

## THE PERCEPTION OF SMS ADVERTISING INTRUSIVENESS DIFFERS BETWEEN AGE GROUP

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### *Abstract*

Short messaging system (SMS) has overtaken the means of communicating and interacting between individuals today, regardless of age, gender, social class and boundaries. Organizations around the world today have incorporated SMS into their strategic marketing communication plans as one vital tool to reach out to their target customers. It rapidly becomes a vital media vehicle since it has precision targeting, personalization, customization and measurability, impact, persuasiveness and interactivity. Age is a widely used demographic variable to characterize the adoption of technologies between two or more consumer groups (Morris and Venkatesh, 2000). There are certain differences exist in their behavior because of their inherent motivational needs. This paper is looking at the perceptions of different age group towards the intrusiveness of SMS advertising and how their perception could affect their brand loyalty and purchase intention. 550 questionnaires were distributed to mobile phone users using systematic stratified random sampling method.

Keywords: SMS advertising, advertising intrusiveness, permission marketing

### *Abstrak*

Sistem pesan singkat (SMS) merupakan sarana berkomunikasi dan berinteraksi antara individu, tanpa memandang usia, jenis kelamin, kelas sosial dan batas-batas. Organisasi di seluruh dunia saat ini telah memasukkan SMS ke rencana strategis komunikasi pemasaran mereka sebagai salah satu alat vital untuk menjangkau target pelanggan mereka. Dengan cepat menjadi sarana yang penting karena memiliki presisi penargetan, personalisasi, kustomisasi dan terukur, persuasi dan interaksi. Umur adalah variabel demografis yang banyak digunakan untuk menandai adopsi teknologi antara dua atau lebih kelompok konsumen (Morris dan Venkatesh, 2000). Ada perbedaan tertentu yang ada dalam perilaku mereka karena kebutuhan yang berbeda. Penelitian ini menguji persepsi dari kelompok umur yang berbeda terhadap campur tangan iklan SMS dan bagaimana persepsi mereka dapat mempengaruhi loyalitas merek mereka dan niat beli. 550 kuesioner didistribusikan kepada pengguna ponsel menggunakan metode sampling *stratified random* sistematis.

Kata kunci: SMS advertising, advertising intrusiveness, permission marketing

JEL Classification: M31

### **1. Research Background**

By the end of September 2007, there are 22.1 million subscriptions of cellular mobile service users in a country with a population of 27.3 million. The mobile cellular service market is among the more matured markets in the region with a penetration rate of 80.8 per 100 inhabitants (SKMM, 2007). SMS advertising is a form of direct marketing thus it shares the same advantages such as precision targeting, personalization, customization and measurability (Yeshin, 1998).

Though its advantages include impact, persuasiveness and interactivity, its major disadvantages of high cost per customer and its level of intrusiveness may need to be looked at seriously before an advertiser embark on using this channel for marketing communication. (Leiderman, 1990; Stone, 1996; Wunker and Hughes, 2001; Rohm and Sultan, 2005; Grant and O'Donohoe, 2007; Xu, 2006/2007; and Muk and Babin, 2006).

Advertising intrusiveness is an individual cognitive process, perceived to be disruptive to thought processes and activities (Li, Edwards and Lee, 2002). It is the degree of an unwanted marketing communication messages that interferes with an individual's cognitive process and tasks (Marimoto and Chang, 2006) and described as the degree an advertisement interrupts the flow of editorial unit (Ha, 1996). Advertising intrusiveness has been recognized as a cause of annoyance (Bauer and Greyser, 1968) because of its ability to influence consumers' attitudes and brand perceptions (MacKenzie and Lutz, 1989; Abernethy, 1991). If the SMS messages are seen as intrusive and an imposition, it will be deleted immediately (Greenyer, 2003).

