Permission Marketing on SMS Advertising Acceptance

Tripathi and Siddiqui (2008) studied the effectiveness of SMS advertising in Indian context and found that the SMS ads lacked in personalisation, contextualisation and utility, and were disruptive in nature. Haq (2012) conducted a study on attitude towards SMS advertising with reference to Indian mobile users. The results revealed that the mobile users generally had a negative attitude and intention, and exhibited rejection behaviour towards SMS advertising. A survey conducted by Reddy and Rajyalakshmi (2011) on Indian consumers' attitude towards SMS advertising showed that personalisation and permission were the priority for Indian consumers. The results further revealed that the mobile users were in

favour of receiving SMS ads if their preferences were taken into account before sending ads. The positive impact of permission was demonstrated in the studies of Barwise and Strong (2002), Maneesoonthorn and Fortin (2006), Unal et al. (2011), and Wei et al. (2010).

These results imply that the existing system of SMS advertising is unacceptable to the Indian mobile users and the adoption of permission based SMS advertising will have a positive impact on the acceptance of SMS advertising. If permission marketing is employed in the Indian scenario, it is more likely that mobile users will develop positive perceptions, attitude, intentions and acceptance behaviour towards SMS advertising. So, this study, with an attempt to investigate the effects of permission marketing approach on the acceptance of SMS advertising, constructs the following null hypothesis based on the research objective iii.

H_{07} : The mobile users will not differ significantly in their perceptions, attitude, behavioural intention and acceptance behaviour between the existing system of SMS advertising and Permission based SMS advertising

Methodology

The present study, with an aim to find solutions for improving the current state of SMS advertising acceptance, employed One Group Pre-test and Post-test field experiment, which is a type of pre-experimental design. The experimental procedure used in this study is as follows.

Stage I: Pre-test: During the pre-test, the respondents' perceptions, attitude, intention and their acceptance behaviour towards existing system of SMS advertising was measured. Meanwhile, their data such as profile information and willingness to receive permission based SMS advertising was gathered. If respondents were in favour of receiving permission based SMS advertising, then they were asked to indicate their preferred brands/products and its features, for the purpose of tailoring personalised SMS advertisements. Besides, other preferences related to receiving permission based SMS ads such as preferred time, frequency, number of ads to be sent in a day, and its language were collected from them. Finally, they were invited to volunteer for the post-test field experiment. The willing respondents were recruited.

Stage II: Post-test: During the post-test field experiment, permission based SMS advertisements were being sent to the recruits for a period of four weeks. For personalising ad messages the recruits' preferences recorded during the pre-test were taken into account. After the field experiment, the recruits' perceptions, attitude, intention and their acceptance behaviour towards permission based SMS advertising were measured.

Qualitative in-depth interviews: After examining the pre-test and post-test results, a sequential triangulation was performed by conducting one-on-one in-depth interviews with a sample of 30 interviewees to get further insights.

Sample Selection

A non-probability purposive sampling technique is used for the selection of appropriate sample required for the study. The mobile users of Coimbatore city form the sampling frame. For the pre-test survey, as many as 450 potential respondents were contacted.

Among them a number of 418 responded to the interview schedule. From the responses gathered, a total of 413 respondents were finally selected as pre-test sample after removing 5 incomplete interview schedules. Of the pre-test sample, 243 were males (59 per cent) and 170 were females (41 per cent)

From the pre-test sample, it was found that a number of 358 respondents (around 87 per cent) were in favour of receiving permission based SMS advertisements via their mobile phones. Among them, a group of 126 volunteers was selected for the post-test who gave their consent for the field experiment. Finally, 124 participants responded to the post-test interview schedule. In post-test sample, 80 were males (64 per cent) and 44 were females (36 per cent)

Tools and Techniques

Two different interview schedules have been used as data collection tools in this study, each one for pre-test and post-test. In order to ensure the reliability and construct validity of the scales used in these interview schedules, a pilot study was carried out with a sample of 50 respondents. The scales are standardised using Reliability test and Factor analysis.

