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Consumers' Attitude and Perception towards Short Message Service (SMS) Advertising through Mobile Phones

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ABSTRACT

In India there are over 1170 million mobile subscribers and it is increasing day by day. This has paved the way for many companies of goods and services in the state to manage their sales promotions through the mobile telephone platform. SMS marketing is one of the most popular kinds of mobile marketing. The present research investigates consumer's attitude and perception towards SMS advertising and a descriptive research design is made to extract the relevant factors bearing on consumer attitude towards SMS based advertisements and users actual behavior. A sample of 110 smart phone users from Malappuram District of Kerala state has been taken for the study by using convenient sampling method. Malappuram district consist of 25 lakh smart phone users due to time and cost constraints sample size it's fixed to 110. The data required for the study were collected by using of the interview schedule method. The questionnaire was prepared in English language, the investigator recorded the responses in the instrument. The instrument consist of five point scale Likert scale statements relating to attitude and perception towards short message service (SMS) advertising through mobile phones. The collected data analyzed by employing factor analysis and independent sample t-test. The result reveal that there are no difference in perception towards privacy in relation to SMS advertisements among male and female. The study also found that privacy and disturbance related perception factors, purchase intention related perception factors and finally content related perception factors are the leading factors contributing to the perception towards SMS advertisements.

1. Introduction

In the current scenario, mobile internet applications enable consumers to access a variety of services: Web information search, SMS (short message service), MMS (multimedia message service), banking, payment, gaming, e-mailing, chat, weather forecast, GPS (global positioning service), and so forth. Collectively, we denominate this wide array of services as "m-commerce." These digital media are considered to potentially improve the possibilities to reach consumers by allowing personalization of the content and context of the message. Combining customer's user profile and the context situation, advertising companies can provide the target customers exactly the advertisement information they desire, not just "spam" them with irrelevant advertisements. Mobile advertising is a brand new phenomenon. Yunos *et al*. (2003) defined mobile advertising as marketing and advertising activities that deliver advertisements to mobile devices using wireless networks and mobile advertising solutions to promote goods and services and build brand awareness. The unprecedented technological development in mobile devices, mobile computing and mobile web has resulted in significant growth of mobile commerce, which refers to one or two---way exchange of value facilitated by a mobile device (MMA, 2010). In the context of retailing, mobile commerce encompasses shopping via the Internet---enabled mobile devices (i.e., smartphones and tablets) that is rapidly emerging as a new retail channel. A study done by Heinonen & Strandvik (2003) showed that mobile channels are perceived to be more personal than traditional and email channels. This creates high expectations for the relevance of marketing communication messages. A consumer expects messages to be personal and of high interest and this makes the disappointment greater when they get undesired messages.

2. Objectives of the study

The following are the important objectives of the study

1. To assess the number of mobile phone users in India
2. To identify the general attitude of the people towards SMS advertising.
3. To evaluate the factors affecting the attitude of the customers towards SMS advertising.

Hypothesis

1. There is no significant difference in perception towards privacy in relation to SMS advertisements among male and female.

3. Research Methodology

This study consists of 110 samples customers of mobile users in the area of Malappuram district of Kerala. The data set include, primary data were collected by field survey method using a structured questionnaire and secondary data were collected from various data bases, Internet, Business articles, business periodicals, TRAI (Telecom Regulatory Authority of India) report etc. Apart from this data, the leading journals and magazines relating to mobile advertising sector were also referred for this study. In the present study the technique used by the researcher is a non-probability sampling method of purposive sampling. The respondents are purposively selected on the basis of ownership of the mobile. Further they are

considered on the basis of using mobiles and receiving SMS advertisements and interesting to give response towards questionnaire. In these study areas, the total numbers of respondents are 110 which include various Questionnaire is the main tool for data collection and the questions are on five point Likert scale from strongly disagree (1) to strongly agree (5), the field survey method was adopted for collection of data. The data is analyzed through simple percentage method independent sample t-test, factor analysis etc.

