

Analysis of Mobile Users' Perception towards SMS Voting

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Abstract

Voting through Short Message Service (SMS) technology is fast and reliable as the mobile technology in Malaysia is quite advanced. Most of the SMS voting mechanism is easily understood by the public. There is no need to explain the voting process in detail as almost 80% of the mobile users know how to use the SMS service. SMS voting is just another way of sending a vote to the recipient by using short code instead of using a normal mobile number. SMS voting provides a useful, secure and reliable process as mobile users are informed of the charges incurred and receive a return SMS to acknowledge that their SMS vote has been received. The objective of this study is to study the characteristics of SMS voting adopters in terms of demographic factors as well as to explore the mobile users' perception towards SMS voting. A survey using questionnaires was conducted to gain information and opinions from a convenience sample of 300 Malaysian mobile users regarding their perceptions on using SMS to vote. The findings revealed that approximately two-thirds of the Malay respondents use SMS voting, most mobile users in the sample are single and female, and that mobile users like to send their votes using SMS. There is a significant difference between the usage of SMS voting among female respondents. Of the respondents 80 per cent perceive that the ease of use factor has greatly influenced mobile users in using SMS for voting purposes.

Keywords: SMS Voting, Mobile User's Perception, Demographic, Developing Countries.

1. Introduction

The use of mobile SMS to communicate with peers, to download ring tones, java games and picture messages, and even voting is very common for the mobile user in Malaysia. It is a norm for most Malaysians to carry a hand phone with them everywhere they go. This kind of culture has encouraged the mobile user to try the SMS voting service and subsequently find that it has become a norm for the society to participate in the SMS voting service. Most new mobile users who try SMS voting are influenced by their peers or television/radio programmes. If Malaysian mobile consumers are to take up mobile entertainment with enthusiasm then it has to be both financially viable for the industry players to develop and run, as well as cost-effective for the consumers to access. Mobile users are willing to pay the SMS voting

charges as they think it will add to their enjoyment of leisure activities, and the service is not too different from what they already use and pay for in other contexts.

By exploring the demographics and other factors that influence mobile consumers towards SMS voting it is hoped that the findings of the study will facilitate further development of the SMS voting service in Malaysia. Most specifically, this study aims to explore how demographics and mobile consumer behaviour will direct mobile consumer perception towards SMS voting. The mobile consumer perception and behaviour knowledge obtained could be extremely useful for mobile operators and mobile service providers in the formulation of service strategies pertaining to the rolling out of new SMS voting applications and services in the near future. From this, mobile operators and mobile application service providers can refine and target their service offering to different potential user groups. The mobile service provider can then improve the SMS voting service by enhancing the technology and mechanism used to achieve innovative results. The easy access to SMS voting provided through mobile services brings a lot of benefits to the different groups in the society. The design of the mobile phone including the screen and button size enables the mobile user to enjoy fun interaction with the service. SMS voting can be accessed in anyway and at any time as long as the user has a mobile phone and sim card. It is very convenient for the mobile user to participate in the SMS voting service as they only need to send the voting keyword to a particular short code and send it through SMS. The hassle of sending the vote keyword through the traditional posting method will be replaced by SMS voting because it is more fun and convenient in terms of sending the vote.

2. Literature Review

Knutsen and Lyytinen (2008) classified research on mobile service innovation and adoption into three categories (1) models of technology acceptance, (2) models of service adoption and diffusion, and (3) ensemble models of the macro environment. The current study can fall into the second category where the researchers attempted to study adoption of one of SMS application called SMS voting. Leung (2007) highlighted that SMS is a social technology and has become a popular communication utility for students. Similarly, Muk, (2007) stated that SMS is popular among young American consumers. In addition, Knutsen and Lyytinen (2008) reported that mobile services have become ingrained in everyday life in all Western societies.

