A Study of Mobile Subscriber's Inclination towards DND Registration

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ABSTRACT *Although mobile advertising is popular among advertisers due to direct reach to customers and relatively low tariffs or cheaper than other medium however it has brought with it serious issues of invasion of privacy and has become a major irritant to customers. To overcome this problem, TRAI has promulgated "The Telecom Commercial Communication Customer Preference Regulation, 2012". According to this regulation, advertisers can not send commercial messages to DND registered mobile users. The present paper has made an attempt to study the relationship between demographic variables (sex, age, marital status, education and income) with DND registration. The present paper found that majority of respondents is DND registered. Chi-square results show that there is significant relationship between demographic variables and DND registration. Males, married, above 18 age, higher educated and high income group respondents have shown more interest towards DND registration. The present paper may help businesses or advertisers devise and design mobile advertising more effectively and efficiently in their market endeavours.*

Introduction

Mobile advertising refers to advertisements sent to mobile devices and other handheld devices which people carry with them (Salo & Tahtinen, 2005). The mobile phone is one of the few devices, which people carry throughout day. The rapid boost of mobile technology and subscribers has introduced mobile advertising as part of the marketing mix (Lebhar friedman, 2006). Mobile advertising provides a high rate of personalization, interactivity and a low cost of reaching large target audiences at right time and in the right place (Anckar 2002; Facchetti et al., 2005). Therefore, mobile advertising is a very important tool for all advertisers. With second highest mobile subscriber's base, mobile is looking a very effective medium for marketing goods and services to the end users in India. But mobile advertising has brought with it serious issues of invasion of privacy and has become a major irritant to customers. TRAI has issued "The Telecom Commercial Communication Customer Preference Regulation, 2012". According to regulation, advertisers can not send commercial messages to DND registered mobile users. TRAI maintains NDNC register for this purpose. NDNC refers to the national do not call registry maintained by TRAI of India and consists of mobile phone numbers of customers who do not want to receive unsolicited commercial messages from marketers or advertisers.

DND (Do not Disturb) Registration

TRAI has issued, "The telecom commercial communication customer preference regulation, 2012". According to this regulation, advertisers/telemarketers cannot send commercial messages to DND registered mobile subscribers. A Mobile subscriber and Landline subscriber can stop marketing/commercial calls and messages. There is only one solution for that 1909. You can block all commercial calls or messages (fully blocked) or partially blocked. You can block all commercial calls and messages or you can block some selected categories. It means you can receive calls and messages from non-blocked categories. These categories are (1) Banking/ Financial Products/Credit Cards (2) Real Estate (3) Education (4) Health (5)Consumer goods and automobiles (6) Communication/ Broadcasting/ Entertainment/ IT (7) Tourism and Leisure. You can choose one or more categories. For fully blocked category, write "START 0" and send it to 1909 through same mobile in which you want to block commercial messages. For partially blocked category (to receive commercial messages only from education sector), write "START

3" and send it to 1909. To receive commercial messages only from education and health, write "START 3, 4" and send it to 1909. On successful registration customer will receive an SMS confirming exercised options and a unique registration number within 24 hrs. The registration will be effective within 7 days. 1909 is toll free number. After DND registration if DND registered customer receives any commercial message than in such a case he/she can complain it. Customers can change his/her preferences. Customers can be De-registered their selves later. For De-registration write "STOP" and send it to 1909.

The importance of evaluating the relationship between demographic variables with DND registration cannot be ignored. Every organisation has limited resources and only a part of total budget is used for advertising activities. Today's world is more competitive and only those organisations can increase their sales or survive who uses less costly medium for advertising with wider spread towards targeted customers. Mobile advertising is relatively less costly medium and have huge subscriber's base but advertisers cannot send commercial messages to DND registered subscribers. Advertiser/telemarketer who sends commercial messages to DND registered numbers is punishable. So, there is need to identify the demographic features of non DND registered subscribers. So that they can be targeted accordingly and mobile advertising can be used more effectively and efficiently in their market endeavours.

Research Design
Objective of the study

To analyse and evaluate the association between demographic variables and mobile user's inclination towards DND registration

Null Hypotheses

H_0 **(1):** There is no significant relationship between Sex of the respondents and DND registration.

