

THE IMPACT OF DEVICE, DEMOGRAPHICS AND ACTIVITIES ON THE ATTITUDE WHILE ASSESSING SOCIAL MEDIA: AN EMPIRICAL EVIDENCE FROM THE UNIVERSITIES IN MALAYSIA

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Abstract---*The purpose of existing study is to examine the impact of device, demographic and activities on the attitude of the student while assessing the social media. Data were gathered from the universities that are situated in Shah Alam Malaysia and SPSS was employed to test the hypothesis. The results show that positive nexus among the device, demographic and activities on the attitude of the student while assessing the social media.*

Keywords: social media, student attitude, demographics, second generation technology

I. Introduction

Asia/Pacific region is the fastest area for mobile technology growth in the world. It is a major region in terms of numbers of mobile phone users and a leader in terms of in mobile advertising revenue. Its high level of penetration makes mobile phone a channel of choice for businesses big and small to communicate with their target consumers. This fact along with data plan price reduction helps to drive mobile internet usage. This trend is prevalent with the increase of spending on mobile advertising. The growth in mobile advertising revenue, mobile internet users and mobile social network users. Past studies forecasted that the mobile advertising revenue will reach USD \$41.9 billion by 2017. It all begins with the first generation (1G) built in 1977 and “turned on” in 1978. When the second generation (2G) was introduced in the 1990s, the market saw major competition between the European GSM and US CDMA standards. The growth of phone usage due to 2G led to the introduction of prepaid phones (Parveen, Jaafar, & Ainin, 2015).

When the second generation technology (2G) was introduced in 1991, it gave birth to data service. SMS text messaging was the first offering of such service. Ever since, SMS has becomes popular among marketers. As phone became part of our everyday life, evidently demands increased for data services and for greater data speeds. These demands led to the development of the third generation of technology known as 3G. The development of mobile standard continues as the industry expects the fifth generation (5G) to be available by 2015 (Kamal, Chu, & Pedram, 2013).

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There are over 42.9 million cellular phone subscribers and 24.3 million internet users where 6.3 million are broadband users. These statistics prove that marketing communication via mobile phone is a channel to consider.

The 3G technology gives rise to mobile email, instant messaging and MMS. Moreover, the upswing of 3G technology sees the fall in SMS messaging traffics. Although it is still rising in term of message sent, its share of traffic is falling as traffic from mobile instant messaging rises. Likewise, “global mobile instant messaging traffic” share are forecasted to increase from 17.2 percent to 34.6 percent. In addition, mobile instant messaging is projected to be used by 30.9 percent of mobile subscribers in 2016 from 7.9 percent in 2011. In 2011, 207 billion MMS were sent and it is expected to rise to 276.8 million in 2016. Another area of growth expected is mobile email. It is difficult not to see the importance of social media. Social media are impacting the way people live. Politically it has impact on the Arab Spring, the Syrian Revolution and Ukraine crisis. It was heavily used for politics locally and internationally. It has changed the way people buy. It has changed the way marketers communicate. Social media is a must in any marketer’s communication strategy (Pelling & White, 2009; Nguyen et al., 2019; Nikhashemi et al., 2013; Pathiratne et al., 2018; Seneviratne et al., 2019; Tarofder et al., 2019).

The following are trends for social media as of 2014.

Interestingly, more than 40% of social media users come from the Asia Pacific Region. 19.7% percent of all time spent online in on social media sites.

1. People from different age group, different gender and different region have different social media behaviour

Research shows that people spend less time communicating via the traditional way of face to face but more towards social networking. Their activities in social network include creating content, seeking information and chatting (Kim, LaRose, & Peng, 2009).

In Malaysia, 91.6% of online population is engaged in social network. Furthermore, one third of world social networkers are from the Asia Pacific region. On average, a person in Asia Pacific spends 2.9 hours on social networking compared to 7.6 hours in Latin America, 7.2 hours, in Middle East, 7 hours Europe and 6.4 hours in North America. In general, study shows that people accept mobile marketing as a whole. The most important drivers for them to accept mobile marketing are because of utility and context (timing of message that give them additional values i.e. location based mobile services) (Ehrenberg, Juckes, White, & Walsh, 2008). Yet, despite concerns about safety and privacy, study shows that “control and trust” are not that important to consumers in mobile advertising. One study shows that the key driver of motivation of acceptance of mobile marketing among the young consumers or the “digital natives” is the marketing message that gives them enjoyment and uplifts their status and image. Furthermore, perceived ease of use of mobile had limited effect on their acceptance.

Dasgupta, Paul, and Fuloria (2011), one study argues that “digital natives” are not accepting mobile marketing. The key reason for this is the view that mobile marketing is intruding and not trustworthy. The study was on SMS and MMS mode of sending marketing communication. The study, however, findings confirm that mobile phones are very appealing to the

digital natives. This paper seeks to better understand the consumer behaviour in using smartphones in comparison to other computing resources (ie. desktop and portable computers). Today, smartphones can perform **more tasks** beyond the basic capabilities of voice calls and SMS. It now can handle emailing, editing and viewing documents, playing games, viewing videos, listening to audios, browsing the internet etc. There are some differences in gender when it comes to mobile phone usage. The males tend to be the “technology enthusiast” whereas the females tend to have an addictive usage of phone and more “trend conscious” users.

The study further explained that 1) Malaysian in general are active in mobile internet browsing, 2) yet, only 60% are using mobile email, 3) and 85% are in mobile games. The fact is consumers are spending a lot of time online in social media. Marketers have to understand how to communicate with the consumers in social media because that is where they are. While marketers understand the importance of mobile social media to their whole marketing strategy, they have yet to fully understand the changes in consumer behavior and their expectation while accessing social media via mobile phone (Baran, 2014).