The interview schedule used for the pre-test consists of three parts. Part I collects data regarding users' demographics, type of mobile phone being used, period of mobile phone ownership, duration and frequency of mobile phone usage. Part II consists of two major scales namely the Acceptance/Rejection Behaviour Scale (ARBS) and SMS Advertising Perception, Attitude, and Intention Scale (SMSAPAIS). These scales measure the acceptance of SMS advertising and its factors in its current format. Part III gathers data regarding mobile users' preferred brands/products using a specimen list of seven categories of products derived from TRAI's partially blocked category, also collects mobile users' preferences such as preferred time, frequency and number of SMS ads to be sent in a day, and preferred language for the purpose of tailoring permission based SMS advertisements, and finally a volunteer acquisition form recruits volunteers for the post-test. The interview schedule used for the post-test measure the acceptance of permission based SMS advertising and its factors with the help of ARBS and SMSAPSIS scales which is similar to the one being used in the pre-test. It also ascertains the mobile users' willingness to adopt permission based SMS advertising.

Findings and Implications

In order to make sense of the data gathered and to address the research problem, the study has used data analysis tools such as Regression Analysis, Paired Samples T-test.

Pre-test Results

Null hypothesis 1 was developed to test the factors influencing the mobile users' attitude towards the existing system of SMS advertising. Table 1 shows the results of multiple regression analysis. The overall model explains 75 per cent of the variance ($R^2=0.745$) in the dependent variable 'attitude' which is statistically significant at 0.001 level ($F=121.526$, $p=0.000 < 0.001$). An examination of the individual predictors reveals that informativeness, credibility, personalisation, and user control have a significant positive influence on the mobile users' attitude; whereas irritation, interactivity and privacy concerns have a significant negative influence on attitude. The predictors such as entertainment, incentives and self-efficacy do not have any significant influence on attitude.

Table 1. Multiple regression—predictors of attitude (Pre-test)

Model Summary		ANOVA						
R	R ²	F	Sig.					
0.867	0.751	121.526	0.000**					
Predictors	Coefficients		SE	T	Sig.	Mean	SD	
	B	Beta						
(Constant)	2.36		0.284	8.304	0.000			
Informativeness	0.178	0.229	0.035	5.114	0.000**	2.402	0.811	
Entertainment	0.007	0.006	0.039	0.169	0.866	2.083	0.594	
Irritation	-0.085	-0.095	0.039	-2.188	0.029*	4.131	0.698	
Credibility	0.593	0.617	0.036	16.378	0.000**	2.315	0.654	
Interactivity	-0.421	-0.351	0.039	-10.846	0.000**	2.418	0.524	
Personalisation	0.418	0.405	0.042	10.009	0.000**	1.965	0.608	
User Control	0.223	0.209	0.047	4.786	0.000**	1.620	0.590	
Incentives	0.040	0.050	0.026	-1.532	0.126	2.634	0.785	
Privacy concerns	-0.144	-0.201	0.024	-6.072	0.000**	4.187	0.880	
Self-efficacy	0.017	0.017	0.035	0.482	0.630	4.357	0.626	
Dependent Variable: Attitude						2.629	0.629	

** : significant at 0.001 level * : significant at 0.05 level

The Beta value indicates that credibility (beta: 0.617) is the strongest predictor of attitude followed by personalisation (beta: 0.405), interactivity (beta: -0.351), informativeness (beta: 0.229), user control (beta: 0.209), privacy concerns (beta: -0.201), and irritation (beta: -0.095). Though irritation has a significant influence on attitude, the lowest Beta value of it signifies that its influence on attitude is minimal.

The mean values in the Table 1 represent the average of various perceptions and attitude of the mobile users on a five-point Likert scale (Strongly disagree=1, Disagree=2, Neither agree nor disagree (Neutral)=3, Agree=4, and Strongly agree=5). The mean value of the attitude (M=2.629) lies below the neutral score of 3. Hence, it is clear that the mobile users generally have an unfavourable attitude towards the existing system of SMS advertising. With regard to perceptions, the existing system of SMS advertising is less informative, less entertaining, less credible, less interactive, less personalised, less incentivised, more irritating & more privacy invasive and provides less degree of user control.