Oulasvirta and Blom (2008) stated that emerging technologies including mobile phones and on-line services are designed to provide users with control over appearance and function. On other hand, Knutsen and Lyytinen (2008) highlighted that all messaging technologies have instrumental properties that allow for efficient data exchange between devices. Some of these properties are relative to SMS, (e.g., support for instance installation and configuration files, e-commerce applications, bar-coding, ticketing, advertisements or receipts, file attachments of mobile e-mail) and are instrumental properties desired for efficient exchange of electronic documents, receipts, coupons and tickets. Furthermore

The popularity factors have a huge influence on the success of SMS voting as the group of mobile users who are willing to spend time and money on participating in SMS voting contests are mostly young people.

The younger generation is keener to use SMS when sending their vote of support for their favourite idol or songs advertised on the television (TV) or radio show compared to the older generation. Young people also constitute the group who are always exposed to various SMS voting services that attract them to participate.

Using the SMS channel for voting has proved particularly popular in Europe. O2 UK revealed recently that on Saturday, 16 November 2002, more than 200,000 votes were cast via premium SMS in the space of one hour for the TV show "Popstars - The Rivals". One factor to broaden the potential of TV-generated-SMS will be the targeting of wider audiences. Traditionally SMS TV has been aimed at the 13-30 year old market. Visiongain asserts that older segments of the audience must also be targeted. According to one industry executive, Vodafone is extremely interested in opening up the market to older users. With the market penetration of mobile phones as high as it is, Vodafone and its rivals are looking to draw revenue from those users who are not as conversant with the technology as teenagers. This may require additional support and demonstration during the show on how to send SMS.

The advent of mobile applications like SMS Voting with TV or a Chat service has created new advertising and sponsorship opportunities, which the broadcasters' sales team can utilize as additional media collateral. This can be done in the form of advertising at the end of the SMS message, the addition of a brand's logo and other visual opportunities via MMS, or a complete sponsorship deal for application or service. As an example, CNN has launched an SMS Voting component for its "Question of the Day" segment that is promoted each day during its morning news broadcast in

Asia. The "Question of the Day" is sponsored by Nokia and as part of this sponsorship opportunity Nokia receives branding exposure during the broadcast on CNN online and in the reply SMS message sent out to voters who submit their votes via SMS. Text voters receive immediate vote results together with the Nokia name and its promotional tagline in the message. As we move towards MMS enabled phones, CNN could even send out a graphical representation of the results incorporating a Nokia logo or even a short movie clip of the latest Nokia ad before the results. All these elements will provide increased advertising and sponsorship channels for the broadcasters, which in turn will continue to drive an increase in mobile interactivity with TV. The growth and convergence of distributed networking, mobile computing and mobile telecommunications as highlighted by Bamba and Barnes (2007) has created significant commercial opportunities.

Muk (2007) argues that mobile phones increase the accessibility, frequency and speed of communication through which timely mobile ads can be delivered to consumers based on their demographic characteristics and geographic information. Applications of SMS are growing in the globe where a lot of e-services were employed SMS. For instance, mobile banking in which, banks according to Leung (2007) offer customers banking services such as account balances, stock quotes, check and book order. E-alerting, other business applications of SMS include tracking information on people and packages, providing flight-status updates. In line with the current study Leung (2007) reported that some TV program use SMS voting and governments allow SMS to be used by citizens to cast their votes in local elections.

According to Leung (2007) there are some who believe that SMS may develop into a major form of interpersonal mediated communication, replacing many phone uses and SMS messaging will become as big as e-mail. Leung (2007) reported that the heaviest use of SMS was motivated by its convenience, its low cost, and its utility for coordinating events. In broad terms, using SMS could help to overcome individuals' shyness about bringing up difficult topics with friends. Businesses around the world are also finding ways to benefit from the technology and the application of SMS to be two way channel of communication that ease the common function of messages exchange between friends and between organization's as fast messaging tool to consumer (Leung, 2007).