4. Result and discussion

Table -1 Wireless Subscribers in India

Area	November 2017**(in millions)**	December 2017**(in millions)**
Urban	664.94	668.44
Rural	497.53	499
Total	1162.47	1167.44

Source: Telecom Regulatory Authority of India Report 2017

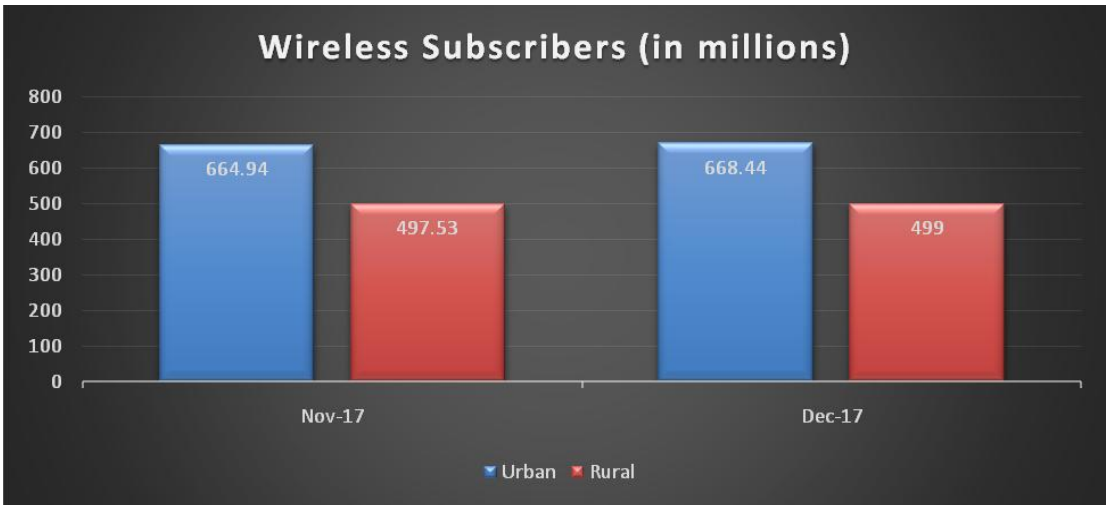


Figure -1 Wireless Subscribers in India

Total wireless subscribers (GSM, CDMA & LTE) increased from 1,162.47 million at the end of Nov-17 to 1,167.44 million at the end of Dec-17, thereby registering a monthly growth rate of 0.43%. The Wireless subscription in urban areas increased from 664.94 million at the end of Nov-17 to 668.44 million at the end of Dec-17, and wireless subscriptions in rural areas also increased from 497.53 million to 499.00 million during the month. The monthly growth rates of urban and rural wireless subscription were 0.53% and 0.29% respectively. The growth in the number mobile subscribers shows the prospects advertising through mobile phones. There is a wide scope for SMS advertisements in India.

Table 2. Demographic features of respondents

Demographic variable	frequency	Percntage
Gender		
Male	65	59.09
Female	45	40.91
Occupation		
Government service	53	48.2
Privet employees	12	10.9
Students	9	8.2
Business	26	23.6
Others	10	9.1
Monthly Income		
Below 15000	49	44.5
15000-25000	36	32.7
25000-45000	17	15.5
45000-55000	8	7.3

The demographic profile of the respondents shows that 59.09% of the respondents are male and40.91% of the respondents are female. The table also shows that 48.2% of the respondents are government employees. 44.5% of the respondents have an income of below Rs.15000.Income level,

education and gender have greater role in influencing consumer behavior towards SMS advertisements.

Factors influencing perception towards SMS advertisements through mobile phone

There are many factors influencing on the formulation of perception towards SMS advertisements through mobile phone. Taking all 13 variables for next stage analysis is not necessary because respondents might have similar perception for one or two variables. To reduce 13 variables into a minimum manageable number of variables factor analysis is applied. The variables are grouped by exploring common dimensions available among the variables

Table 3- KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.580
Bartlett's Test of Sphericity	Approx. Chi-Square	268.850
	Df	78
	Sig.	.000

Before going for factor analysis, suitability of data for the purpose of factor analysis has to be tested. KMO test and Bartlett's test are two such examinations. The value of KMO of 0.580 shows that a factor analysis is useful for the present data. Bartlett's test of Sphericity indicates whether the correlation matrix is an identity matrix, which would show that the variables are unrelated. The significance level gives the outcome of the trial. Hither, the significant value is 0.000 which suggests that there exist significant relationships among the variables. The resultant value of KMO test and Bartlett's test indicate that the present data is useful for factor analysis.