The disadvantages of SMS marketing include the interference in consumer privacy, irrelevance and inappropriateness of messages, timeliness and information overload (Trappey and Woodside, 2005). This study is looking at the influence of the consumer perception according to the various age groups and how these perceptions affect the level of loyalty and commitment towards the advertised brand or product.

## **2. Literature Review**

### **2.1. Short Messaging System Advertising (SMS Ad)**

SMS Ad is an effective interactive medium, which combines the impact of telemarketing, the digitalization of email, and the localization of m-commerce. It has evolved from simple branded slogans to special offers and promotions and it is most effective when it invites a response and includes an incentive (Lawson, 2002). SMS Ad becoming more and more popular and the overall acceptability of SMS advertising was 44% (Rettie, Grandcolas and Deakins, 2006), which is significantly higher than the acceptability of telemarketing (Stone and Wyman, 1992). SMS Ad shares the advantages of telemarketing such as impact, persuasiveness and interactivity as well as its disadvantages of high cost and intrusiveness, which lead to reduced consumer acceptance, (Leiderman, 1990; Stone, 1996).

Yeshin (1998) and Wunker and Hughes (2001) also identified some other advantages such as personalized, customized and time and location-based targeting (the advertisement could reach the consumers at point of action). SMS messages are seen as an imposition (unlike the television advertisement as providing a break) and it can be deleted immediately (Greenyer, 2003). SMS ad had the potential of being well accepted due to its intrinsic characteristics. With permission marketing, SMS ad is viewed as non intrusive, because people do not have to answer immediately and it leaves the customer to discover the message where and when, at their own time (Gauzente, 2008).

### **2.2. Advertising Intrusiveness**

According to Li, Edwards and Lee (2002), intrusiveness may be related to the utility and expectedness of the interruption. Marimoto and Chang (2006) defined SMS Ad intrusiveness as the degree of an unwanted marketing communication messages interferes with an individual's cognitive process and tasks. Li, Edwards and Lee (2002) also suggested that incentives, targeting and permission may mitigate intrusiveness.

There are four aspects of intrusiveness, such as timing of the display, duration of the advertisement, congruence with editorial content and perceived value of information and entertainment (Li and Lee, 2002). Advertising intrusiveness evokes irritation, especially when their execution are too loud or too long (Aaker and Bruzzone, 1985; Bauer and Greyser, 1968) or ad placement are too many or too frequent (Bauer and Greyser, 1968). All these interruption and

irritation may engage in ad reactance (Kennedy, 1971; Krugman, 1983; Park and McClung, 1986; Soldow and Principe, 1981). This means when there is a threat to a person's freedom, that person will attempt to restore the freedom by exhibiting opposition or resisting pressures to conform (Brehm and Brehm, 1981).

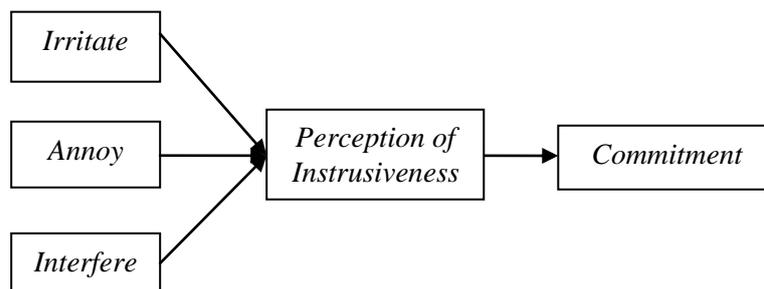
**2.3. SMS Ad Intrusiveness dimensions**

This paper is using adopting the three dimensions of SMS Ad intrusiveness dimensions defined by Said, Embong and Abdullah (2009). The dimensions are Irritate, Annoy and Interfere, which is consistent with several researches on similar area (Marimoto and Chang, 2006), (Bauer and Greysen, 1968), (Li, Edwards and Lee, 2002), (Ha, 1996) and (Aaker and Bruzzone, 1985).