2.1 Mobility and Mobile Use Situation

The growth of mobile telecommunications according to Bamba and Barnes (2007) has opened many new opportunities for marketing promotions and advertising. One of these new modes of advertising is via the short message service (SMS) to handheld devices, notably mobile phones. According to Leung (2007) Cell phone users worldwide send more than a

billion text messages a day from one mobile phone to another. The most significant feature of mobile technology is the mobility itself, that is, its ability to access services ubiquitously, on the move, and through wireless networks and various devices, such as, PDAs and mobile phones (Coursaris, and Hassanein, 2002). Bamba and Barnes (2007), Mobile phones have become apparently ubiquitous; they are seen everywhere from huge cities to remote villages. Mobile commerce, according to Bamba and Barnes (2007) is expected to reach 1.67 billion users by 2008 and the value of mobile commerce is expected to reach \$88 billion by 2009. Compared with traditional electronic commerce, where transactions are commonly conducted through stationary desktop and laptop computers, mobile computing provides users with more freedom, as they can access information and services without having to find a physical space, such as an office or Internet café for Internet connection (May, 2001). Kleinrock (1996) labelled the benefits provided by mobile technologies as "anytime and anywhere computing" and outlined the two most common dimensions of mobility – independence of time and place (Bamba and Barnes, 2007). The spatial and temporal dimensions of mobility extend computing and allow, in principle, anytime and anywhere access to information, communication, and services. Kakiyama and Sørensen (2001) expanded the concept of mobility into three dimensions of human interaction; spatial, temporal and contextual mobility. The spatial and temporal dimensions correspond to those of Kleinrock's (1996) anytime and anywhere computing, whereas the contextual dimension extends the definition further. Contexts in which people reside continuously frame their interaction with others, including people's cultural background, particular situation or mood, and degree of mutual recognition (Kakiyama and Sørensen, 2001).

Perry et al. (2001) discuss restrictions that user situations pose to ubiquitous computing. Specifically, the anytime and anywhere access is dependent on technological and social conditions of the use environment; not all places provide the necessary technological infrastructure such as network connections and not all social situations are adequate for mobile computing (Perry et al., 2001). The effect of use situation has also been studied in consumer behaviour literature, where it has been found to be an important determinant for consumer choice behaviour (Belk, 1975 and Gehrt and Yan, 2004). The use situation is treated as a separate construct representing the specific circumstantial conditions that users meet when they move around and use mobile services in different places at different times. Use situations are expected to moderate the benefits of mobility and perceived usefulness of mobile services. For example, at home or in an office context a user is likely to find a laptop or desktop computer more convenient for accessing email. When the person is

on the move, however, and needs to access the email quickly, the benefits of mobility, that is, anytime and anywhere computing, actualize, and the mobile service is perceived as useful.

Diffusion of innovations theory by Rogers (1995) is a multidisciplinary theory frequently applied in IS adoption research. The theory determines five innovation characteristics which affect the adoption of the innovation: relative advantage, complexity, compatibility, trialability, and observability. Moore and Benbasat (1991) developed a specific measurement instrument for diffusion theory, namely the perceived characteristics of innovating, PCI, which was especially designed for IS adoption research. Prior research on information technology innovation and adoption has provided evidence on the applicability of the diffusion theory in predicting the adoption of different technologies, including, for example, spreadsheet software, online services, and smart cards. Early stage research on mobile banking adoption in the UK confirms that relative advantage over existing services; compatibility of mobile banking with consumer needs and lifestyle; and the ability to test a new service and observe the successful outcomes of other users, increased positive attitudes towards adoption. Whereas perceived complexity and risks had a negative effect on the attitudes towards adoption.

3. Methodology

In selecting the sample for this research, the target population will be mobile users of different groups, consisting of undergraduates, postgraduates and working adults. This study uses the quantitative approach where researchers utilize the survey and targeted sample of participants who are mobile users and own a mobile phone. A set of 350 self-administrated questionnaires were distributed to undergraduate students, postgraduate students (Master of Business Administration of University Malaya) and working adults. Of these 300 completed questionnaires were returned, thereby contributing to an 85.7% response rate. All 300 responses are usable for data analysis. The completion of these questionnaires was entirely voluntary and responses were anonymous.