Table 2. Multiple regression—predictors of behavioural intention (Pre-test)

Model Summary		ANOVA						
R	R ²	F	Sig.					
0.706	0.499	135.799	0.000**					
Predictors	Coefficients		SE	T	Sig.	Mean	SD	
	B	Beta						
(Constant)	1.412		0.291	4.857	0.000			
Attitude	0.771	0.571	0.052	14.787	0.000**	2.629	0.629	
Incentives	0.104	0.097	0.042	2.468	0.014*	2.634	0.785	
Self-efficacy	-0.282	-0.216	0.048	-5.844	0.000**	4.357	0.626	
Dependent Variable: Behavioural intention						2.477	0.848	

** : significant at 0.001 level * : significant at 0.05 level

In testing Null hypothesis 2 concerning the factors influencing the mobile users' behavioural intention towards the existing system of SMS advertising a multiple regression analysis has been conducted. Table 2 shows the results. The overall model explains around 50% of the variance ($R^2= 0.499$) in the dependent variable 'Behavioural Intention' which is statistically significant at 0.001 level ($F=135.799$, $p= 0.000 < 0.001$). The mean value of the behavioural intention ($M=2.477$) lies below the neutral score of 3. It suggests that the mobile users in general are not favourably inclined toward receiving and using the existing system of SMS advertising.

An examination of the individual predictors reveals that all the three predictors—attitude, incentives and self-efficacy have a significant effect on behavioural intention. The beta value suggests that among the three predictors, Attitude (0.571) is most influential factor on behavioural intention, followed by self-efficacy (-0.216) and incentives (0.097). The influence of self-efficacy on intention is negative. That is because the mobile users are generally skilled in using SMS advertisements, as the existing system of SMS advertising is unfavourable them, the influence of self-efficacy has become negative.

Table 3. Linear regression—behavioural intention and behaviour (Pre-test)

Model Summary		ANOVA						
R	R ²	F	Sig.					
0.650	0.423	301.033	0.000**					
Predictors		Coefficients		SE	T	Sig.	Mean	SD
		B	Beta					
(Constant)		0.454		0.073	6.256	0.000		
Behavioural Intention		0.481	0.650	0.028	17.350	0.000**	2.477	0.848
Dependent Variable: Acceptance/ Rejection behaviour							1.646	0.627

** : significant at 0.001 level; * : significant at 0.05 level

Null hypothesis 3 was tested to find out the influence of mobile users' behavioural intention on their acceptance/rejection behaviour towards the existing system of SMS advertising. The result shows (Table.3) that around 42 per cent of the variance ($R^2=0.423$) in the dependent variable 'acceptance/rejection behaviour' is explained by the behavioural intention, which is statistically significant at 0.001 level ($F=301.033$, $p=0.000 < 0.001$). Further, the influence of behavioural intention on the mobile users' acceptance/rejection behaviour is significantly positive at 0.001 level ($p=0.000 < 0.001$) ($\beta=0.650$). It implies that increase in behavioural intention corresponds to the increase in acceptance of the existing system of SMS advertising. Since acceptance/rejection behaviour of the mobile users has been measured using a 3-point Likert scale, its mean value ($M=1.646$), which is far below the neutral score of 2, indicates that the mobile users generally exhibit rejection behaviour toward the existing system of SMS advertising.

Post-test Results

Testing of Null hypothesis 4 regarding the factors influencing mobile users' attitude towards the permission based SMS advertising is shown in the Table 4. The overall model explains 82 per cent of the variance ($R^2= 0.822$) in the dependent variable 'attitude' which is statistically significant at 0.001 level ($F=52.208$, $p=0.000 < 0.001$). An examination of the individual predictors reveals that the predictors such as informativeness, credibility,

personalisation, and user control have a significant positive influence on the mobile users' attitude towards the permission based SMS advertising; while privacy concerns have significant negative influence on the attitude. Other predictors such as entertainment, irritation, interactivity, incentives and self-efficacy do not have any significant influence on their attitude.