Irritate dimension refers to the negative, impatient and displeasing feeling of audience caused by ad stimuli such time wasting, bothersome, takes time and effort to erase and stressful. Annoy dimension refers to the perceived disruption of the audience thought process and activities such as distracting them from their work and thinking processes and Interfere dimension refers to the degree an unwanted marketing communication interferes with the audiences cognitive process and tasks such as invading their privacy, receiving instructive and irrelevant messages and have to indicate rejection to service providers.

**2.4. Research Framework**

Figure 1 depicts the framework of the earlier research on which this study is based upon. In order to identify the different level of perception, each age group is analyzed using the cross tabulation analysis against the three dimensions of SMS ad intrusiveness, i.e. Irritate, Annoy and Interfere.



**Figure 1. Research Framework**

**3. Research Methods**

The study is investigating the effect of SMS Ad intrusiveness dimensions towards the level of customer brand loyalty, the difference level of perception by user age group and how the perception would affect customer commitment towards the product or services offered. 550 respondents were chosen using stratified random sampling method and the data were collected from the mobile phone subscribers in Klang Valley, Kuantan, Kerteh and Kemaman, Terengganu. A total of 502 of questionnaire were collected and analyzed.

The measurement of the degree of SMS advertising intrusiveness is conducted using questionnaire. The questionnaire is divided into 2 main parts. The first part is on the demographic profile of the respondents, whilst the second section contains 18 statements which applied 5-Likert rating scales, offering five options of answer for each statement. This first part consists of statements, which captured the content of each intrusiveness dimension.

The result of reliability test (see Table 1) using Cronbach's Alpha shows that all the factors of SMS advertising intrusiveness are valid and highly reliable. As shown above, all factors have coefficient value of more than 0.8 (0.893 for irritate, 0.827 for annoy and 0.879 for interfere dimensions) which is above the minimum required level of 0.7 (Nunnally, 1978).

**Table 1. Reliability test**

Intrusive Dimensions	Items	Cronbach Alpha
Irritate	5	0.893
Distract	5	0.827
Interfere	5	0.879

### 3.1. Demographic Profile

502 respondents took part in this research, and 63% of the respondents are between the ages of 20 -39 years old and 62% is female. There are 66.7% Malay, 19.9% and 11.6% are Chinese and Indian respectively, whilst 1.2% is of foreign origin. Both single and married respondents have almost equal number, i.e. 51% and 45.2% respectively, whilst 3.8% does not want to disclose their marital status.

The highest education level of the respondents is the STPM/SPM holder at 38%, Degree and Diploma holders are both at 21.1%. 24.7% are students and 20.5% are working at executive or officer positions. There are more Maxis subscribers than Digi's and more than 70% of the respondents are subscribing to prepaid line. 35.9% of the respondents earned between RM1, 000 to RM2, 999 per month, whilst 29.9% are in the no income group.

### 3.2. SMS Related Data

The two big groups of respondents on send SMS are the group sending more than 20 SMS per day (30.9%) and sending 5 to 9 SMS per day (22.7%). 30.9% received more than 20 SMS per day, whilst 24.1% received between 5 to 9 SMS per day. The same two groups have the highest percentage in keeping their SMS messages, i.e. 36.1% keeping between 5 to 9 SMS and 26.9% keeping more the 20 SMS. The respondents indicated that their ideal number of SMS advertising they prefer to receive is 1 SMS advertising per day (31.9%) and 1 per week (31.3%).

## 4. Results and Discussions

The results of the Pearson chi-square test for each of the dimensions of SMS advertising intrusiveness were analyzed. Table 2 below depicts the results of Pearson Chi-Square analysis. The results show that Interfere dimension is significant at .009 (higher than .005), thus confirmed that age and interfere dimension is independent of each other.