There are limited studies made on consumer attitude while assessing social media via mobile phone. Furthermore, no studies on consumer expectation while assessing social media via mobile phone are available. Without the understanding of the consumer attitude while using social media via mobile phone, marketers are deprived of new approach to best use social media to best communicate with their customers. The sample of the study would be university students in the Klang Valley area. This research will provide recommendations for small and medium enterprises of the different strategies best used to communicate with customers using social media and present an integrated social media marketing communication model (Hussain, Mosa, & Omran, 2017).

II. Literature Review

This chapter presents a review of literatures and previous researches related to this study. Our literature reviews will cover the following topics: 1) the introduction of social media marketing framework, 2) the different consumer motivation and activities while using social media, 3) the setting of objectives in social media marketing, 4) the development of message content for social media marketing, 5) the different means of communication in social media marketing. As a component of digital marketing, internet marketing refers to all marketing communication using internet technologies as its channel (Chaffey, Chadwick & Mayer 2009). As for mobile marketing, it refers to all marketing communication using mobile phone technologies as its channel (Hussain, Mosa, & Omran, 2018).

Social media marketing communication refers to the communication process of gaining website traffic, consumer responses or attention through social media application as its channel. Out of all channels in digital marketing, social media marketing has taken as the central part. Some has gone to consider social media marketing as the integral component of marketing communication itself. When looking at media, any media that is, firms have to consider how all the different types of media works or integrates together. In the online (internet, mobile and social) channels of marketing communication, past studies define online media into three types. The process of integrating of all marketing communication means, channels and types of media, and activities within a company into one program is called integrated marketing communication. Technology gives firm choices between many means of communication and varieties of channel and types of digital media to

communicate with their customers. Firms want to choose a mean and a mix of media that gives them the highest responses from customers (Hussain, Musa, & Omran, 2019).

Through integration firms seek to maximize the impact of their marketing communication strategy on the target market at a minimal cost. This integration includes all media; print and digital working together and supporting each other. The end consumers never differentiate the different types of media and channels (ie social media, mobile service, digital print, or printed material). INC, 2014 in their report on social media trend for 2014, puts focus on 1) purposeful marketing, 2) data-based marketing and 3) providing timely and relevant information. A well designed social media campaign begins by understanding the target market. Since a firm usually has a defined group for their target market, this factor refers to the study of the target group's social media behavior and preferences in communication. Data regarding this behaviour can be collected from three sources Client database, secondary research and primary research. Primary research refers to the process of gathering data by talking directly to the target market (i.e. focus group). Interestingly enough, across all region women are more engaged in social networking. Women spend more time on social network but the gap narrows for younger demographics (Al-rahmi, Othman, & Musa, 2014).

Facebook as the prominent social media sites

Facebook is the largest player by virtually any measurement. It is the third largest web property in the world, trailing only Google Sites and Microsoft Sites. In October 2013, Facebook reached more than half of the world's global audience (55 percent) and accounted for approximately 80% of time spend on social networking sites.

Microblogging has emerged as a force in social networking

Microblogging, a style of communicating through short-form content, has taken hold as a wildly popular social networking platform in recent years, due in large part to the emergence of Twitter – which saw its audience begin to erupt in the spring of 2009. To date, Twitter reaches 1 in 10 Internet users worldwide to rank among the top social networks, and posted an impressive growth rate of 59 percent over the past year (Hussain, Musa, & Omran, 2018).

Local social networks are making inroads globally

As global social networking usage continues to expand, there is another trend worth mentioning. There is a shift in geographic footprint of some of the major sites. Local social networks around the world are beginning to break into the top tier of global networks while attracting a sizeable share of traffic outside their native markets. VKontakte, which currently ranks seventh worldwide, traditionally catered to a Russian audience, but now attracts 43 percent of its traffic from outside Russia – an increase of nearly 10 percentage points from the previous year. Odnoklassniki, another Russian social network, also currently attracts 41 percent of its traffic from outside Russia.

Marketing using mobile devices are increasingly important due to the 1) increasing number of users and 2) the advances in its technology. Furthermore, mobile social media is gaining greater acceptance among consumers. Thus, this next section

will present the current academic studies on 1) the acceptance of consumers receiving marketing communication via mobile devices, and 2) the consumer behaviour while using mobile devices (mobile phones, lap top, netbook, or tablets).

In general, consumers will be busy acquiring and consuming information. Consumer would visit a social media site, but they will only read, view or listen to the content. They would not write comments, share the content or produce their own content to be posted on the site. Study shows the tendency to produce content is reported when using social networking sites (Hussain et al., 2012).

The youth of the new millennium is called the millennial or the digital natives. They are the native user of technologies. 81% of Millennial are on Facebook. The median size of friends in Facebook is 250, which is higher than other age group. Yet, the digital gap between age groups is dropping in recent years. Millennial are also unique in how they portray themselves in social media. For example, 55% have posted a “selfie” on a social media site. Although the term “selfie” has been declared as word of the year in 2013, only 60% of Boomers know what a “selfie” is. Although they are a generation that loath all thing digitals.

Research suggests that younger generation’s perception on digital media different from the adult perspectives. Firstly, the youth does not look at “technology” as hardware or software; they look at it in terms of the activity it enables. They consider the word “technology,” to refer to things that are innovative, modern, and exciting, not merely useful. The same study also identify that for group with strong positive peer group relationship, entertainment and passing time as the most important motivation of use. Youth considers participation on the key social network site essential to being seen as cool at school. Young adults view social media similar to parks and malls, to socialize with peers, make sense of and help build the culture around them (Nawaz, Afzal, & Shehzadi, 2013).