Table 4. Multiple regression—predictors of attitude (Post-test)

Model Summary		ANOVA						
R	R ²	F	Sig.					
0.907	0.822	52.208	0.000**					
Predictors	Coefficients		SE	T	Sig.	Mean	SD	
	B	Beta						
(Constant)	1.395		0.398	3.507	0.001			
Informativeness	0.484	0.472	0.062	7.869	0.000**	4.310	0.412	
Entertainment	0.074	0.111	0.042	1.773	0.079	3.039	0.630	
Irritation	-0.060	-0.055	0.067	-0.904	0.368	1.360	0.384	
Credibility	0.387	0.347	0.075	5.171	0.000**	4.347	0.380	
Interactivity	-0.035	-0.049	0.043	-0.812	0.419	3.593	0.597	
Personalisation	0.572	0.578	0.071	8.104	0.000**	4.315	0.428	
User Control	0.184	0.210	0.053	3.487	0.001**	4.224	0.483	
Incentives	0.072	0.087	0.056	1.277	0.204	4.060	0.513	
Privacy concerns	-0.196	-0.259	0.047	-4.158	0.000**	2.559	0.560	
Self-efficacy	0.035	0.037	0.046	0.772	0.441	4.664	0.443	
Dependent Variable: Attitude						4.565	0.423	

** : significant at 0.001 level * : significant at 0.05 level

The beta value indicates that personalisation (beta: 0.578) is the strongest predictor of attitude followed by informativeness (beta: 0.472), credibility (beta: -0.347), privacy concerns (beta: -0.259), and user control (beta: 0.210). The mean value of the attitude (M=4.565) lies above the neutral score of 3 on a five-point Likert scale. Hence, it is clear that mobile users generally have a favourable attitude towards the permission based SMS advertising. With regard to perceptions, Permission based SMS advertising is more informative, more credible, more interactive, more personalised, more incentivised, providing more user control and less privacy invasive.

Table 5. Multiple regression—predictors of behavioural intention (Post-test)

Model Summary		ANOVA						
R	R ²	F	Sig.					
0.768	0.590	57.581	0.000**					
Predictors	Coefficients		SE	T	Sig.	Mean	SD	
	B	Beta						
(Constant)	0.357		0.395	0.905	0.367			
Attitude	0.886	0.765	0.087	10.167	0.000**	4.565	0.423	
Incentives	0.015	0.016	0.068	0.217	0.829	4.060	0.513	
Self-efficacy	-0.021	-0.019	0.069	-0.301	0.764	4.664	0.443	
Dependent Variable: Behavioural intention						4.363	0.490	

** : significant at 0.001 level * : significant at 0.05 level

Null hypothesis 5 aims to find out the significant predictors of mobile users’ behavioural intention towards the permission based SMS advertising. The results show (table.5) that the overall model explains around 59 per cent of the variance ($R^2=0.590$) in the dependent variable ‘Behavioural Intention’ which is statistically significant at 0.001 level ($F=57.581, p=0.000 < 0.001$). The mean value of the behavioural intention ($M=4.363$) lies above the neutral score of 3. It suggests that the mobile users are more favourably inclined towards receiving and using the permission based SMS advertising. An examination of the individual predictors reveals that among the three predictors, attitude has a significant effect on behavioural intention, while incentives and self-efficacy are insignificant predictors.

