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Network Providers' SMS Advertisement: Customers' Perspective

Md. Shak Forid¹, Md. Nazrul Islam²

***Abstract :** Network providers communicate the offers through SMS advertisement - an exclusive way of direct communication. The purpose of this study is to understand the level of customer annoyance and to identify the factors related to customer annoyance in respect to SMS advertisements on network provider's own offerings. The research has been conducted based on structured questionnaires and data has been collected through a convenience sample from Dhaka City. Descriptive analysis has been done and the factors have been determined through factor analysis. The result shows that a good number of factors extracted creating customer annoyance viz. incomprehensible, disturbance, price lag, misleading, redundant, and tenant.*

***Keywords:** SMSs advertisement, customer annoyance.*

Introduction

Today's technology savvy generation makes mobile phone a part of the daily life. Mobile technologies are upgraded day by day. Every moment it adds more and more values for us. The growth of mobile telecommunication industry in Bangladesh is remarkable. At the end of July 2013 total number of Mobile Phone subscribers in Bangladesh has reached 106.934 million (Bangladesh Telecommunication Regulatory Commission [BTRC], 2013). The prospect of mobile marketing in Bangladesh is notable. Mobile reaches its levels from communication to the financial transaction viz. mobile banking by bKash as example. The mobile phone, the best medium of direct and individualized customer communication, enables the advertiser to communicate the customer anytime and anywhere (Bauer et al., 2005). The advertisers usually communicate the products' merit through Short Message Service (SMS), Voice Message Service (VMC), and Multimedia Message Service (MMS) as direct personalized contact over mobile phone. SMS, the 160-character service, has been the most successful non-voice service for mobile operators in the history of telecommunications (Zabadi et al., 2012).

Statement of the Problem

In recent times the Mobile phone operators in Bangladesh advertise their services via SMS and MMS to gain competitive advantage over others. The mobile phone subscribers in Bangladesh are getting the SMSs from operators immensely covering the welcome tune package, internet package, SMS/MMS package, and different priced packages of services etc almost in every day. Though these SMSs from operators are important for the customers to select the right timing packages,

¹ Assistant Professor, School of Business, Ahsanullah University of Science and Technology, Dhaka -1208, Bangladesh

² Senior Lecturer, Department of Business Administration, Prime University, Mirpur, Section-1, Dhaka 1216, Bangladesh

repeated receiving of SMSs creates customer annoyance. Lack of research in this area validates the present study.

Literature Review

According to Mobile Marketing Association [MMA] (2014, p. 3), 'Mobile messaging refers to the discipline of opt-in, push marketing to individual consumers, via connected devices'. Categories of mobile messaging are SMS, MMS, Push Notifications, Cross Channel Messaging, Over the Top Messaging and Instant Messaging (MMA, 2014, p. 5). SMS has become one of the most popular mobile applications for users and a profitable business for mobile operators (Mahatanankoon and O'Sullivan, 2008).

Mobile network operators are now sending the SMSs for their different products (mobile product, internet service, value added services etc) which are annoying the subscribers.

According to askdefine Online Dictionary (n.d), '...Annoyance is an unpleasant mental state that is characterized by such effects as irritation and distraction from one's conscious thinking. It can lead to emotions such as frustration and anger'.

Though the consumers are reluctant to try and accept increasing use of mobile services in response to advertising without their trust, the marketers are publicizing brand related information through mobile (Davis et al., 2011). Tsang et al. (2004) studied on consumers' attitudes toward mobile advertising, and found that sending SMS without prior consent of the recipient creates negative attitude toward mobile advertisement.

Rau et al. (2011) studied to investigate the influence of content relevance and delivery time on SMS advertising effect in terms of attitude, purchase intention, and involvement; and found that SMS advertisements are delivered on Monday and weekends creates best effects and the customer acceptance and purchase intention showed on the delivery of SMS in afternoon and evening hours.

Chowdhury et al. (2006) studied on four constructs - entertainment, informativeness, irritation, and credibility- to understand the consumer attitude toward mobile advertising in Bangladesh as an emerging market; and found that the customers will not be annoyed of pleasing mobile advertisement and they will gradually like the ads, and also credibility of the message is the most significant factor that affects respondent's attitude toward mobile advertisement.