4. Data analysis

Descriptive statistics were the main tool used to explore the questionnaire data, summarize and describe observations. In this research, descriptive statistics in the form of frequency percentages were used to obtain summary statistics of respondents including gender, age, marital status, education level, ethnic group, profession and income level.

4.1 Statistics of Respondents

From the data collected, 123 are male respondents and 177 female respondents. The majority of the respondents are female, making up 59%, while 41% of the respondents are male. Out of the 300 responses gathered, about 77 % of the respondents are single and 23% are married. This is a representation of the

population of MBA students at the University of Malaya (UM), other undergraduate students and working adults from different companies. The analysis of age groups showed that 45% of the respondents are in the 20 to 25 year old age group. There are 117 respondents from the 26 to 30 year old age group, accounting for 39% of the total number. The 31 to 35 year old age group has 30 respondents. Only 7% of the respondents fall into 36 to 45 year cohort.

For ethnic groupings, Malay respondents compose 34% of the total respondents while Chinese represent about 48% and Indian respondents 13%. Other races whose country of origin is Bangladesh, Pakistan, or China represent 5.4% of the respondents. Analysis of the highest level of education shows that most of the respondents have a Bachelor's Degree, making up 59.3% of the total. This is followed by postgraduate degree respondents, 36.7 % and lastly diploma holders, 3%. In terms of job position, managerial and professional respondents accounted for 33.7%, followed by technical and supervisory job level respondents, 19.3%. Clerical, production/operation workers and lecturers only form a small portion of the respondents – clerical (2%), production/operation workers (0.3%), lecturers (0.7%) and others (7%). Out of the 300 respondents 111 are students representing 37% of the total. The analysis of total monthly income of respondents showed that 35% of the working adults fall into a salary range between RM 2,501 to RM 5,000. This is followed by 13.9% of respondents' who have a salary range between RM1,501 to RM 2,500. Respondents that fall into the student category have no income and represent 35.7 % of the total.

Highest level of education		
Secondary school	1	0.3
Diploma	9	3.0
Bachelor's degree	178	59.3
Postgraduate degree	110	36.7
Other	2	0.7
Job position		
Managerial & professional	101	33.7
Technical & supervisory	58	19.3
Clerical & related	6	2.0
Operation workers	1	0.3
Lecturers/teachers	2	0.7
Students	111	37.0
Other	21	7.0
Total monthly income		
Less than RM1,500	10	3.3
RM1,501 - RM2,500	42	13.9
RM2,501 - RM5,000	106	35.1
RM5,001- RM10,000	34	11.3
Above RM10,000	1	0.3
No income	107	35.7

Table 1: Demographic profile of respondents

Item	Frequency	Percent
Gender		
Male	123	41.0
Female	177	59.0
Marital status		
Single	231	77.0
Married	68	22.7
Divorced	1	0.3
Age		
20-25	135	45.0
26-30	117	39.0
31-35	30	10.0
36-40	15	6.0
41-45	3	1.0
Ethnic group		
Malay	100	33.3
Chinese	145	48.3
Indian	39	13.0
Other	16	5.4

4.2 Characteristics of SMS Voting Adopters

Table 4.2 shows the demographic characteristics of SMS voting adopters in terms of gender, marital status, ethnicity, education, job position and total monthly income. The relationship between each of the demographic characteristics and the usage of SMS voting will be examined and analyzed.

For the purpose of gender analysis of the respondents, the number of male and female respondents who use SMS to send their votes was gathered. Among the 123 male respondents the number who use SMS to send votes and the number of respondents that do not use SMS voting are almost the same. Of the male respondents, 62 use SMS voting representing 50.4% and 49.6% do not use SMS voting. It is very obvious that there is no significant difference between the usages of SMS voting among male respondents.