Table 6. Linear regression—behavioural intention and behaviour (Post-test)

Model Summary		ANOVA						
R	R ²	F	Sig.					
0.754	0.569	161.159	0.000**					
Predictors	Coefficients		SE	T	Sig.	Mean	SD	
	B	Beta						
(Constant)	-0.746		0.264	-2.829	0.005			
Behavioural Intention	0.762	0.754	0.060	12.695	0.000**	4.363	0.490	
Dependent Variable: Acceptance/ Rejection Behaviour						2.580	0.495	

** : significant at 0.001 level * : significant at 0.05 level

Testing of Null hypothesis 6 was done to examine the influence of behavioural intention on the acceptance/rejection behaviour towards the permission based SMS advertising. The results show (Table 6) that around 56 per cent of the variance ($R^2=0.566$) in the dependent variable ‘acceptance/rejection’ behaviour is explained by the behavioural intention, which is statistically significant at 0.001 level ($F=161.159, p=0.000<0.001$). Further, the influence of behavioural intention on mobile users’ acceptance/rejection behaviour is positively significant at 0.001 level ($p=0.000<0.001$) ($\beta=0.754$). It implies that increase in behavioural intention corresponds to the increase in acceptance of the permission-based SMS advertising. Since acceptance/rejection behaviour of the mobile users are measured using a 3-point Likert scale, its mean value ($M=2.560$), which is higher than the neutral score of 2, indicates that mobile users generally exhibit acceptance behaviour towards the permission based SMS advertising.

Pre-test Vs. Post-test Results

A paired samples t-test was conducted to test Null hypothesis 7, that is, mobile users will not differ significantly in their perceptions, attitude, behavioural intention and acceptance behaviour between the existing system of SMS advertising and Permission-based SMS advertising. The results show (Table 7) that Permission marketing approach has a significant effect on the acceptance of SMS advertising. Statistically significant mean differences are shown in the mobile users’ various perceptions such as informativeness, entertainment, irritation, credibility, interactivity, personalisation, user control, incentives, and privacy concerns and in their attitude, intention and behaviour between the existing system of SMS advertising and Permission-based SMS advertising. The mobile users’ perceptions, attitude, behavioural intention and acceptance/rejection behaviour are more favourable for the permission based SMS advertising, but are unfavourable for the existing system of SMS advertising.