Drosses et al. (2007) conducted an experimental study to investigate the significance of a number of factors – location and time, interactivity, incentive,

credibility, appeal, product involvement, and attitude toward SMS advertising in general and found that attitude toward the advertisement, attitude toward the brand, and purchase intention are directly influenced by the factors – interactivity, incentive, appeal, product involvement, and attitude toward SMS advertising in general. The response of the respondents on receiving the mobile advertisements was negative.

Waldt et al. (2009) studied on the SMS advertisement focusing on the younger consumer segment of South Africa to determine relationships between consumer perceptions of the value of entertainment, informativeness, irritation and credibility of SMS advertisements and consumers' overall attitude toward SMS advertisements. They found that the consumers' perceptions of the value of entertainment, informativeness and credibility of SMS advertisements are positively correlated to consumers' overall attitudes towards SMS advertisements. Whereas the consumers' perceptions of the irritation of SMS advertisements is negatively correlated with consumers' attitudes towards SMS advertisements. In general the consumers have the negative attitudes towards SMS advertisements.

Davis et al. (2011) studied and found that the reputation of the vendor, disposition to trust, structural assurance, perceived ease of use, third party assurance and perceived privacy have the maximum impact on consumer trust.

Cortés & Vela (2013) studied on the antecedents of consumers' negative attitudes toward SMS advertising, and examined irritation, privacy concerns, and intrusiveness perception are the main factors that provoke a negative attitude toward SMS advertising. They found that consumers' irritation, which has a major negative effect on attitude toward SMS ads, is the subsequent result of perceived intrusiveness on mobile phones which is affected by the privacy concerns.

Though the researchers of different regions investigated on the different aspects of SMS advertisement but no research has been conducted from the perspective of the customer annoyance in respect of the SMS advertisements on own offerings which led the researcher to conduct the study.

Objectives of the Research

The research was conducted:

- i. to understand the level of customer annoyance toward the SMS advertisements on network provider's own offerings; and
- ii. to identify the factors related to customer annoyance in respect to SMS advertisements on network provider's own offerings.

Methodology

In order to attain the objective of the study a questionnaire was developed and applied which consists of 26 questions and statements. The first 5 questions of the questionnaire relate to the demography of the respondents including gender, age, profession, monthly income and education; next 3 questions relate to (i) the subscribers' choice of the respondents, (ii) number of SMSs receiving every day, and (iii) categories of SMSs including three options (Table 3); then a single (9th) question relates to understand the level of perception towards 'SMS advertisements on network provider's own offerings' (Table 4); and finally 17 statements were inserted to have the response following the 'annoying perceptions' of the 9th question. A five-point Likert Scale was used in all these 17 statements where 1 means 'strongly disagree' and 5 means 'strongly agree'. The Scale was also used for question 9 where 1 means 'fully convinced' and 5 means 'fully annoyed'.

The questionnaires were distributed to a conveniently selected sample of 150 respondents and 130 fully filled-up questionnaires were identified. The status of questionnaires is as follows:

Table 1: Status of the Questionnaires

Questionnaires distributed for the study	Fully filled-up questionnaires	Response on 'SMS advertisements on network provider's own offerings' (See Table 3)	Number of annoyed customer (fully and somewhat) (See Table 4)	Seventeen statements applied for factor analysis
150	130	118	104	104

The demography of the respondent is shown in Appendix 1.

The descriptive statistical measures were used to understand the perception mean toward 'network provider's own offerings'. The factor analysis, taking into consideration the 17 statements designed to understand the subscribers' annoyance, was done.

For overall calculation, the statistical software SPSS 16.0 was used.

Validation of Sample

The Cronbach's coefficient alpha was used to test the reliability of sample which ranges between 0 (i.e. no internal reliability) and 1 (i.e. perfect internal reliability).

Table 2: Reliability Statistics

Cronbach's Alpha	N of Items
0.817	17

The result (Table 2) indicates a good estimate of reliability as it exceeds the acceptable value of 0.70 recommended by Nunnally (1978). This indicates that the data were found as eligible for further analysis.

Findings and Analysis

Among the six mobile phone subscribers, GP is at the top position holding 44.666 million active subscribers (Appendix 2). As the market is mature, the competitors are competing with each other to capture customers and uphold its position in industry.

Most of the respondents are the user of Airtel i.e. 35.38% and Grameenphone i.e. 31.54% (Appendix 3). Most of the respondents (40.77%) are receiving more than 5 SMSs everyday from the respective network operator (Appendix 4).