Youth receives more pressured from their peers to use digital media than do other adults. Since social networking sites are extremely popular among youths, they feel greater desire and opportunity to expand their social connections via these media. One study on the psychological influences of mobile phones shows that youth uses phone for three benefits: self, social and practical. The study shows that youths are addicted to their mobile phone. The study also shows that self-gratification is the greatest impact leading to phone usage addiction. In contrast to the older generation, youth does not seem to be concerned about information credibility. They are concerned about 1) the reliability/accuracy of information use for their schoolwork and 2) how to trust people they meet in the social media. In addition, they are more “natural” in using social media to find information compared to other generations. Although many youths participate in social media, there are groups of youth that do not. Past studies describes two types of nonparticipants: 1) disenfranchised teens and 2) conscientious objectors. The downside of social networking for young adults is possibility of sexual harassment. Similarly, children may not have sufficient knowledge and experience of what is safe (Nawaz, Azam, & Bhatti, 2019).

Many studies have been conducted on the subject of mobile marketing, mobile phone usage and social media marketing. Yet there are no studies on mobile marketing focusing on social media channel. Furthermore the focus of these studies is on consumer acceptance on mobile marketing. The term mobile marketing in these researches focuses more on mobile advertising and not mobile marketing communication. Once a firm has a clear understanding of how its target market behaves in social media and having decided a clear objective for their social media initiatives, the next factor is to define their message

content strategy. Firm has to define the message content it seeks to communicate to their target market. The key success criterion for message content strategy in social media is to create good conversation with the target market or pull strategy (Nawaz & Hassan, 2016).

A conversation is a process of acting, reacting, saying and replying to a subject. Developing a conversation is the key and starting point for content strategy in social media. The firm content strategy is to create an environment where the conversation is personalized and polite. Firm must not only react to consumer communication but more importantly listen and control the tonality of the conversation. Firm must first set their credibility and not try to sell themselves. It must seek as someone who offers help, ideas, and advices to a specific topic without trying to sell. Firm must continuously offer new topics that are relevant to the consumers. Firm must attentively and quickly react to suggestions and feedback. The key is to create an enjoyable communication experience between the firm and its consumers. Social media is unique in comparison to other media. The content is living. Firm cannot see social media communication as a set of campaigns or push strategy. Message content strategy should be in continuous stream (Park, Kee, & Valenzuela, 2009).

Past studies present a 3 layer model for creating unique mix of content for a brand or company in a social web. The first layer is called Grundrauschen. This is a process of an ongoing, daily conversation a firm has with its customers on the social web. The topic of discussion is all that is connected to the firm, the brands and the product. It should present whatever necessary information a consumer is looking for in a company's social web. It should be Informative, Entertaining, and Engaging. The information can be presented in the text, video or audio format.

Secondly, firms must create great content. Readers are more likely to share if they think the content are useful, important for society, and reflect their tastes; and anticipate that people would feel happy and grateful to them for sharing with them. Although, great content is important, even if the content of the campaign is not of interest to the readers, the tendency for them to pass on the information is very high through mobile social media application (Valkenburg, Peter, & Schouten, 2006).

Finally, firms must time their communication strategy to ensure it is within context. The current happening plays a role in ensuring timing of message. Location of readers also plays a role. The message must be communicated in the right environment to ensure it to become viral. When devising a social media communication strategy, it is imperative for firms to have a deep understanding of the different factors that motivate consumer to use social media and 2) clear understanding of the type of activities they would undertake while using social media.

An assistant professor from Harvard University, from his research identifies five big problems online advertisers face when creating content that can be viral. He found that consumers were turned off by digital ads of prominent brand that shows the logo of brand. He suggests utilizing 'brand pulsing'. It is a process of creating content by eloquently blending in company logo or company brand. Direct association with the brand turns off consumers because of their natural resistance for being persuaded. Secondly, consumers get bored right away. Firms must create content that create joy or surprise instantaneously. Thirdly, people then move on once their joy or surprise levels out. It seems that consumer stay watching or reading. Fourthly, there is a tendency of consumers liking a content but not willing to share it. The content must create constant surprise and not shocking. Lastly, the fact is that whether or not an ad is shared depends as much on the personality

types of viewers as on the ad itself. Firms must target the right viewers. It goes back to understand the target market (Koc & Gulyagci, 2013).

In accessing social media applications, people have several communication devices to choose from. They can choose to use mobile phone, tablet, desktop, laptop, netbook and other internet abled devices (ie camera etc). The choice of devices would depend on many factors. Firms care about their return on investment thus effectiveness measurement is important. Firms need to analyses the effectiveness of their program. They need to monitor the external environment to listen to the changes the customers want. They need to analyses each of their social media platform to see which is doing well and which is not. Social media provides firm with just that. Its powerful analytics tools are present to help firm measure the effectiveness of each of the firm initiatives. Social media allows firms to run hundreds of initiatives with limited budget. The analytic tools help firm define and decide which initiatives are giving them the best results. There are many monitoring tools that can help firm analyze the public conversations on Social Media platforms. This process gives firm the insides on their customer's sentiment towards their brand and products, their interests and needs (Tan, Ooi, Sim, & Phusavat, 2012).