**Table 2. Pearson Chi-Square for each Intrusiveness dimensions**

	Value	df	Asymp. Sig. (2-sided)	Notes
Interfere	20.516 <sup>a</sup>	8	0.009	<i>a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.17.</i>
Annoy	6.721 <sup>a</sup>	8	0.567	<i>a. 1 cells (6.7%) have expected count less than 5. The minimum expected count is 4.83.</i>
Distract	23.456 <sup>a</sup>	8	0.003	<i>a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.89.</i>
Intrusiveness	7.208 <sup>a</sup>	8	0.514	<i>a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.12.</i>
Commitment	14.092 <sup>a</sup>	8	0.079	<i>a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.93.</i>

The result for age and Annoy dimension (0.567) shows that they are not independent of each other, whereas age and Distract dimension is independent of each other at 0.003. The result

of the Pearson Chi-Square between age and the overall Intrusiveness is 0.514 and it indicated that age and level of intrusiveness is dependent on each other. Meanwhile the result for age and commitment shows that they are dependent at 0.79 significant levels. This means that different age group will reflect a different level of purchase commitment.

The cross tabulation analysis between various age groups with the three dimensions of SMS Ad intrusiveness is presented in Table 3. The results indicated the level of perception of the various age groups towards the SMS Ad intrusiveness dimensions. Similar to other researches, the respondents below 20 years of age have a low interfere perception of SMS advertisement, thus the high percentage of 47.9%. The respondents between 30 to 39 years of age perceived SMS ad as highly interfering at 40.8%. While the age group of 40 to 49 years old was divided almost equally with 39.7% perceived SMS ad as low in its interfering dimension and the other 42.9% perceived it as highly interfering. Surprisingly the perception level of the respondents within the age group of above 50 years old is moderately interfering at 50%.

**Table 3. Cross Tabulation Analysis between Age Group and Intrusive Dimensions**

Items	< 20 yrs old		20-29 yrs old			30-39 yrs old			
	Low	High	Low	High	Low	High			
Interfere	47.90%	28.70%	23.40%	33.20%	33.70%	33.20%	32.00%	27.20%	40.80%
Annoy	43.60%	23.40%	33.00%	42.90%	22.40%	34.70%	44.00%	20.00%	36.00%
Distract	40.40%	27.70%	31.90%	34.20%	31.10%	34.70%	24.80%	43.20%	32.00%
Items	40-49 yrs old		> 50 yrs old						
	Low	High	Low	High					
Interfere	39.70%	17.50%	42.90%	29.20%	50.00%	20.80%			
Annoy	49.20%	9.50%	41.30%	54.20%	16.70%	29.20%			
Distract	27.00%	34.90%	38.10%	66.70%	8.30%	25.00%			

The results also shows that majority of the respondents have low perception on annoy dimension of the SMS Ad. 43.6% from the less than 20 years old, 42.9% from 20-29 years old, 44% from 30-39 years old and 54.2% are the respondents who are above 50 years old. Though the respondents from the age group of 30 to 49 years old indicated, that SMS advertising is irritating but these results shows that they don't consider it as annoying. Two groups of the respondents (20 years and above 50 years old) have low perception for distract dimension at 40.4% and 66.7% respectively. Whilst the respondents within 30-39 years of age have moderate perception and 38.1% of those from the 40-49 years old perceived it as high. The age group 20-29 years old has almost equal percentage of low, moderate and high perception at 34.2%, 31.1% and 34.7% respectively.

Distraction is the main element of intrusiveness of the SMS advertising. The 54% of the respondents within the age range of 30 to 49 years old have moderate perception of distraction towards SMS advertising, since it requires attention and focus to open and read the SMS message. The other 32% has a high perception of distraction element. Unlike those age less than 20 years, they are able to operate the mobile phone with minimal attention and able to multi tasking, most of the time. Surprisingly the respondents who are more than 50 years old have a low perception over the distracting dimension of SMS advertising. This could be because they use mobile phone just for communicating with their family and some of them do not know how to use the SMS element of the mobile phone.