Table 7. Paired sample t-test—Pre-test vs. Post-test

Pair	Variables		Mean	SD	Mean difference	T	df	Sig.																																																																																																																														
1	Informativeness	Pre	2.211	0.779	-2.098	-27.745	123	0.000**																																																																																																																														
		Post	4.310	0.412					2	Entertainment	Pre	1.955	0.458	-1.084	-15.411	123	0.000**	Post	3.039	0.630	3	Irritation	Pre	4.366	0.577	3.005	53.085	123	0.000**	Post	1.360	0.384	4	Credibility	Pre	2.236	0.624	-2.111	-29.235	123	0.000**	Post	4.347	0.380	5	Interactivity	Pre	2.402	0.492	-1.191	-14.891	123	0.000**	Post	3.593	0.597	6	Personalisation	Pre	1.824	0.438	-2.49	-42.443	123	0.000**	Post	4.315	0.428	7	User Control	Pre	1.460	0.336	-2.765	-53.765	123	0.000**	Post	4.224	0.483	8	Incentives	Pre	2.468	0.658	-1.593	-19.616	123	0.000**	Post	4.061	0.513	9	Privacy concerns	Pre	4.159	1.003	1.599	14.347	123	0.000**	Post	2.559	0.560	10	Attitude	Pre	2.602	0.621	-1.962	-31.392	123	0.000**	Post	4.565	0.423	11	Intention	Pre	2.465	0.800	-1.898	-22.013	123	0.000**	Post	4.363	0.490	12	Acceptance/Rejection Behaviour	Pre	1.467	0.667	-1.112
2	Entertainment	Pre	1.955	0.458	-1.084	-15.411	123	0.000**																																																																																																																														
		Post	3.039	0.630					3	Irritation	Pre	4.366	0.577	3.005	53.085	123	0.000**	Post	1.360	0.384	4	Credibility	Pre	2.236	0.624	-2.111	-29.235	123	0.000**	Post	4.347	0.380	5	Interactivity	Pre	2.402	0.492	-1.191	-14.891	123	0.000**	Post	3.593	0.597	6	Personalisation	Pre	1.824	0.438	-2.49	-42.443	123	0.000**	Post	4.315	0.428	7	User Control	Pre	1.460	0.336	-2.765	-53.765	123	0.000**	Post	4.224	0.483	8	Incentives	Pre	2.468	0.658	-1.593	-19.616	123	0.000**	Post	4.061	0.513	9	Privacy concerns	Pre	4.159	1.003	1.599	14.347	123	0.000**	Post	2.559	0.560	10	Attitude	Pre	2.602	0.621	-1.962	-31.392	123	0.000**	Post	4.565	0.423	11	Intention	Pre	2.465	0.800	-1.898	-22.013	123	0.000**	Post	4.363	0.490	12	Acceptance/Rejection Behaviour	Pre	1.467	0.667	-1.112	-14.959	123	0.000**	Post	2.580	0.495						
3	Irritation	Pre	4.366	0.577	3.005	53.085	123	0.000**																																																																																																																														
		Post	1.360	0.384					4	Credibility	Pre	2.236	0.624	-2.111	-29.235	123	0.000**	Post	4.347	0.380	5	Interactivity	Pre	2.402	0.492	-1.191	-14.891	123	0.000**	Post	3.593	0.597	6	Personalisation	Pre	1.824	0.438	-2.49	-42.443	123	0.000**	Post	4.315	0.428	7	User Control	Pre	1.460	0.336	-2.765	-53.765	123	0.000**	Post	4.224	0.483	8	Incentives	Pre	2.468	0.658	-1.593	-19.616	123	0.000**	Post	4.061	0.513	9	Privacy concerns	Pre	4.159	1.003	1.599	14.347	123	0.000**	Post	2.559	0.560	10	Attitude	Pre	2.602	0.621	-1.962	-31.392	123	0.000**	Post	4.565	0.423	11	Intention	Pre	2.465	0.800	-1.898	-22.013	123	0.000**	Post	4.363	0.490	12	Acceptance/Rejection Behaviour	Pre	1.467	0.667	-1.112	-14.959	123	0.000**	Post	2.580	0.495																		
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		Post	3.593	0.597					6	Personalisation	Pre	1.824	0.438	-2.49	-42.443	123	0.000**	Post	4.315	0.428	7	User Control	Pre	1.460	0.336	-2.765	-53.765	123	0.000**	Post	4.224	0.483	8	Incentives	Pre	2.468	0.658	-1.593	-19.616	123	0.000**	Post	4.061	0.513	9	Privacy concerns	Pre	4.159	1.003	1.599	14.347	123	0.000**	Post	2.559	0.560	10	Attitude	Pre	2.602	0.621	-1.962	-31.392	123	0.000**	Post	4.565	0.423	11	Intention	Pre	2.465	0.800	-1.898	-22.013	123	0.000**	Post	4.363	0.490	12	Acceptance/Rejection Behaviour	Pre	1.467	0.667	-1.112	-14.959	123	0.000**	Post	2.580	0.495																																										
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** : significant at 0.001 level * : significant at 0.05 level

Theoretical Implications

Developing a conceptual model of SMS advertising acceptance with the help of behavioural theories and existing literature, the study has attempted to explain the phenomenon of SMS advertising acceptance in two different contexts; the existing system of SMS advertising and permission-based SMS advertising. In both contexts, the conceptual model has shown the adequate explanatory power.

Diverging from the earlier studies which saw permission as one of the predictors of attitude, this study has approached permission as an approach towards SMS advertising. The findings have confirmed that the permission-based SMS advertising approach is effective in terms of generating positive perceptions, attitude, intentions and acceptance behaviour among the mobile users.

Though the irritation has a significant negative influence on attitude in the existing system of SMS advertising, its effects on attitude is too minimal. It is because of the tolerance that the mobile users have towards SMS advertising. In-depth interviews reveal that the telemarketing calls are more irritating for mobile users than the SMS ads. In the permission based SMS advertising, irritation has no significant role to play on attitude as the perceived irritation is significantly lower among the mobile users.