III. Research Model

Analytic tools are aplenty and are very strong in social media, and easily accessible. Many platforms offer detailed measurements and analysis around users' engagement with the firm's content. This section of the chapter will present the research theoretical framework of the thesis. The framework below is based on theories of integrated marketing strategy formulated to understand customer attitude while accessing social media. The research objective is to identify relationship between the independent variables, which are 1) demographic, 2) devices, 3) activities, and the dependent variable, which is attitude, while accessing social media. Hence, the research will identify the triggers that will make consumer have a positive attitude while accessing social media.

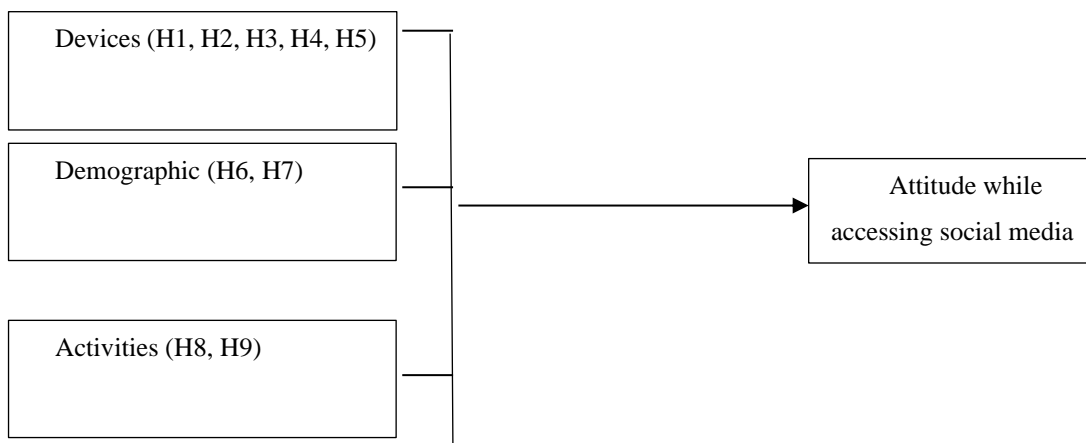


Figure 1: Research Framework

Attitude is defined as person's evaluation of behavior's outcome as favorable or not favorable. A person tends to take certain behaviour if he has positive attitude on undertaking the behaviour. If the attitude is positive, the behaviour is positive. Since brand is looking for a positive behaviour it needs to know in what condition a customer can have a positive attitude in social media. The process of integrating of all marketing communication means, channels and types of media, and activities

within a company into one program is called integrated marketing communication. Technology gives firm choices between many means of communication and varieties of channel and types of digital media to communicate with their customers. Firms want to choose a mean and a mix of media that gives them the highest responses from customers. The literature reviews show that marketers need to focus on the right consumers, to 1) understand how they behave and create content that are relevant to them and 2) to communicate with them in the right means and mix of social media communication. This is vital for an effective social media strategy. The research explores this idea that marketers should consider the demographic, devices, activities, motivation, and channel factors when trying to understand the customer's attitude when accessing social media. The research seeks to understand the following factors to help brand develop better strategy.

- 1) **devices factor** such as tab, smartphone or desktop,
- 2) the **demographic factors** such as genders,
- 3) **activities factor** such as consuming or creating

IV. Research Design & Methodology

Questionnaires are cheaper to implement compared to face-to-face interviews especially when the sample is large and the geographic area is big. In addition, when there are a large number of research questions, a written questionnaire becomes even more cost effective. Furthermore, questionnaires are easy to analyze. Their data and tabulation can be easily completed with numerous software packages. Moreover, people are familiar with questionnaires. Almost everyone has had some experience completing questionnaires. Since the questions are uniformly presented, questionnaires reduce biases. Questionnaire eliminates the possibility for the researcher's own opinions to influence the respondent to answer questions in a certain way. Respondents are not exposed to any verbal or visual clues to influence them. First, a questionnaire is designed based on the hypotheses to be tested. There are four sections in the questionnaire 1) demographic profiles, 2) means of accessing the internet and social media, 3) channels of communication mobile phone activities. For each section, there is a set of questions where the respondents must answers.

This study seeks to prove the following hypotheses:

H1:

- More respondents access social media application through mobile phone than any other devices.
- Less respondents access social media application through mobile phone than any other devices.

H2:

- Respondents access social media through multiple devices.
- Respondents do not access social media through multiple devices.

H3:

- More respondents communicate using mobile phone than other fixed communication devices (fixed phone, email via desktop, IM via desktop).
- Less respondents communicate using mobile phone than other fixed communication devices (fixed phone, email via desktop, IM via desktop).

H4:

- Respondents use the phone more in internet related activities than traditional phone activities such as call, sms and mms.
- Respondents use the phone less in internet related activities than traditional phone activities such as call, sms and mms.

H5:

- More respondents access social media application than any other online activities while using the internet via phone.
- Less respondents access social media application than any other online activities while using the internet via phone.

H6:

- Female respondents act differently than male respondents while using social media using mobile phone.
- Female respondents act no different than male respondents while using social media using mobile phone.

H7:

- Female respondents are motivated differently than male respondents while using social media using mobile phone.
- Female respondents are motivated no different than male respondents while using social media using mobile phone.

H8:

- More respondents use their own social media sites as a source of product information than other any other media.
- Less respondents use their own social media sites as a source of product information than other any other media.

H9:

- When accessing social media via phone, respondents would create, consume and share.

- When accessing social media via phone, respondents only create, consume or share.

The sample in this study is young adult. The sample contained 250 university students studying in Malaysia.