H0 (2): There is no significant relationship between Age of the respondents and DND registration.

H_0 **(3):** There is no significant relationship between Marital Status of the respondents and DND registration.

H_0 **(4):** There is no significant relationship between Education of the respondents and DND registration.

H_0 **(5):** There is no significant relationship between Income of the respondents and DND registration.

Locale of the study and Population
The study was conducted in Haryana during the months of Sep-Nov, 2012. Population consist all mobile subscribers of Haryana.

Sampling Method, Sample Size and Sample Unit
Convenience non-random sampling method was followed. Online questionnaire was filled by 200 respondents. Data was analysed on the basis of responses provided by 200 respondents. Individual mobile user was sample unit.

Research Instrument and Method
Online survey was conducted with the help of Google docs. Well-structured questionnaire was developed for conducting the study. Questionnaire was designed to obtain demographic information about respondent's sex, education, marital status, age and income. Second part of the questionnaire was to obtain other information like mobile service provider and DND registration. It also contained open ended questions.

Analysis of data
The collected data through questionnaire was coded and analysed by cross-tabulation with row and column percentage. It was analysed by Chi-square test also by using SPSS version 20 for windows through the study.

Distribution of Respondents
54% of respondents were male and 46% female (Table-I). 10.5% respondents belong to the age group of 'Below 18 years' while highest (49.5%) were in the age group of '18-30' and 31% were in the age group of '31-45' and rest 9% of age '46 and above' (Table-II). Majority of respondents (62%) were married (Table-III). 17.5% respondents were 'under graduate', 13% were 'graduate', 40% were 'post graduate' and 29.5% were 'other higher' (Table-IV). Respondents were almost equal in different income groups ranging 28% to 22.5% (Table-V). 53.5% respondents were DND registered (Table-VI).

	Frequency	Percent
Male	108	54.0
Female	92	46.0
Total	200	100.0

	Frequency	Percent
married	124	62.0
unmarried	76	38.0
Total	200	100.0

Table-IV Education level of the respondents

	Frequency	Percent
Under Graduate	35	17.5
Graduate	26	13.0
Post Graduate	80	40.0
Other Higher	59	29.5
Total	200	100.0

	Frequency	Percent

Below 18	21	10.5
18-30	99	49.5
31-45	62	31.0
46 and above	18	9.0
Total	200	100.0

Table-V Income level of the respondents(Monthly)

	Frequency	Percent
Below 10000	56	28
10000-30000	53	26.5
30001-50000	46	23
Above 50000	45	22.5
Total	200	100

Table-VI Do Not Disturb (DND) registration

	Frequency	Percent
Yes	107	53.5
No	93	46.5
Total	200	100.0

Analytical Results
Chi-square value indicates that whether any significant relationship occurs between the demographic variables and DND registration. Chi-square sig. value more than .05 indicates that there is no significant relationship between demographic variables and DND registration.

* Relationship between demographic variable (SEX) and DND registration.

Table-VII Sex * DND Registration (Cross Tabulation)

Sex of the respondents		DND Registration		Total
		Yes	No	
Male	Count	65	43	108
	% within Sex of the respondents	60.2%	39.8%	100.0%
	% within DND Registration	60.7%	46.2%	
Female	Count	42	50	92
	% within Sex of the respondents	45.7%	54.3%	100.0%
	% within DND Registration	39.3%	53.8%	
Total % within DND Registration	Count	107	93	200
		100.0%	100.0%	100.0%

Table-VII (a) Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.218	1	.040
N of Valid Cases	200		

Pearson Chi-square sig. value is .040 which is less than .05 indicate that there is significant relationship between the demographic variable (SEX) and DND registration. Hence, null hypothesis H_0(1) is rejected. Male are more DND registered (60.7%) than female. Out of total male respondents 60.2% are DND registered and Out of total female respondents 45.7% are DND registered.