Analysis of the female respondent's shows that 121 of the 177 female respondents use SMS voting while only 55 do not use SMS for voting. Approximately 70 % of the female respondents will use SMS voting in their daily life. It also shows that there is a significant difference in the usage of SMS voting among female respondents. Most female mobile users like to send their votes using SMS. The analysis of gender characteristics and the usage of SMS voting shows that generally there is no difference among male respondents but there are significant differences among female respondents.

In terms of marital status analysis, the research shows that most mobile users in the sample, 231 out of 300, are single making up 77.0% of the total respondents while only 22.7% of SMS adopters are married and 0.3% are divorced. When drilled down one can see that within the married category itself the number of married SMS voting adopters is 32, while the number of married but non SMS voting adopters is 35. This means about 50% of the married respondents will use SMS voting and vice versa. This indicates that there is no significant difference between the usages of SMS voting among married respondents. In contrast 151 out of 231 single respondents use SMS voting while the remaining 80 are non SMS voting users. The difference in SMS voting usage in the single category is 30.8%. The results show that significant differences exist between the usage of SMS voting and respondents who are still single. This also indicates that the majority of the non SMS users who are single may be likely to use SMS voting in the future. For ethnic group analysis, respondents from four different ethnic groups will be studied individually concerning SMS voting usage to represent the real context of SMS voting among ethnic groups in Malaysia. For the Malay population, 70% of the Malay respondents use SMS voting while 29% of them are non SMS voting adopters. This demonstrates that most Malay respondents are keen to use SMS to send their vote as significant differences exist between SMS voting adopters and non adopters among the Malay population. For the Chinese population, 54.5% of the Chinese respondents use SMS for voting purposes while 45.5% are non SMS voting adopters. The adoption of SMS voting among Chinese respondents is approximately equal. This shows that no significant differences exist between SMS voting adopters and non adopters among the Chinese population. For the Indian population, 66.7% of the Indian respondents are SMS voting adopters while 33.3% of them are non SMS voting adopters. The difference between these two categories is 33.4%, which indicates that SMS voting is popular among Indian respondents and that significant differences exist between SMS voting adopters and non adopters among the Indian population. For the adoption of SMS voting among respondents of other populations including Kadazan, Iban, and Indonesian it is approximately equal, that is 50%. This also illustrates that no significant difference exists between SMS voting adopters and non adopters among these populations. In terms of the level of education analysis among the respondents, significant differences exist for diploma and bachelor degree holders but not for postgraduate degree holders. Respondents' highest education level will be studied in detail under these three groups. For respondents with diploma holders, 33.3% use SMS voting in daily life while 66.7% do not use SMS voting. It clearly shows that SMS voting is not popular among the diploma holder respondents.