This sample is significant because it is a huge, if not the biggest, market segment. Generation Y or youths are the most reactive segment in term of changing in needs and technology. They respond highly to technology advances as they are the early adopter of technology. Be it for retailers, educators, or politician, the youth of today is a major driving force in any economy.

As the major group internet user and mobile phone owners, the understanding of using these channels to communicate to this particular target market is important. The table shows that Generation Y lead the way with 30% (United States) and 42% (Malaysia) of internet using population.

Table 1: Percentage of Home Internet Users In Malaysia

Generation name	Ages	% of internet using population
Gen Y	20 to 34	41.9%
Gen X	35 to 44	19.5%
Younger Boomers	45 to 49	5.1%

(Source: Malaysian Communications and Multimedia Commission)

V. Findings

The research objective is to identify relationship between the independent variables, which are 1) demographic, 2) devices, 3) activities, and the dependent variable, which is attitude, while accessing social media. Hence, the research will identify the consumer behavior while accessing social media.

The results of respondents' race are shown in table 4.3. The table shown 79 respondents (32%) are from the age 20 years old or younger. In addition 149 respondents (60.3%) are from age 21-30 years old group while 16 respondents (6.5%) are from 31-40 years old. In the other hand, the least respondents are from age 41-50 years old and above consist of 3 respondents (1.2%).

Table 2: Age of Respondents

		Frequency	Percent
Valid	below 20 years	79	32.0
	21 - 30	149	60.3
	31 - 40	16	6.5
	41 - 50	3	1.2
	Total	247	100.0

Table 3 shows race of respondents. It's shown that 137 respondents (55.5%) are Malay. In other hand, 7 respondents or 2.8% are Chinese. Indian for 36 respondents (14.6%) and 67 respondents (27.1%) are other races.

Table 3: Race of Respondents

		Frequency	Percent
Valid	Malay	137	55.5
	Chinese	7	2.8
	Indian	36	14.6
	Others	67	27.1
	Total	247	100.0

Table 4 below, shows the IT background of respondents. From the table below 93 respondents (37.7%) are having an IT background, whereas 154 respondents (62.3%) do not have an IT background.

Table 4: IT Background

		Frequency	Percent
Valid	yes	93	37.7
	No	154	62.3
	Total	247	100.0

A frequency factor was used to analyze the hypotheses in this section. Respondents were asked to indicate their perceptions and agreements towards “devices” related statements in the questionnaires. Furthermore, respondents were given choices to multiple answers and were allowed to have more than one answer. Based on the respondents’ score for each of the “devices” related statement, the percentage of each variable in the answers is determined. The highest percentage is identified to represent the respondents’ perceptions towards the variables.

These hypotheses investigate the respondents’ choice of device while accessing their social media. The hypotheses are as follows:

- H1 More respondents access social media application through mobile phone than any other devices.
HO1 Less respondents access social media application through mobile phone than any other devices.
- H2 Respondents access social media through multiple devices.
HO2 Respondents do not access social media through multiple devices.

Table 5 below shows that “mobile phone” is the most popular device for respondents while assessing social media application. It represents 28% (159 respondents) of the total respondents. It is followed by, “laptop” at 26.3% (149 respondents), “netbook” at 18.2% (103 respondent, “desktop” at 13.9% (79 respondents) and finally “tablet” for 13.6% (77 respondents). This indicates that there are more respondents adopted to use mobile phone to access social media rather than any other devices. **Thus H1 and HO2 are accepted and rejected for HO1 and H2.**

Table 5: Frequency of Social Media Application Through Devices

		Frequency	Percent
Valid	Mobile Phone	159	28.0
	Desktop	79	13.9
	Laptop	149	26.3
	Netbook	103	18.2
	Tablet	77	13.6
	Total	567	100.0

Hypothesis 3 wishes to study the “usage of mobile phone as a tool for communication” in comparison to other “fixed communicating” devices. Below are the hypotheses:-

- H3 More respondents communicate using mobile phone than other fixed communication devices (fixed phone, email via desktop, IM via desktop)

HO3 Less respondents communicate using mobile phone than other fixed communication devices (fixed phone, email via desktop, IM via desktop)

Table 6 below presents the frequency of each communication channels. The result shows that “mobile phone” has the highest score at 321 respondents. **Thus, H3 is accepted and HO3 rejected.**

Table 6: Frequency of Communication Channel

		Frequency	Percent
Valid	Face to face	201	21.7
	Landline	33	3.6
	Mobile Phone	321	34.7
	Email	103	11.1
	Messaging through social media	75	8.1
	Send Instant message to friends	111	11.9
	Send text message to friends	82	8.9
	Total	926	100.0

This hypothesis intends to study the “usage of mobile phone for internet related activities in comparison with the conventional phone activities”. Below are the hypotheses:-

H4 Respondents use the phone more in internet related activities than traditional phone activities such as call, SMS and MMS.

HO4 Respondents use the phone less in internet related activities than traditional phone activities such as call, SMS and MMS.

Table 7 below shows that “traditional mobile phone activities” scores 710 frequencies (60%) and “internet based mobile phone activities” scores 475 frequencies (40%). The data shows that the respondents are most likely to use mobile phone for “traditional mobile phone activities”. **In this case, H4 is rejected and HO4 is accepted.**

Table 7: Mobile Phone Activities

Traditional phone activities			Internet based activities		
	Frequency	Percent		Frequency	Percent
Voice call	157	13.3	Sending email	135	11.4

Checking answering machine	49	4.2	Using location based service	11	0.9
Sending SMS/text messaging	232	19.6	Downloading	55	4.6
Instant messaging	87	7.3	Watching mobile tv	10	0.8
Sending MMS	74	6.2	Web browsing and searching	53	4.5
Listen to mobile radio	12	1.0	Accessing social media	211	17.8
Making video call	99	8.4			
Total	710	60		475	40

The objective of this hypothesis is to look at the “online activities” of the respondents while accessing internet through their phones. Below are hypotheses:-

H5 More respondents access social media application than any other online activities while using the internet via phone.