* Relationship between demographic variable (Age) and DND registration.
Table-VIII Age of respondents * DND Registration (Cross Tabulation)

Age of the respondents		DND Registration		Total
		Yes	No	
Below 18	Count	4	17	21
	% within Age of the respondents	19.0%	81.0%	100.0%
	% within DND Registration	3.7%	18.3%	
18-30	Count	57	42	99
	% within Age of the respondents	57.6%	42.4%	100.0%
	% within DND Registration	53.3%	45.2%	
31-45	Count	36	26	62
	% within Age of the respondents	58.1%	41.9%	100.0%
	% within DND Registration	33.6%	28.0%	
46 and above	Count	10	8	18
	% within Age of the respondents	55.6%	44.4%	100.0%
	% within DND Registration	9.3%	8.6%	
Total	Count	107	93	200
	% within DND Registration	100.0%	100.0%	100.0%

Table-VIII (a) Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.231	3	.011
N of Valid Cases	200		

Pearson Chi-square sig. value is .011 which is less than .05 indicate that there is significant relationship between the demographic variable (Age) and DND registration. Hence, null hypothesis H0 (2) is rejected. Highest DND registered (53.3%) from '18-30' age group after that 33.6% from '31-45' age group and 9.3% from '46 and above' age group and only 3.7% from 'Below 18' age group. Among 'Below 18' age group of respondents 19% DND registered. Among age group '18-30' 57.6%, among age group '31-45' 58.1% and 55.6% respondents among '46 and above' age group are DND registered.

- Relationship between demographic variable (Marital status) and DND registration.

Table-IX Marital status of respondents * DND Registration (Cross Tabulation)

Marital status of the respondents		DND Registration		Total
		Yes	No	
Married	Count	74	50	124
	% within Marital status of the respondents	59.7%	40.3%	100.0%
	% within DND Registration	69.2%	53.8%	
Unmarried	Count	33	43	76
	% within Marital status of the respondents	43.4%	56.6%	100.0%
	% within DND Registration	30.8%	46.2%	
Total % within DND Registration	Count	107	93	200
		100.0%	100.0%	

Table-IX (a) Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.005	1	.025
N of Valid Cases	200		

Pearson Chi-square sig. value is .025 which is less than .05 indicate that there is significant relationship between the demographic variable (Education) and DND registration. Hence, null hypothesis H_0 (3) is rejected. Married respondents are more DND registered 69.2% than Unmarried. Out of total married 59.7% and out of total unmarried respondents 43.4% are DND registered.

- Relationship between demographic variable (Education) and DND registration.

Table-X Education level of respondents * DND Registration (Cross Tabulation)

Education level of the respondents		DND Registration		Total
		Yes	No	
Under Graduate	Count	11	24	35
	% within Education level of the respondents	31.4%	68.6%	100.0%
	% within DND Registration	10.3%	25.8%	
Graduate	Count	12	14	26
	% within Education level of the respondents	46.2%	53.8%	100.0%
	% within DND Registration	11.2%	15.1%	
Post Graduate	Count	49	31	80
	% within Education level of the respondents	61.3%	38.8%	100.0%
	% within DND Registration	45.8%	33.3%	
Other Higher	Count	35	24	59
	% within Education level of the respondents	59.3%	40.7%	100.0%
	% within DND Registration	32.7%	25.8%	
Total	Count	107	93	200
	% within DND Registration	100.0%	100.0%	100.0%

Table-X (a) Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.153	3	.017
N of Valid Cases	200		

Pearson Chi-square value is .017 which is less than .05 indicate that there is significant relationship between the demographic variable (Education) and DND registration. Hence, null hypothesis H0 (4) is rejected. Highest DND registered are post graduate 45.8%) after that other higher educated (32.7%). Rest of 21.5% DND registered are under graduate or graduate. Among total under graduate respondents 31.4% are DND registered, among total graduate respondents 46.2% are DND registered, among total post graduate respondents 61.3% are DND registered and among total other higher educated respondents 59.3% are DND registered.

- Relationship between demographic variable (Income) and DND registration.