Most of the respondents in this study hold a bachelor's degree. The analysis of the SMS voting adoptions among bachelor degree respondents will provide a more accurate result closer to the real scenario of the Malaysian context. Out of a total of 178 bachelor degree respondents 119 use SMS voting and 58 of the rest are non SMS voting adopters. SMS voting adopters for bachelor degree holders contribute to 66.9% while 32.6% goes to non SMS voting adopters. It is very apparent that respondents with a bachelor's degree like to use SMS voting as there is a significant difference among them. On the other hand, the analysis of postgraduate degree holders for SMS voting adopters shows that no significant differences exist for this group of respondents. This is because only a 9% difference exists for SMS voting usage among postgraduate degree respondents. In the relationship between SMS voting adoption and job position as shown in Table 4.2 below, most SMS voting respondents are students with 37.0% followed by managers/professionals (33.7%), technical/supervisory (19.3%), clerical (2%), lecturers (0.7%), production/operation workers (0.3%) and others being 7%. Others refers to housewives and those who are self employed. For managerial and professional analysis, respondents who fall into this group generally do not have significant differences in terms of the usage of SMS voting. The percentage of adopting SMS voting and non SMS adopters are almost equal as the difference is only 4%. The same applies to technical and supervisory respondents, clerical respondents, production and operational workers, and lecturers or teachers. However, the analysis of respondents from the group of students shows a significant difference in terms of the usage of SMS voting. Of the student respondents 81.1% will use SMS to perform voting while only 18.9% of the rest do not use SMS voting. It can be seen that SMS voting is popular among the student group, especially those pursuing tertiary education. For total monthly income analysis, respondents with monthly income below RM1,500 do not demonstrate a significant difference in terms of usage of SMS voting. There is a 20% difference captured but it is not significant enough to prove that respondents with a monthly income less than RM1,500 are SMS voting adopters. The same analysis can be used to conclude the results for respondents with a monthly income of RM2,501 to RM5,000 and respondents with a monthly income of RM5,001 to RM10,000. For respondents with no monthly income including students, there is a significant difference between the usage of SMS voting and non SMS voting adopters. From the no income group of respondents 80.4% are SMS voting adopters while 19.6% of them do not use SMS to send their votes. It can be concluded that SMS adopters from the no income level are the group of respondents who heavily use SMS to participate in voting. The SMS voting service provider should take into consideration this group of respondents when launching new SMS voting services.

Table 4.2 Characteristics of SMS voting adopters

		SMS voting adoption				Total No
		Yes		No		
		No.	%	No.	%	
Gender	Male	62	50.4	61	49.6	123
	Female	121	68.4	55	31.1	177
Marital status	Single	151	65.4	80	34.6	231
	Married	32	47.1	35	51.1	68
	Divorced	0	0	1	100	1
Ethnic group	Malay	70	70	29	29	100
	Chinese	79	54.5	66	45.5	145
	Indian	26	66.7	13	33.3	39
	Others	8	50	8	50	16
Highest level of education	Secondary school	0	0	1	100	1
	Diploma	3	33.3	6	66.7	9
	Bachelor's Degree	119	66.9	58	32.6	178
	Postgraduate Degree	60	54.5	50	45.5	110
	Others	1	50	1	50	2
Job Position	Managerial & professional	48	47.5	52	51.5	101
	Technical & supervisory	29	50	29	50	58
	Clerical & related	3	50	3	50	6
	Production/operation worker	1	100	0	0	1
	Lecturers/teachers	2	100	0	0	2
	Students	90	81.1	21	18.9	111
	Others	10	47.6	11	52.4	21
Total Monthly Income	Less than RM1,500	6	60	4	40	10
	RM1,501 – RM2,500	3	33.3	6	66.7	9
	RM2,501 – RM5,000	51	48.1	54	50.9	106
	RM5,001 – RM10,000	19	55.9	15	44.1	34
	Above RM10,000	1	100	0	0	1
	No income	86	80.4	21	19.6	107

4.3 Perception of SMS Voting Adopters

This section presents the descriptive statistics of the perception of mobile users' towards SMS voting: ease of use, popularity of SMS voting, culture and norms of the society, willing to pay and affordability, and usefulness of SMS voting. Table

4.3 indicates the percentage of selection for the 5-point Likert scale (strongly disagree, disagree, neither agree nor disagree, agree and strongly agree), means and standard deviation of mobile users' perception towards SMS voting on the 5 dimensions.).