HO5 Less respondents access social media application than any other online activities while using the internet via phone.

Table 8 below presents the online activities of respondents while accessing the internet using their mobile phone. As a clarification, social media application includes 1) collaborative projects (e.g. Wikipedia), 2) blogs and microblogs (e.g. Twitter, Facebook), 3) content communities (e.g. Youtube), 4) virtual game world (e.g. World of Warcraft) and 5) virtual social worlds (e.g. Second Life) (Kaplan and Heinlein 2010). The result shows that the frequency of “social media activities while using mobile phone internet” is 1008 (64.1%) and the frequency of “non-social media activities” is 565 (35.9%). **Thus, H5 is accepted and HO5 is rejected.**

Table 8: Accessing Online Activities While Using Mobile Phone

Social media activities			Non social media activities		
	Frequency	Percent		Frequency	Percent
Play video games	189	12.0	Watch shows, music groups or sports stars	49	3.1
Use an online social networking site	243	15.4	Go to websites about movies, TV	120	7.6
Watch a video on video-sharing site like YouTube	218	13.9	Go online to get news or information about current events or politics	75	4.8

Keep a blog or online journal	46	2.9	Go online to get information about a service or product	112	7.1
Download a podcast	189	12.0	Buy things online like books, clothing or music	76	4.8
Visit a chat room	123	7.9	Look online for health, dieting or physical fitness information	11	0.7
			Manage my own website	122	7.8
Total	1008	64.1		565	35.9

An independent samples t-test was conducted to see whether there is a significant difference in the means of “activities and motives in social media accessed using mobile phone” score for male and female. In testing the hypotheses, one sample t-test is used to analyse whether there is a significant difference in the means of “using social media accessed through mobile phone” score between male and female.

The hypothesis intends to evaluate the relationship between genders and their “activities in social media accessed through mobile phone”. The hypotheses are as below:-

- H6 Female respondents act differently than male respondents while using social media using mobile phone.
- HO6 Female respondents act no differently than male respondents while using social media using mobile phone.

Table 4.10 below indicates that there is a significant difference in the “activities in social media accessed through mobile phone” between genders (f value = 0.466, p = 0.495). As the probability error is more than 0.05 (p = 0.495 > 0.05). Therefore, as a conclusion female respondents acted no differently than male respondents. **Thus H6 is rejected and HO6 is accepted.**

Table 9: Independent Sample T-Test for Serving Social Media Using Mobile Phone

Table 9: Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean	F	Sig
Using Mobile phone	Male	117	2.8547	2.28286	.21105	.466	.495
	female	129	3.0465	2.34807	.20674		

The hypothesis intends to evaluate the relationship between genders and their “motivation to use social media accessed through mobile phone”. The hypotheses are as below:-

- H7 Female respondents are motivated differently than male respondents while using social media using mobile phone
- HO7 Female respondents are motivated no differently than male respondents while using social media using mobile phone

Table 10 below shows the results of the Independent sample t-test that has been conducted between “gender” and “motivation to use social media accessed through mobile phone”. The results revealed that there was no difference between both male and female as the p value is bigger than significant value, ($p=0.819$ which is >0.05). **Thus, H7 is rejected and HO7 is accepted.**

Table 10: Independent Sample T-Test For Motivation In Social Media Using Mobile Phone

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean	F	Sig
motivation	Male	118	3.5262	.59990	.05522	0.52	0.819
	Female	129	3.4004	.60423	.05320		

Hypothesis 8 and 9 are regarding respondents’ activities while using social media.

The objective of this hypothesis is to find whether the respondents use social media as a source of product information more than other media. The hypotheses are as follows:

- H8 More respondents use social media sites as a source of product information than other any other media
- HO8 Less respondents use social media sites as a source of product information than other any other media

Table 11 below shows that “Other Media” scores 563 frequencies (82%) and “Social Media” scores 120 frequencies (18%). The data shows that the respondents are most likely to use more “traditional media” for product information. **In this case, H8 is rejected and HO8 is accepted.**

Table 11: Social Networking Site as Source of Information

Other Media			Social Media		
Newspaper			Product social media sites		
	127	19%		71	10%

Magazine	112	16%	My own social media sites	21	3%
Product website	140	20%	Post in social media for feedbacks	28	4%
Online ads	75	11%			
Search engine	109	16%			
Total	563	82%		120	18%
Total	683				

The purpose of this hypothesis is to understand the respondents' activities while accessing their social media using their mobile phone. It seeks to find out whether respondents are creating, consuming or sharing information at the same time or just only creating or consuming or sharing information. For this the following hypotheses are developed:-

- H9 When accessing social media via phone, respondents would create, consume and share
HO9 When accessing social media via phone, respondents only create, consume or share

The table 12 shows that the respondents are willing to create, consume and share at the same time. The activities of creating, consuming and sharing information are chosen the most "sometimes" activities by the respondents. Thus it can be concluded that the respondents are creating, consuming and sharing information at the same time while accessing their social media via phone. **Thus, H9 is accepted and HO9 is rejected.**