Table 4 shows the overall level of intrusion perceived by the different age groups. Those below 20 and above 50 years old have low perception of SMS Ad intrusion at 39.4% and 54.2% respectively. The others have high perception of intrusion, i.e. 20-29 years old at 36.2%, 30-39 years old at 36% and 40-49 years old at 39.7%. This means that advertisers have to treat the

older consumer carefully and incorporate permission marketing in order to adopt this media vehicle of marketing communication. Although the respondents below 20 years of age have a low perception over the SMS advertising intrusiveness and techno-savvy, their limited spending amount may not produce much income for the advertisers. Thus, the marketing effort should focus on the older segments between 20 to 49 years old.

**Table 4. Cross Tabulation Analysis between Age Group and Intrusiveness and Commitment**

Items	< 20 yrs old		20-29 yrs old			30-39 yrs old			
	Low	High	Low	High	Low	High			
Intrusiveness	39.40%	27.70%	33.00%	33.70%	30.10%	36.20%	30.40%	33.60%	36.00%
Commitment	45.70%	16.00%	38.30%	38.30%	25.00%	36.70%	29.60%	27.20%	43.20%

Items	40-49 yrs old		> 50 yrs old			
	Low	High	Low	High	High	
Intrusiveness	34.90%	25.40%	39.70%	54.20%	25.00%	20.80%
Commitment	38.10%	30.20%	31.70%	54.20%	29.20%	16.70%

Unfortunately, this older segments are not as receptive towards SMS advertising and if the advertisers do not tread carefully, they might ostracized these segments and reduce their company, products and brands popularity. Those who are above 50 years old are skeptical with new technology and prefer to use the old ways to do things, such as banking errands, paying bills etceteras. Although their overall perception of the SMS advertising intrusiveness, the results may not reflect that they are receptive of the SMS advertising. Most may not use SMS to communicate, while others may not know how to use it. Thus, advertisers should not focus on this segment for marketing communication purposes. Any products meant for this segment should be forwarded to their children instead.

According to literature, the level of perceived intrusion has an impact on the purchase intention and the results are captured in Table 4. Surprisingly, though they have low perception of intrusiveness of the SMS Ad that they received, 45.7% of those below 20 years of age have low level of commitment. Similarly with those who are above 50 years old whereby 54.2% of them also have low level of commitment to purchase products that were advertised via SMS. The result also shows that those below 20 years of age and above 50 have the lowest perceived level of commitment at 45.7% and 54.2% respectively. Again, this could be due to the younger group have low spending power, while the older group do not trust technology to handle their purchase.

The 20-29 years old and 40-49 years old also seem to have low level of commitment at 38.3% and 38.1% respectively but another 36.7% (20 to 29 years old) and 31.7% (for 40-49 years old) have high level of commitment. These groups are financially independent (especially between 30 -39 years old), thus advertisers should focus their marketing communication activities on these groups. The respondents between 30-39 years old show significant level of commitment at 43.2%. This could bring in the dollar into the company since this group in financially independent and stable and have high self-esteem.

Table 5 below shows that highs and lows level of SMS intrusiveness perception between various age groups. It also shows the level of commitment or purchase intention of the consumer to purchase products or services via their mobile phones. Those who are below 20 years of age are rather inconsistent with regards to their perception level of intrusiveness and their purchase intention. Though their perception is low but their commitment towards purchase is also low (45.7%). This could be due to the fact that most are students and with no income or limited allowance received from parents. Their receptivity towards SMS advertising may not be able to rake in revenue and profits for the advertisers.