The next step in the process is to decide about the number of factors to be derived. The thumb rule is factors which are having 'Eigen values' greater than unity can be accepted. For the use of extraction Principal Component Analysis method is applied. The Component metrics so formed is further rotated orthogonally using a Varimax rotation algorithm for convenience factors are cut to three. After the rotation all the program lines are loaded with the three ingredients. The results so obtained have been given in the tables separately along with factor loadings.

Table 4 Total Variance Explained on Interest

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.712	20.861	20.861	2.180	16.770	16.770
2	1.900	14.616	35.477	1.966	15.122	31.892
3	1.367	10.518	45.996	1.834	14.104	45.996
4	1.237	9.517	55.513			
5	1.124	8.648	64.161			
6	.975	7.500	71.661			
7	.792	6.089	77.750			
8	.655	5.038	82.788			
9	.616	4.735	87.523			
10	.481	3.697	91.220			
11	.456	3.511	94.731			
12	.414	3.181	97.913			
13	.271	2.087	100.000			

From the 13 statements only 5 statements have Eigen values more than 1. This means that these 5 statements can be used to explain maximum variance in the characteristics of people. The total variance accounted by all the three factors is 45.996 percent. This means that significant amount of variance is explained by the reduced three factors alone. Therefore it is better to take three variables alone for further analysis. Among the three factors, the first factor accounts for around 17 percent of variance.

Table 5 Rotated component matrix

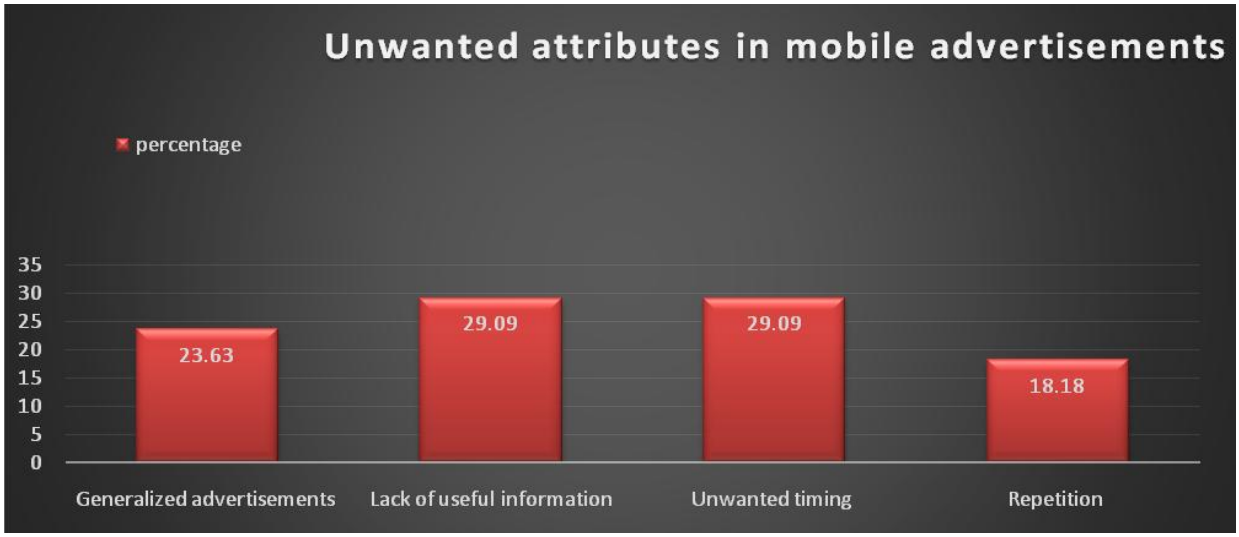
Statements	**Component**		
	1	2	3
SMS advertisements are sending without prior permission	.754		
It reduces privacy	.752		