Table 12: Activities When Accessing Of Social Media

One-Sample Statistics

While accessing my social media sites via my mobile phone, I would	N	Mean	Highest score	Frequency
Add comments to a friend's post	225	4.8800	Some times	86
Post messages to a friend's page or wall	247	4.6437	Some times	86
Share content with a friend's page or wall	247	4.5749	Some times	84
Send private messages to friend's	247	4.7166	Some times	88
Read comments on friend's page or wall	247	5.0891	Some times	82
Read comments on brands page or wall	247	4.8016	Some times	81
Send group messages to all friend's	247	4.4211	Some times	75
Post contents (text, video or picture) on my own walls	247	4.7733	Some times	85
Others	100	5.2900	Some time	28

VI. Conclusions and Implications

This is the final chapter of the thesis. First, it will summarize the main results. Second, it will revisit the research objectives and questions; and present the methods used to answer them. Third, the statistical findings and results of hypotheses testing will be presented. Fourth, the implications of the study for businesses will be discussed. Finally, the limitations of the study, suggestions for future research and conclusions of this chapter will be discussed. Today, our lives are surrounded with social media and mobile phones. "Facebook" with its millions of active users around the world leads the way as the most important social media application. Current mobile phone technology has enabled customers to surf internet instantly and conveniently. This new technological landscape has changed the way we communicate and live.

Businesses must adopt these new digital technologies to compete and more importantly, to survive. They have to 1) re-examine how their customers are behaving in this new economy and 2) develop new processes to strengthen their brand, retain old customers, find new customers, increase their sales, improve their support functions, recruit more competent staff, develop their communication infrastructure and improve their product (Carlsson 2010).

The result reveals that from four (4) are rejected. The basis for these hypotheses to be accepted is because of their relatively high positive "attitude to access social media via mobile phone". H4, H6, and H7, are rejected because the results are not significant due to low significant value and low frequencies.

Chapter Three presented the nine hypotheses developed to help answer the key questions pertaining to the determinant factors for predicting consumer attitude while accessing of social media via mobile phone. The first research question, is whether marketing communicating through mobile phone device the best medium for businesses to engage with their customers via social media? These hypotheses investigate the respondents' choices of devices when accessing social

media. The “devices” factor is identified by five constructs. To support this objective, five hypotheses were developed. There are as follow:

- | | |
|-----|---|
| H1 | More respondents access social media application through mobile phone than any other devices. |
| HO1 | Less respondents access social media application through mobile phone than any other devices |
| H2 | Respondents access social media through multiple devices. |
| HO2 | Respondents do not access social media through multiple devices. |
| H3 | More respondents communicate using mobile phone than other fixed communication devices (fixed phone, email via desktop, IM via desktop) |
| HO3 | Less respondents communicate using mobile phone than other fixed communication devices (fixed phone, email via desktop, IM via desktop) |
| H4 | Respondents use the phone more in internet related activities than traditional phone activities such as call, SMS and MMS. |
| HO4 | Respondents use the phone less in internet related activities than traditional phone activities such as call, SMS and MMS. |
| H5 | More respondents access social media application than any other online activities while using the internet via phone. |
| HO5 | Less respondents access social media application than any other online activities while using the internet via phone. |

The second research question is to find out more on what are the consumer’s motivations and activities when accessing their social media networks. Hypotheses 6 and 7 are about demographic factor in consumer’s motivations and activities. These hypotheses are developed to find the gender influence activities and motives for activities while they are using mobile phone to access social media. Two constructs were used to evaluate gender role in determinant using behavior.

- | | |
|-----|---|
| H1 | Female respondents acted differently than male respondents while using social media using mobile phone. |
| HO1 | Female respondents acted no differently than male respondents while using social media using mobile phone. |
| H2 | Female respondents are motivated differently than male respondents while using social media using mobile phone |
| HO2 | Female respondents are motivated no differently than male respondents while using social media using mobile phone |

“Activities in social media” factor has been argued to be one of the significant contributors towards the “attitude while accessing social media”. Understanding this factor is the key influencer in having successful communication with customers to ensure total satisfaction. A satisfied customer leads to repeat purchase, brand loyalty, and positive word of mouth. Furthermore, it will lead to repeat purchases, loyalty and customer retention. Thus, by recognizing the different activities customer carries out in social media will help businesses sets directions and develop better communication strategies. The hypotheses for this factor are as follows:

- H8 More respondents use their own social media sites as a source of product information than other any other media.
- HO8 Less respondents use their own social media sites as a source of product information than other any other media.
- H9 When accessing social media via phone, respondents would create, consume and share.
- HO9 When accessing social media via phone, respondents only create, consume or share.

“Motivation” or “motive for action” is a factor that drives audiences to use social media. Past studies define motivation as “general disposition may influence people’s action taken to fulfill needs and wants”. The concept of “motivation” is still elusive as evident by the debate between scholars from various disciplines such as sociology, psychology, mass communication and behavior. The debates surround the question of measuring motivation. One way of measuring motivation is through studying how a particular behaviour fulfils needs and wants. In this case, the study of what drives a customer to carry out a specific activity while accessing their social media through their mobile phone.

Hypotheses below are developed to identify the motivational factor that influences customer to conduct a certain activity while using social media.

- H1 More respondents access social media application through mobile phone than any other devices.
- HO1 Less respondents access social media application through mobile phone than any other devices.

The frequency analysis of social media application through different types of devices shows that mobile phone has the highest score at 159 frequencies. As a result, H1 hypothesis is accepted and HO1 is rejected.

- H2 Respondents access social media through multiple devices.
- HO2 Respondents do not access social media through multiple devices.

Hypothesis H2 is accepted because the frequency analysis illustrates that “social media access through multiple devices” has the highest score at 408 frequencies. Thus, H2 hypothesis is accepted and HO2 is rejected.