Table 3: Categories of SMSs received

	Frequency	Percent	Cumulative Percent
SMS advertisements on network provider's own offerings	118	90.77	90.77
Government notice	9	6.92	97.69
Commercial advertisement	3	2.31	100.00
Total	130	100	

Source: Survey

Out of 130 respondents 118 respondents i.e. 90.77% reported of having the 'SMS advertisements on network provider's own offerings' (Table 3). Among them 104 (i.e. 88.14%) of the respondents are annoyed of receiving the 'SMS advertisements on network provider's own offerings' (Table 4). The perception mean towards the SMSs receiving from network providers for its own offerings is 4.26 indicating a significant level of customer annoyance. The perception means of all the statements are above the neutral level 3 which indicate that the customers are annoyed on all the aspect queried to them (Appendix 5).

Table 4: Levels of Perception of Respondents who have received 'SMS advertisements on network provider's own offerings'

	Frequency	Percent	Cumulative Percent
Fully Annoyed	57.00	48.31	48.31
Somewhat Annoyed	47.00	39.83	88.14
Neutral	4.00	3.39	91.53
Somewhat Convinced	8.00	6.78	98.31
Fully Convinced	2.00	1.69	100.00
Total	118	100	
Mean = 4.26, Std. Error of Mean = 0.086			

Source: Survey

The application of factor analysis was deemed to be appropriate as the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.712 which is more than 0.6 value suggested by Tabachnik & Fidell (2001) and Bartlett's Test of Sphericity was significant at 1% level as the significant value is about 0.00 (Table 5).

Table 5: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.712
Bartlett's Test of Sphericity	Approx. Chi-Square	557.828
	df	136
	Sig.	0.000

It is assumed that before extraction, the communalities are all 1. In the factor analysis, the extraction communalities indicate the amount of variance in each variable accounted for by the factors. All the communalities (Table 6) are above 0.5 indicating a satisfactory quality of measurement (Anastasiadou, 2011).

Table 6 : Communalities

(Extraction Method: Principal Component Analysis)

	Initial	Extraction
V1. SMS comes in Mobile without permission.	1.000	.681
V2. SMSs break the concentration.	1.000	.670
V3. SMS advertisements don't come on time.	1.000	.704
V4. Reading the SMSs consumes valuable time.	1.000	.626
V5. Important SMSs get ignored with bulk of junk ones.	1.000	.627
V6. Most of the SMSs are unnecessary.	1.000	.607
V7. Offers on SMSs are often misleading in nature.	1.000	.679
V8. Repeated SMSs on same type of packages create boringness.	1.000	.527
V9. Most of the SMSs are very short that are not understandable.	1.000	.790
V10. Contents in the SMS ads are sometimes ambiguous.	1.000	.684
V11. Unacceptable SMS occupies the storage space and the memory of the mobile.	1.000	.666
V12. SMS advertisement focuses on premium (expensive) products.	1.000	.744
V13. Some SMSs induce for extra expenditures.	1.000	.715
V14. SMSs, useful for specific customer segment, are usually sent to all subscribers and that make costs to them (which can be regarded as cheating).	1.000	.630
V15. Based on SMS, accepting any pack creates problem.	1.000	.707
V16. English letters used for writing local language are not clearly understandable.	1.000	.657
V17. Network operators do not bother for any complain of stopping SMS.	1.000	.782

There are six number of factors (Table 7) kept based on the criteria of eigenvalue, which represent the total variance explained by each of the factors, is greater than 1 (Kaiser, 1960). For the six factors, the cumulative variance has been found

67.623% which overcomes the extraction of factors in the level of cumulative variance at least 60% recommended by Zikmund et al. (2012, p. 653).

Table 7: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared			Rotation Sums of Squared		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.417	25.982	25.982	4.417	25.982	25.982	2.498	14.693	14.693
2	2.155	12.674	38.656	2.155	12.674	38.656	2.426	14.272	28.965
3	1.448	8.516	47.171	1.448	8.516	47.171	1.895	11.145	40.110
4	1.341	7.887	55.059	1.341	7.887	55.059	1.675	9.852	49.961
5	1.113	6.548	61.607	1.113	6.548	61.607	1.623	9.547	59.508
6	1.023	6.016	67.623	1.023	6.016	67.623	1.380	8.115	67.623
7	.909	5.347	72.971						
8	.823	4.844	77.815						
9	.729	4.290	82.105						
10	.614	3.612	85.717						
11	.543	3.193	88.910						
12	.433	2.548	91.458						
13	.363	2.132	93.591						
14	.352	2.071	95.662						
15	.281	1.653	97.314						
16	.242	1.424	98.739						
17	.214	1.261	100.000						

The Varimax Rotated Component/Factor Matrix with Kaiser Normalization was done to pile the variables in the specific factors (Table 8). The factors were identified by the largest loading as well as examining the minimum loading to confirm the identification of the factors (Gorsuch, 1983). The loading of all the variables included in the respective factor overcome the significant value of loading greater than 0.3 (Hair et al., 1998).