Table-XI Income level of respondents * DND Registration (Cross Tabulation)

Income level of the respondents in Rs.(Monthly)		DND Registration		Total
		Yes	No	
Below 10000	Count	21	35	56
	% within Income level of the respondents(Monthly)	37.5%	62.5%	100.0%
	% within DND Registration	19.6%	37.6%	
10000-30000	Count	27	26	53
	% within Income level of the respondents(Monthly)	50.9%	49.1%	100.0%
	% within DND Registration	25.2%	28.0%	
30001-50000	Count	29	17	46
	% within Income level of the respondents(Monthly)	63.0%	37.0%	100.0%
	% within DND Registration	27.1%	18.3%	
Above 50000	Count	30	15	45
	% within Income level of the respondents(Monthly)	66.7%	33.3%	100.0%
	% within DND Registration	28.0%	16.1%	

| Total | Count | 107 | 93 | 200 |
| | % within DND Registration | 100.0% | 100.0% | 100.0% |

Table-XI (a) Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.722	3	.013
N of Valid Cases	200		

Pearson Chi-square sig. value is .013 which is less than .05 indicate that there is significant relationship between the demographic variable (Income) and DND registration. Hence, null hypothesis H0 (5) is rejected. Respondents of high income group are more (28%) DND registered. 27.1% from income group '30001-50000', 25.2% from income group '10000-30000' and lowest 19.6% from 'Below 10000' income group are DND registered. Out of total respondents from Income group '10000-30000', '30001-50000' and 'Above 50000' DND registered are 50.9%, 63% and 66.7% respectively. But out of income group 'Below 10000' only 37.5% DND registered.

Findings and Suggestions

1) Pearson Chi-square sig. value for DND registration with all demographic variables (Sex, Age, Marital Status, Education level and Income) are less than .05. Statistical results revels that there is significant relationship between DND registration and demographic variables of respondents. So, marketers and advertisers must take into account customer's demographic variables while framing advertising strategies

2) Researcher found that relatively males are more DND registered than females. The preference of males towards DND registration can be understood as they are busier in their work/professional life. Females are comparatively less educated and professionally equipped that leads to lower level of DND registration on their part. Marketers/advertisers should take it as an opportunity to target female customers by catering the needs of females.

3) DND registration among age group '18-30' '31-45' and '46 and above' is 57.6%, 58.15% and 55.6% respectively (Table-VIII). It shows that in age groups more than 18 years majority of respondents (more than 50%) is inclined towards DND registration. Among total respondents of 'below 18' age group, only 19% are DND registered. So, advertisers should target children or minors through mobile advertising. In crux, mobile as a medium of advertisement may prove good for those advertisement/commercial messages which are targeted to children or minors.

4) Out of total married respondents, 59.7% DND registered. Out of total unmarried respondents, 43.4% DND registered (Table-IX). Married are more DND registered than unmarried. Most of unmarried are 'below 18' age group. Again statistical results support that mobile advertisement is more prudent for unmarried or age group 'below 18'.

5) Mobile users, which are Post Graduate or above are more DND registered than Graduates and below Graduates (Table-X). Almost 'below Graduates' are 'below 18' age group. As per statistical results, mobile advertising is good for Graduates and for below Graduates.

6) As income increases, probability of DND registration also increases. High income group respondents are more DND registered than Low income group respondents (Table-XI). As per statistical results, mobile advertising is good for Low income group customers.

7) Table-VI shows that 53.5% respondents are DND registered. Mobile advertising is relatively cheap medium than other medium of advertising and it has direct reach to customers but on other side more than 50% respondents are DND registered. So, There is need to give monetary incentives or other benefits (like discount coupons, some free calls etc.) to induce/motivate mobile users to De-Registered their selves.

Conclusion

Mobile advertising attracts advertisers due to low tariff and direct reach to customers. But it has brought with it serious issues of invasion of privacy and has become a major irritant to customers. To resolve this issue, TRAI has issued "The Telecom Commercial Communication Customer Preference Regulation, 2012". According to regulation, advertisers can not send commercial messages to DND registered mobile users. This study was conducted to study the relationship of DND registration with different demographics like sex, age, marital status, education and income. Advertisements/commercial messages through mobiles, should send preferably to female mobile users and if they are targeted to males than they should 'below 18' age. Targeted customers should neither higher educated nor having higher income. In crux mobile advertisement may prove good for Female customers, Minor customers, 'Below 18' age customers, Unmarried customers, Graduate or below Graduate customers and customers whose monthly income approx. less than 10000 Rs. More than 50% respondents are DND registered. So, There is need to give monetary incentives or other benefits (like discount coupons, some free calls etc.) to induce mobile users to De-Registered their selves.

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