- H3 More respondents communicate using mobile phone than other fixed communication devices (fixed phone, email via desktop, IM via desktop).

- HO3 Less respondents communicate using mobile phone than other fixed communication devices (fixed phone, email via desktop, IM via desktop).

Hypothesis H3 is accepted because the frequency analysis shows that “mobile phone as a communication channel” scores the highest at 321. Hence, H3 hypothesis is accepted and HO3 is rejected.

- H4 Respondents use the phone more in internet related activities than traditional phone activities such as call, SMS and MMS.
- HO4 Respondents use the phone less in internet related activities than traditional phone activities such as call, SMS and MMS.

Hypothesis HO4 is accepted because the frequency of mobile phone activities is negatively significant. The frequency of the construct is found to be at 710. Consequently, H4 is rejected and HO4 is accepted.

- H5 More respondents access social media application than any other online activities while using the internet via phone.
- HO5 Less respondents access social media application than any other online activities while using the internet via phone.

Hypothesis H5 is accepted because the frequency accessing online activities while using mobile phone is positively significant. The frequency of the respondent access social media was found to be at 1008. Accordingly, H5 is accepted and HO5 is rejected.

- H6 Female respondents acted differently than male respondents while using social media using mobile phone.
- HO6 Female respondents acted no differently than male respondents while using social media using mobile phone.

Hypothesis H6 is rejected while HO6 is accepted. This is because the independent sample t-test between gender and mobile phone activities is not significant. Furthermore, the probability error is more than 0.05 ($p=0.495 > 0.05$). Thus, the test shows that female respondents act no differently than male respondents.

- H7 Female respondents are motivated differently than male respondents while using social media using mobile phone.
- HO7 Female respondents are motivated no differently than male respondents while using social media using mobile phone.

As for the H7 hypothesis, the independent sample t-test result between “gender and means of accessing the internet and social media” is negatively significant. This result reveals that there is no different between both male and female respondents. Moreover, the p value is bigger than significant value, ($p=0.819$ which is >0.05). Therefore, H7 is rejected while HO7 is accepted.

H8 More respondents use their own social media sites as a source of product information than other any other media.

HO8 Less respondents use their own social media sites as a source of product information than other any other media.

Hypothesis H8 is accepted because the frequency of social networking site as source of information is positively significant. The frequency of the construct is 247. Therefore, H8 is accepted and HO8 is rejected.

H9 When accessing social media via phone, respondents would create, consume and share.

HO9 When accessing social media via phone, respondents only create, consume or share.

Hypothesis H9 is accepted because the activities accessing of social media is significant. The result shows that there is a high frequency of activities when accessing of social media. Hence, H9 is accepted and HO9 is rejected.

Furthermore, the table reveals “Activities” as the second most influential factor with a Beta of 0.282. Most of the literature suggests a positive relationship between activities and attitude. Moreover, the result demonstrates a positive relationship between activities and attitude while accessing social media. The result further exhibits that higher “activities” formulate to higher level of attitude while accessing social media. Likewise, this could also be due to the positive questions designed in the questionnaire. As of for element of “devices”, the result indicates it has the second lowest interactions with beta value 0.0501. There is a low perceived influence of “devices” towards attitude while accessing social media.

VII. Recommendation

Malaysians use social media as a medium to create, consume and share contents. Yet, they are constantly demanding new ways that social media be used fulfil their needs and wants. From the research, when devising a marketing communication strategy, brand must consider the following: A major factor in having an effective marketing communication strategy is having chosen the right means of communication for the target market. There is little relevant of a good message content when the readers are not being reached. Based on the research, we recommend focusing on mobile social media, with mobile phone context as a mean of communication

VIII. Implications of the Study

The findings will benefit corporation, manufacturer, marketer and researcher in Malaysia by helping them devise better marketing communication strategy. The research provides insights into consumer perception and belief. These are important insights as it is the cornerstone in customer’s psychology in building their intention to purchase the product. Past studies state that a more specific marketing approaches or technique should be used to stimulate products versus generalize product marketing. Thus, through proper understanding of customers’ behaviour in term of social media, marketers can devise a more effective, creative technique using social media to approach their customers. In turn, this will increase their return of marketing investment.

Through social media, businesses can be easily reached and accessed by their prospects and their customers. Furthermore, social media allows businesses to give a more personalized communication to their current based of customers. Social media gives businesses the platform to nurture their prospects by educating them on the solution that it provides. This casual nature of prospect nurturing further strengthens its brand equity. This method is better in the short and long run in comparison to using the stuffy, pressure, rushing, uptight method to force customers to buy. Social marketing offers a platform for businesses to build relationship with their qualified prospects in informal, low pressure, personable, friendly environment. Likewise, it is used to keep base with its customer.

Online social networking users are three times likely to trust their peers to peers opinion over online advertising. Otherwise, less than 20% of these users trust online advertising when it comes to purchase decision. Some are center of influences where their recommendation, opinion and advice are highly regarded. They wield the power to make a brand to be viral through the power of mouth to mouth marketing. Furthermore, social media helps build a brand social value. This is important to gain trust from all of its stakeholders. This further increases the value of brands digital marketing as search engine such as Google are becoming more social friendly. Google is paying more attention to site visitor social activities in ranking websites.

IX. Future Research

This research only investigates five elements of independents variable and one dependent variable. There are other elements for future research. The sample size and physical coverage to some extend influence the quality of the research findings and its generalization. Therefore, the findings may not be so accurate and is less representative of the whole population.

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