Table 8: Rotated Component Matrix^a

Variables	Component (Factor)					
	1	2	3	4	5	6
V1		.774				
V2		.767				
V3	.551	.526				
V4		.738				
V5				.698		
V6					.647	.302
V7				.703		
V8	.418					.484
V9	.857					
V10	.783					
V11						.772
V12	.430		.360		.569	
V13			.676			
V14			.768			
V15			.312		.693	
V16	.477			.342		
V17		.375	.650		.444	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 9 iterations.

The title of each of the factors determined and loaded variables to respective variables are as follows:

Factor 1: Incomprehensible

- V3: SMS advertisements don't come on time.
- V9: Most of the SMSs are very short that are not understandable.
- V10: Contents in the SMS ads are sometimes ambiguous.
- V16: English letters used for writing local language are not clearly understandable.

Factor 2: Disturbance

- V1: SMS comes in Mobile without permission.

V2: SMSs break the concentration.

V4: Reading the SMSs consumes valuable time.

Factor 3: Price Lag

V13: Some SMSs induce for extra expenditures.

V14: SMSs, useful for specific customer segment, are usually sent to all subscribers and that make costs to them (which can be regarded as cheating).

V17: Network operators do not bother for any complain of stopping SMS.

Factor 4: Misleading

V5: Important SMSs get ignored with bulk of junk ones.

V7: Offers on SMSs are often misleading in nature.

Factor 5: Redundant

V6: Most of the SMSs are unnecessary.

V12: SMS advertisement focuses on premium (expensive) products.

V15: Based on SMS, accepting any pack creates problem.

Factor 6: Tenant

V8: Repeated SMSs on same type of packages create boringness.

V11: Unacceptable SMS occupies the storage space and the memory of the mobile.

A comprehensive model (Figure 1) can be developed based on the determined six factors. The factors lead to the customer annoyance. Annoyed customer may reject the offers or move towards alternatives that will lead the decrease of sales of operators or decreasing the market share.

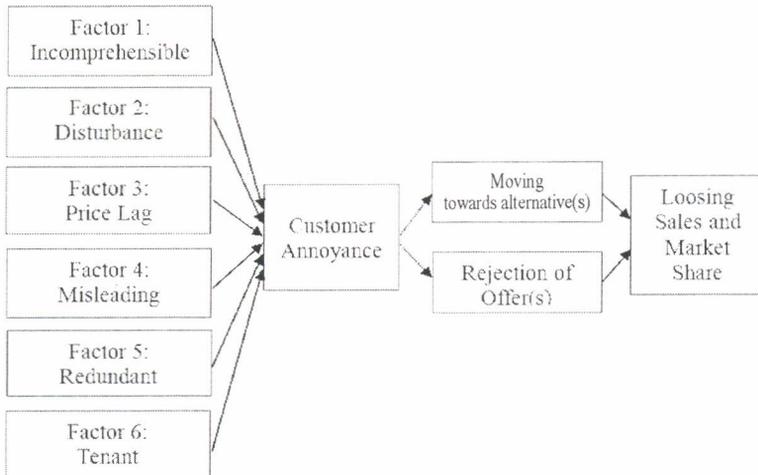


Figure 1: Factors Leading Customer Annoyance towards the SMSs

Recommendations

In respect to the identified factors, the following suggestion can be made for the improvement of SMS advertisement as a communication tool:

- Mobile network operators should send clear messages at the right time with the right languages (i.e. Bangla front for bangla word and/or English front for English word).
- The customized SMSs advertisement should be ensured.
- Toll free call should be ensured so that the customers enjoy product information by calling the operators.
- An all-inclusive SMS (i.e. a single SMS for all updated offers for current day) may carry a good sense.
- Mobile application for packages useful for different operating systems (like Android, iOS, Windows, etc) of smart phone with toll free updating option may be launched.
- Built-in option in basic/featured phone with a separate hub for storing messages may reduce the annoyance of customers.
- Finally, operators should make a positive sense of SMS advertisement.