**Table 5. Summary of Analysis**

Age Group (Years)	Intrusiveness			Commitment		
	Low	Mid	Hi	Low	Mid	Hi
< 20	39.4%		33%	45.7%		38.3%
20-29	33.7%		36.2%	38.3%		36.7%
30-39			36%			43.2%
40-49	34.9%		39.7%	38.1%		31.7%
> 50	54.2%			54.2%		

The respondents between 20 to 29 years old are divided in term of their perception towards SMS advertising intrusiveness elements. Whilst 33.7% have low perception, the other 36.2% have high perception. The results on their commitments towards purchase also reflects the age group perception, i.e. 38.3% have high purchase commitment and another 36.7% have low level of purchase commitment. Advertisers may have to thread carefully with this group because only about one third have high level of purchase commitment.

The respondents between the ages of 30 to 39 years old seem likely to be the ideal target segment. Their perception level of intrusiveness fall between moderate and high but their purchase commitment is higher that any other group at 43.2%. This could means they are confident and trust the purchase transaction made via mobile phone. Advertisers may have to maximize the delivery of their marketing messages to this age group and optimize company's sales and profits.

Those between 40 to 49 years of age have high perception level of intrusiveness and low level of purchase commitment. The same careful strategy for the 20 to 29 year-old group should be applied because about 31.7% of the respondents have high level of purchase commitment. The level of intrusiveness and purchase commitment among those who are above 50 years old are low because this group is rather wary of technology and use mobile phone as a single function – to call their family. Most of them may have problem browsing (ignorance) through the folders or have trouble reading messages (bad eyesight) or may not be able to send messages (small keypad). If the advertisers wish to offer products or services for this group, the marketing messages should be targeted to their children (age group between 30 to 49 years old).

Many researchers indicated that the concept of intrusiveness is related to permission (Godin, 1999). If consumers have given their permission, they are less likely to look at advertising as intrusive, because it is expected. Advertising media differ in term of the delivery of experience, whether it is self-selected or intrusive ad experiences. According to Shavitt, Vargas and Lowrey (2004), self selected ad experience may be evaluated much more favorably than the more intrusive advertising. The reason to this could be because self-selection allows consumer to obtain information that they consider relevant to their needs and interests (Elliot and Speck, 1998).

Consumer can also give detailed attention to ads that are of interest and spend extensive time poring over it (Shavitt, Vargas and Lowrey, 2004). SMS advertising is cost effective with its response rate between 10 to 20% and the viral effect accelerates it further. (Rettie, Grandcolas and Deakins, 2005). The best way to eliminate or reduce SMS ad intrusiveness is via permission marketing because permission marketing encourages consumers to participate in long-term, interactive marketing campaigns in which they are rewarded in some way for paying attention to increasingly relevant messages (Godin, 1999)

Though the results show that the percentage of mobile users in Malaysia who perceived SMS ad is intrusive are relatively low (as compared to other country) marketers must get themselves ready with the increase awareness of privacy rights among the consumer nowadays. Understanding and applying the concept of permission marketing in all their marketing communication activities are crucial. This study was conducted in a specific setting thus the results could not be directly generalized to other organizations or other industries. It has to be

tested before the confirmation of the relationship in other settings. Second, specific dimensions of SMS advertising intrusiveness have been chosen for study because of their particular relevance to consumer perception and buying behavior. It is possible that other dimensions of intrusiveness would reflect different results. Besides that, the 64.7% of the respondents are within 20 to 50 years of age, which may not reflect the population breakdown of the mobile phone users in the selected locations.

Further research is required to identify the manner in which audiences interpret the marketing communication messages send to them. This is because marketers must understand and apply the concept of permission marketing before incorporating SMS in their IMC activities to reach out to their consumers. The Malaysian Privacy Acts need to be looked into as well, in order to ensure the consumers' privacy is well protected and the level of SMS advertising intrusiveness are minimize if not eliminated. The advertisers in US and Europe are required to practice permission marketing and each country has comprehensive policies and regulations on invasion of privacy and permission marketing. Though the advertisers in Malaysia have to adhere to *Consumer Protection Act 1999* but permission marketing policy that protect Malaysian consumer still need to be improved tremendously.

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