Incentives given via SMS ads do not have any significant influence on the attitude towards the existing system of SMS advertising and permission based SMS advertising. In-depth interviews show that in the existing system of SMS advertising, incentives are plenty, but majority of them are irrelevant and useless. So, the incentives do not have any significant influence on attitude. In the permission based SMS advertising, though incentives are relevant and useful, its influence on attitude is insignificant as the incentives are given for only the products that the mobile users prefer.

The factors such as informativeness, credibility and personalisation exert a significant positive influence on attitude towards SMS advertising in both the existing system of SMS advertising and permission-based SMS advertising contexts. In the existing system of SMS advertising context, credibility is the most significant factor influencing attitude as the SMS ads are primarily unsolicited and unwanted. In the Permission-based SMS advertising context, personalisation is the most significant factor influencing attitude as the SMS ads are mainly personalised.

User control is relatively a new dimension in the SMS advertising. The control given to the mobile users regarding what, when and how much SMS advertising they want receive into their mobile phones has a significant positive influence on their attitude towards SMS advertising in both the existing system of SMS advertising and permission-based SMS advertising contexts.

Self-efficacy of the mobile users does not have any significant influence on attitude towards SMS advertising in both the existing system of SMS advertising and permission-based SMS advertising. However, self-efficacy has a significant negative influence on the intention towards receiving and using the existing system of SMS advertising. This might be because of the fact that the existing system of SMS advertising is unfavourable to the mobile users. So, their higher level of self-efficacy exerts a negative influence at the intentional level. But in permission-based SMS advertising, self-efficacy does not have any significant influence on intention. Since, the mobile users are more favourable towards the permission based SMS advertising, their intention to receive and use the permission-based SMS advertisements is chiefly determined by their attitude, not by their self-efficacy.

Managerial Implications

As a key implication, this study suggests the marketers to adopt the practice of permission marketing in SMS advertising. It is because, in the existing system of SMS advertising, the marketers and network providers are targeting the mobile users with unsolicited SMS ads. This results in the mobile users developing rejection behaviour towards the SMS advertising. If this trend persists, it may retard the growth of SMS advertising as a genuine advertising medium. Therefore, if permission marketing is adopted, as demonstrated in this study, it will generate a positive impact among the mobile users and consequently lead them to accept SMS advertising.

The mobile phone is personal in nature. So, the privacy concerns regarding the misuse of personal information are stronger among mobile users. The findings revealed that the mobile users are concerned about their privacy even in permission-based SMS advertising context. So, once the marketers and access providers have the mobile users' personal information, they should not share it with any other third parties. They should self-regulate themselves from doing such malpractices.

The major limitation of SMS advertising is it could offer only a little entertainment value. Simply reading the text adverts of 160 characters without audio-visuals makes the

mobile users feel only a little entertainment value. However, still marketers can improve the entertainment value by adding emotional and humour appeals in the messages.

The interactivity is one of the unique features of mobile phones, however, in the existing system of SMS advertising interactivity is perceived as a negative element. This is because of the mobile users' unpleasant past experiences in using interactive elements. This was corroborated during in-depth interviews. Some mobile users think that the use of interactive elements is a waste of time, which leads to unexpected money loss, data and talk-time losses. So, the marketers should use interactive elements more sensibly in the ads in a way that will not harm the mobile users.

Policy Implications

Most of the mobile users (76 per cent) who participated in this study are not aware of the Dial 1909 provisions of TRAI; they don't know how to stop the unsolicited SMS ads that are bombarded at them. So, TRAI should undertake a major initiative to educate the mobile users regarding its provisions related Unsolicited Commercial Communications.

The mobile users are apprehensive of the fact that the Dial 1909 provisions are not protecting them from unsolicited SMS ads. The findings reveal that the mobile users, who have activated Dial 1909, are also vulnerable to unsolicited SMS ads. They still receive SMS ads from access providers and other marketers. It exemplifies the fact that the present regulation is ineffective.