Table 4.3: Mobile Users' Perception towards SMS Voting (N =300)

Variables	Items	Items					Mean	Standard Deviation
		Strongly disagree	Disagree	Neither agree Nor disagree	Agree	Strongly Agree		
Ease of use	The design of mobile phone improves access to SMS voting	1.7	14.0	24.0	49.3	11.0	3.5	0.92
	Everyone can use the SMS feature of mobile phones to send their vote	1.7	6.0	14.0	64.0	14.3	3.8	0.80
	SMS voting offers an extremely 'cool' feature that adds enjoyment to my life	3.3	16.0	40.3	34.7	5.7	3.2	0.90
	SMS voting service is easy to use	0.0	6.7	26.7	59.0	7.7	3.7	0.71
	Everyone can send votes using SMS voting at anytime and from anywhere	0.7	5.3	19.3	60.0	14.7	3.8	0.77

Popularity	SMS voting is more popular among the younger than the older generation	0.3	2.7	10.0	54.7	32.3	4.2	0.73
	The younger generation are more interested in using mobile phones to perform SMS voting compared to the traditional way of voting	0.3	2.3	10.9	53.6	32.1	4.2	0.73
	The younger generation can easily adapt to the changes and accept the new concept of using SMS to vote	0.3	2.7	9.0	56.7	31.3	4.2	0.72
	The younger generation can easily understand and are familiar with the SMS voting mechanism	0.0	3.0	11.6	59.7	25.7	4.1	0.69
Cultural & norms	Most young mobile users use SMS for TV programme voting because they are influenced by peers	0.0	3.3	21.0	54.7	21.0	3.9	0.74
	It is very common in Malaysia that most of us use SMS to vote for some TV or radio voting programme	0.0	5.0	20.0	58.3	16.7	3.87	0.74
	We are always exposed to SMS voting services from media channels	0.0	3.0	10.7	67.3	19.0	4.0	0.65
Affordability	SMS voting is fun and we are willing to pay for the charges incurred	9.0	22.0	36.3	27.3	5.4	3.1	2.48
	The charges of sending SMS for voting services is reasonable	15.3	28.7	31.7	20.0	4.3	2.7	1.09
	Most mobile users can afford to pay for the SMS voting charges	4.3	20.0	33.0	36.3	6.4	3.2	0.98
Usefulness	We can send as many votes as we like as there is no registration required	1.0	8.3	24.3	54.7	11.7	3.7	0.83
	SMS voting is another channel of voting that provides a fast and accurate voting process	2.3	14.0	23.7	51.0	9.0	3.5	0.92
	Some of the voting services that require immediate voting results are best done through SMS voting	2.3	7.0	27.0	52.3	11.3	3.6	0.86
SMS voting	The SMS voting process is easy to understand and follow	1.3	7.7	26.7	57.0	7.3	3.6	0.79
	The keyword for SMS voting is common and not complicated	1.7	5.7	26.3	59.0	7.3	3.7	0.77
	The short code used to send SMS voting is easy to remember	1.7	10.3	35.3	46.7	6.0	3.5	0.82

Of the 300 respondents 80% agree that the ease of use factor, which includes easy access, convenience and fun elements has greatly influenced mobile users in using SMS for voting purposes. The average mean score for all the items under the ease of use variable is 3.62 and the average standard deviation is 0.82. The majority of the respondents agree that the design of the mobile phone and the SMS features in the mobile phone encourage them to participate in SMS voting. Apart from that, SMS voting services which are fun, easy and accessible at anytime and anywhere gives rise to the usage of SMS voting. Only a small portion of the respondents, less than 16%, think that the mobile user behaviour was not influenced by the ease of use factor.

When analyzing the SMS voting popularity factor, most respondents agree that the popularity factor contributes to the success of SMS voting. The data shows that the percentage of respondents who

support the popularity factor statement is over 80% as the average mean for this factor is 4.32 and the average standard deviation is 0.72. More than 50% of respondents agree with the statements that the younger generation is more interested and can easily adapt and understand the SMS voting mechanism. Less than 3% of the respondents disagree with the popularity factor.

From the cultural and norms factor, most of the respondents agree that media channels that promote SMS voting have appreciably influenced the mobile user. About 20% of the respondents are moderate in believing most mobile users are influenced by peers while performing SMS voting. The average mean for this factor is 3.94, which shows that the majority of the respondents support the cultural and norms factor. Only a very small portion of respondents disagree with the cultural and norms factors that influence mobile users in using SMS voting.