Getting unwanted messages	.698		
Fear of spam and unsolicited messages	.551		
SMS advertisements are misleading consumers		.702	
SMS advertisements are mainly focused for premium products		.660	
SMS advertisements are induce me to purchase		.609	
Getting sufficient knowledge of product for purchase		.403	
I would like to read SMS advertisements, which are easy to read and understandable			.718
Location based advertisements are good for further action			.603
SMS advertisements should be in regional language			.564
Short content of SMS advertisements are good			.553

From the rotated component matrix it is clear that the first factor is having four statements, the second factor is having four statements and the third factor is having four statements. Based on the statements included in the factors can be named. The reduced three factors are privacy and disturbance related perception factors, purchase intention related perception factors and finally content related perception factors

Table 6-Unwanted attributes in mobile advertisements

Attribute	Frequency	Percentage
Generalized advertisements	26	23.63
Lack of useful information	32	29.09
Unwanted timing	32	29.09
Repetition	20	18.18



Figue 2- Unwanted attributes in mobile advertisements

Table 2 and figure 2 show that unwanted attributes in mobile advertiseents. It is inferencecd that 29.09 percent of the respondents are identified that SMS advertisements are does not contetnt useful information, again the 29.09 percent people responded that advertismettns are sending in unwanted timing. 23.63 percent of the total respondent says that SMS advertisemets are generalised in nature and rest of the people opinioned that SMS advertisemts are repitive in nature.

Table –7 independent sample t- test -Group Statistics

Statement	Gender	N	Mean	Std. Deviation	Std. Error Mean
I have the Fear of spam and unsolicited messages	MALE	65	3.17	1.140	.141
	FEMALE	45	2.96	1.147	.171
Getting unwanted messages	MALE	65	3.31	1.074	.133
	FEMALE	45	3.62	.912	.136
I Concerned about my privacy and personal data	MALE	65	3.68	.970	.120
	FEMALE	45	4.00	.929	.139
SMS advertisements are sending without prior permission	MALE	65	3.98	.893	.111
	FEMALE	45	3.91	.949	.142

Assumptions		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
I have the Fear of spam and unsolicited messages	Equal variances assumed	.242	.624	.964	108	.337
	Equal variances not assumed			.963	94.379	.338
Getting unwanted messages	Equal variances assumed	1.056	.306	-1.604	108	.112
	Equal variances not assumed			-1.653	103.491	.101
I Concerned about my privacy and personal data	Equal variances assumed	.630	.429	-1.747	108	.083
	Equal variances not assumed			-1.761	97.335	.081
SMS advertisements are sending without prior permission	Equal variances assumed	.334	.564	.414	108	.680
	Equal variances not assumed			.409	90.929	.683

The *p*-value of Levene's test and for t test is greater than ".000" for all statements, so we accept the null of Levene's test and conclude that there is no variance in perception towards privacy in relation with SMS advertisements of male is not significantly different than that of female. It had observed $p > \alpha$, then we would have used the "Equal variances assumed"

5. Conclusion

Mobile technology's magical characteristics of an anywhere, anytime, easy to use personal device makes it one of the strongest channels for retail shopping. All the same, despite of all the inherent advantages of mobile shopping, adoption remains low. This field, therefore is an early step in the way of seeing the role of psychographic and behavioral components that encourage or inhibit customer intention to utilize mobile devices for shopping and purchase. It can be understood from the psychoanalysis of the results that a bulk of the collected respondents are favored to get the SMS ads if their tastes are accepted into consideration before sending the ads and further those who are disagree they have a negative attitude toward SMS ads. By dissecting the results it is found that some of the mobile users are getting wild while getting SMS ads due to inconvenient at times when they are in use and especially at working hours therefore the advertisers need to see the time convenience of the customers while sending the SMS ads. According to TRAI (Telecom Regulatory Authority of India), an average Indian sends 29 text messages a month. Text messages in India are not only applied for personal communication. People hold back their bank balances, book tickets for movies, check air ticket and train ticket status, pay their bills, and do loads more. The response rate for text message marketing in India is real impressive. One in every three urban Indians has responded to such marketing campaigns either by forwarding the messages to his friends or by naming the sender to obtain more inside information.

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