Kumar and Srihari (2013) conducted a critical review on 'The Telecom Commercial Communications Customer Preference Regulations, 2010'. They found that the explicit control over the choice of preferred content/product delivered via SMS ads, frequency and timing of delivery, and the convenient opt-in and opt-out facilities were absent in the present regulations. While these are the core elements of the permission based SMS advertising. So, similar to the marketers who need to adopt permission marketing, the present regulations should also be modified to incorporate the key tenets of permission marketing approach.

Conclusion

The present study, with an aim to find solutions for improving the current state of SMS advertising acceptance, approached the research problem with three major objectives. With the first objective, the study has investigated the factors influencing the mobile users' acceptance of the existing system of SMS advertising. The findings reveal that the mobile users' perceptions of informativeness, irritation, credibility, interactivity, user control, personalisation, and privacy concerns have a significant influence on their attitude towards the existing system of SMS advertising. The mobile users' attitude and their perceptions of self-efficacy and incentives have a significant influence on their behavioural intention to receive and use the existing system of SMS advertising. The behavioural intention of the mobile users has a significant influence on their acceptance/rejection behaviour. Further, the study demonstrated that the SMS advertising in its current format is unacceptable to the mobile users. They are generally not willing to receive SMS ads and are not intending to use it for consumption purposes. Their attitude towards the existing system of SMS advertising is generally unfavourable. This is because of the fact that the marketers, including network providers, frequently bombard them with unsolicited SMS advertisements. So, the advertisements are mostly irrelevant and not useful to the mobile

users. It results in the mobile users developing unfavourable tendencies towards the existing system of SMS advertising. If these trends continue in future, it may stunt the growth of SMS advertising as a genuine advertising medium in India.

With the second objective, the study has investigated the factors influencing the mobile users' acceptance of permission-based SMS advertising. The findings show that the mobile users' perceptions of personalisation, informativeness, credibility, user control and privacy concerns are the significant predictors of attitude in the permission-based SMS advertising. The mobile users' attitude significantly influences their behaviour intention to receive and use the permission-based SMS advertisements. Finally, the behavioural intention of the mobile users has a significant influence on their acceptance/rejection behaviour. The findings further showed that the permission-based SMS advertising has gained favourable acceptance among the mobile users. They are willing to receive and are intending to use it for consumption purposes in a favourable manner. This is mainly because of the permission based and personalised nature of the SMS advertising. The ads are more relevant and useful to the mobile users. So, it results in the mobile users developing more favourable perceptions and attitude towards the permission-based SMS advertising.

Finally, with the third objective, the study has analysed the effects of permission-based SMS advertising approach on the acceptance of SMS advertising. The findings confirm that the permission-based SMS advertising approach has a significant positive impact on the mobile users' acceptance of the SMS advertising. The mobile users significantly differ in their perceptions, attitude, intentions and acceptance/rejection behaviour between the existing system of SMS advertising and permission-based SMS advertising. Their perceptions, attitude, behavioural intention and acceptance/rejection behaviour are more favourable for the permission based SMS advertising, but unfavourable for the existing system of SMS advertising.

So, in conclusion the study suggests that the adoption of permission marketing will be ideal for improving the current scenario of SMS advertising acceptance in Indian setting. Therefore, in order to make SMS advertising a meaningful practice, it is imperative for the marketers to stop targeting the mobile users with unsolicited SMS advertisements and to send SMS advertisements that provide more value to the mobile users by embracing the practice of permission marketing. Besides, the present regulations concerning the practice of SMS advertising should also be amended to be in line with permission marketing approach.

Limitations and Delimitations: The study is unique while addressing the existing research gap 'the possible effects of Permission marketing on SMS advertising acceptance in Indian Setting. As the field experiment is conducted in Coimbatore city, generalising findings to the total Indian population is the major limitation of the study. Employing a control group or a comparison group is not feasible in this study as SMS advertisements cannot be sent to mobile users without getting their prior permission. So, a single group pre-test and post-post field experiment was chosen for the study. Also adopting field experiment has its own advantage, because, unlike the experiments conducted in laboratory setting, the field experiments render more ecological validity.

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