In terms of affordability and the willingness to pay for SMS voting charges incurred, the analysis of data shows that most respondents are moderate or disagree with the eagerness to pay for SMS voting charges incurred. The mean for willing to pay and affordability factor is below 3.20. About 20 – 28% of respondents disagree that the charges for SMS voting service is reasonable and they can afford to pay for it. For the usefulness factor, more than 50% of the respondents think that SMS voting is very useful in providing immediate, fast and accurate voting results. The average mean for this factor is 3.60 and the average standard deviation is 0.87. Less than 14% of the respondents disagree with the fact that SMS voting is useful for generating voting results. Although about 30% of the respondents are moderate in agreeing that SMS voting usefulness will influence the mobile user, most of the respondents agree that the SMS voting service is easy to understand, remember and follow. Around 59% of the respondents think that the keyword for sending SMS voting is common and easy, which encourages the mobile user in using SMS voting.

5. Conclusion

The data collected lead to conclude that the better understanding of individual differences of the Malaysian mobile users, the easier for marketers, government and advertisers to develop strategies that make SMS voting more appealing to the target audiences. The unique characteristics of Malaysian mobile users, along with the increasing trend for global mobile SMS usage, have led to a need for further cross-national studies on mobile SMS communications. In conclusion, the researchers have to admit that gender could play fatal role in studying SMS voting as there are more female respondents than male respondents. This consideration should be investigated in the light of distribution of population in Malaysia. With respect to SMS voting, it is important to understand how to design personalization features that meet SMS voters' aspiration so that SMS voting best be understood and they themselves promote the acceptance and adoption of SMS voting application (Oulasvirta and Blom, 2008). The respondents with marital status designated as single contribute 77 percent of the total respondents and the majority of them are aged between 20 and 30. Most of the respondents are from a Malay or Chinese population, hold a bachelor's degree, managerial and professional or students and those with an income of RM2500 and above. When analyzing the characteristics of SMS voting adopters, the results indicate that the higher levels of SMS voting

adoption and those with greater experience in its use are female, singles, Malays, students, and holders of a bachelor's degree. The more the mobile user supports SMS voting and the higher the adoption and usage of SMS voting the more it influences perceptions such as ease of use,

popularity, cultural and norms of society, affordability and usefulness of SMS voting. The greater the acceptance of SMS voting among mobile users, the higher the SMS voting participation in the country. This finding shows that not only does ease of use and popularity act as a base in the adoption of SMS voting by mobile users, but the society, influenced by cultural norms, also contributes to the greater development of SMS voting. Hence, it is reasonable to propose that these perceptions contribute, to a certain extent, to the usage of SMS voting by mobile users who intend to participate in SMS voting in future. The results from the study help clarify and enrich the relevant perceptions and extend their boundaries for better understanding of countries other than Malaysia. In addition, the results help convey the message to SMS voting service providers that attention to providing a more user friendly SMS voting mechanism will attract more mobile users to try it.

The limitation of this empirical study is the use of a convenient sample rather than a random systematic sampling, since convenient methods may have introduced a sampling bias. Although the selected respondents in this study are UM MBA students, UKM undergraduate students and working adults that use SMS voting, they may not represent the entire Malaysian population and the real scenario of SMS voting. Nowadays, over 70 percent of the population in Malaysia owns a mobile phone and the use of SMS to send votes has become very common. The sample collected should consider all levels of population and living standards as all these constitute important factors in analyzing the adoption of SMS voting in Malaysia.

In terms of implications, the SMS voting service provider should strive to develop SMS voting mechanisms and environments that foster interest and relationships with the mobile user through the proper display of techniques in using SMS voting and all the relevant information that the mobile user is required to understand. This will encourage more mobile users to participate in SMS voting. Further marketing measures could involve building a relationship management via FAQs, forums and E-letters highlighting that the majority of polls think that the SMS voting service provides a fun and useful environment to all.

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