Conclusions

Service quality has long been the most research topic for the marketing scholars to understand the customers' experience. The complaints of the customers regarding the services are being overlooked by most of the companies in different industries worldwide. This research shows a general perception on SMSs giving the direction

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of fully customer dissatisfaction and finalizes the factors responsible for the customers' annoyance or irritation. In this regard the companies should rethink of selecting the alternative ways of communicating, inducing and engaging the customers.

Future research

More research may be conducted on the outcomes of subscribers' annoyance and its impact on the sales of a particular operator and/or the customers' switching tendency to other operators.

Appendix 1: Demography of the Respondents

Category	Frequency	Percent	Cumulative Percent
Gender	Male	75	57.69
	Female	55	42.31
Age	18-20	14	10.77
	20 - 30	69	53.08
	30 - 40	33	25.38
	40 - 50	11	8.46
	50 - 60	0	0.00
	60 and Above	3	2.31
Education Level	Below SSC	4	3.08
	SSC	9	6.92
	HSC	11	8.46
	Degree (Honors/Pass)	26	20.00
	Masters	74	56.92
	M Phil/PhD	6	4.62
Occupation	Teacher	36	27.69
	Serviceholder	47	36.15
	Businessman	14	10.77
	Student	27	20.77
	Housewife	3	2.31
	Retired	3	2.31
Monthly Household Income	No income or less than Tk. 5,300	35	26.9
	Tk. 5,300 – 10,000	12	9.2
	Tk. 10,000 – 25,000	34	26.2
	Tk. 25,000 – 50,000	27	20.8
	Tk. 50,000 – 1, 00,000	21	16.2
	Tk. 1,00,000 and above	1	0.8
N =130			

Source: Survey

Appendix 2: The Mobile Phone subscribers at end of July 2013 in Bangladesh

Operators	Active Subscribers (in Millions)
Grameen Phone Ltd. (GP)	44.666
Banglalink Digital Communications Limited (Banglalink)	27.324
Robi Axiata Limited (Robi)	23.770
Airtel Bangladesh Limited (Airtel)	7.897
Teletalk Bangladesh Ltd. (Teletalk)	1.916
Pacific Bangladesh Telecom Limited (Citycell)	1.361
Total	106.934

Source: BTRC (2013): www.btrc.gov.bd

Appendix 3: Respondents to Different Operators

Operators	Frequency	Percent	Cumulative Percent
Airtel	46	35.38	35.38
Banglalink	23	17.69	53.08
Citycell	1	0.77	53.85
Grameen Phone	41	31.54	85.38
Robi	18	13.85	99.23
Teletalk	1	0.77	100.00
Total	130	100	

Source: Survey

Appendix 4: Number of SMSs receiving every day

Number of SMSs	Frequency	Percent	Cumulative Percent
0 - 1	9	6.92	6.92
2 - 3	26	20.00 [*]	26.92
4 - 5	42	32.31	59.23
above 5	53	40.77	100.00
Total	130	100	

Source: Survey

Appendix 5: Perception Mean

	Mean	Std. Error of Mean
V1. SMS comes in Mobile without permission.	4.37	0.089
V2. SMSs break the concentration.	4.31	0.075
V3. SMS advertisements don't come on time.	3.88	0.106
V4. Reading the SMSs consumes valuable time.	4.26	0.075
V5. Important SMSs get ignored with bulk of junk ones.	4.60	0.054
V6. Most of the SMSs are unnecessary.	4.34	0.077
V7. Offers on SMSs are often misleading in nature.	4.12	0.082
V8. Repeated SMSs on same type of packages create boringness.	4.27	0.067
V9. Most of the SMSs are very short that are not understandable.	3.71	0.093
V10. Contents in the SMS ads are sometimes ambiguous.	3.98	0.077
V11. Unacceptable SMS occupies the storage space and the memory of the mobile.	4.45	0.064
V12. SMS advertisement focuses on premium (expensive) products.	4.08	0.071
V13. Some SMSs induce for extra expenditures.	4.37	0.056
V14. SMSs, useful for specific customer segment, are usually sent to all subscribers and that make costs to them (which can be regarded as cheating).	4.31	0.060
V15. Based on SMS, accepting any pack creates problem.	4.24	0.081
V16. English letters used for writing local language are not clearly understandable.	4.03	0.085
V17. Network operators do not bother for any complain of stopping SMS.	4.24	0.085

Source: Survey

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