Consumer Perceptions and Intentions Towards Malaysian Mobile Marketing

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Abstract   Mobile marketing is a brand new phenomenon. In Malaysia, marketeers do not seem to understand well enough the perceptions of consumers according to mobile marketing, especially to the mobile service users. This study analyses and evaluates any significant relationship between consumer perceptions and intentions with respect to mobile marketing, and seeks to determine the expectations, preferences, pattern and usage of the consumers of Mobile Marketing Product and Service (MMP&S). The data was obtained by convenience sampling in the big cities of Malaysia. A total of 500 questionnaires were distributed and a sample of 112 usable questionnaires was selected. The result of this research applying the Technology Acceptance Model (TAM) point to the fact that perceived usefulness, perceived ease of use, perceived innovative, social influence have a direct positive relationship with the intention to use mobile marketing. This, in turn, can shed light on the main factors determining consumer intentions to use mobile marketing that may control consumer adoption of mobile marketing.

Keywords   Mobile marketing, mobile marketing product and service, technology acceptance model, perceived usefulness, perceived ease of use, perceived cost, perceived trust, personal innovativeness, consumer intentions

I. Introduction

In Malaysia, marketeers and advertisers do not seem to completely understand the perceptions of consumers according to mobile marketing, especially to the mobile service users. Industry marketeers usually outsource their marketing advertisements to the mass market without seeing the needs and interests of their targeted audience. As such, some consumers may get annoyed and irritated with these ineffective marketing tactics (Nattharika et al., 2009, p.815). In order to examine the potential of the mobile phone as a

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communication and advertising channel, marketeers need to recognise the unique characteristics of this channel, building a technology to get closer to consumers and constantly access the ways consumers interact with this channel (Lauren, 2016; Julia, 2010, p.2).

As the mobile medium is a relatively new channel for mobile advertising, there is a considerable amount of attention focused on investigating the determinations of mobile marketing adoption toward consumer intentions, yet the results of these findings are inconsistent and fragmented (Neda, 2015; Leppäniemi et al., 2006, p.11). Little research, however, has looked at the influence of consumer perceptions and purchase intentions on mobile consumer behavior. Hence, this study intends to deepen the understanding of the relationship between consumer perceptions and intentions (Haslinda et al., 2015; Geoffrey et al., 2010, p.36), more specifically regarding the adoption of mobile marketing in Malaysia.

The relation between perception and intention toward using mobile marketing can be explained by the Technology Acceptance Model (TAM) as defined by Davies in 1989, particularly to explore the perception, and behavioral intention for technology or service acceptance (Nysveen et al., 2005, p.247). This theoretical framework is often discussed in the academic research, hence this finding can help marketeers to understand the needs of the public who display the wrong perceptions and the attitude of local consumers on their intention towards buying Mobile Marketing Product and Service (MMP&S) (Julia, 2010, p.10). These consumers are among those who have experience buying MMP&S and those who never use or buy any MMP&S via mobile devices (Grewal et al., 2015; Faziharudean & Tan, 2011, p.1811).

This research has not been widely applied in the Malaysian context. As such, this study proposes a descriptive analysis on the respondents' demographic characteristics in regard to mobile marketing and examines the factors that influence purchase intention of MMP&S amongst the Malaysia consumers.

II. Theoretical Background

From previous studies, typically the scholars have focused on the main type of mobile marketing services, which are usually mobile Internet, mobile advertising, mobile coupons, mobile payment and mobile banking, and location-based mobile services, but they have paid little attention to the adoption of mobile marketing (Sultan et al., 2009, p.308). Table 1 shows the finding and summary of these recent studies.

Table 1 Key study on mobile marketing adoption

Source	Study Focus	Methodology	Most significant factors
Bauer et al. (2005)	Mobile marketing	Online survey	Attitude towards mobile marketing, perceived
Cheong & Park (2005)	Mobile Internet	Online survey	Attitude, perceived playfulness, perceived usefulness
Koivumaki et al. (2006)	Mobile services	Personal survey	Perceived usefulness, user guidance and support, and user skills
Rohm & Sultan (2006)	Mobile marketing	Personal survey	Privacy vulnerability, attitude, innovativeness, permission to interact, usage characteristics.
Amin (2008)	Mobile credit card	Personal survey	Amount of information, perceived usefulness, perceived ease of use and perceived credibility.
Hong et al. (2008)	Mobile data services	Online survey	Attitude, perceived enjoyment and perceived ease of use
Suleyman (2008)	Mobile Commerce & Mobile marketing	Online survey	Customer's Attitudes towards Mobile Commerce and Mobile Marketing in Consumer Markets
Sultan et al. (2009)	Mobile marketing	Personal survey	Risk acceptance, providing information, accessing content and personal attachment.
Jayasingh & Eze (2009)	Mobile coupon	Personal survey	Perceived usefulness, perceived credibility and social influence
Nattharika et al. (2009)	Marketing tools	Online survey	Consumers' Perception of the effectiveness of SMS and MMS as marketing tools
Geoffrey et al. (2010)	Mobile marketing	Online survey	Third Screen Communication and the Adoption of Mobile Marketing: A Malaysia Perspective
Faziharudean & Tan (2011)	Mobile data services	Online survey	Consumers' behavioral intentions to use mobile data services in Malaysia
Uchenna et al. (2011)	Mobile Commerce	Online survey	Mobile Commerce usage in Malaysia

Source: from researcher.

The adoption of mobile marketing is vital as the overall acknowledgement of consumer is the main influence to the success of mobile marketing implementation (Bauer et al., 2005, p.181).

In recent research by Goi & Ng (2011), many multinational companies (MNC) and media companies use mobile marketing in their advertisements to enable targeted consumers especially the young generation to gather their view about the usage of the products and services. Hudson et al. (2016) also conducted a related research to explore the issues and factors that impact on the adoption of mobile marketing intention in 33 countries. From his 866

respondents, he found that "the usefulness, attitude, ease of use, innovativeness, adoption behavior and demographic factors are important acceptance factors for m-commerce".

Mohammad & Razli (2011) also commented in their research that there are over 30 million mobile phone registered users in Malaysia and the penetration rate for mobile phone are exceptionally high (see Figure 1).

Browsed Internet	79%
Took photo/Video	77%
Social Networking	76%
Others	73%
Listen to Music	72%
Email	71%
Play games	70%
General Search	65%
Used an app	60%
Product Search	59%
Video Sharing Site	54%
Read news	54%
Directions/map	52%
Travel Search	42%
Online banking/Finance	42%
Tethered to a desktop	39%
Restaurant/Bar Search	36%
Job Search	30%
Used Coupons for shopping	24%
Flat/House Search	23%

Source: Adapted from our mobile planet, www.ourmobileplanet.com

Figure 1 How Malaysians use their smart phones for all gender

The mobile revolution is changing the average Malaysian's lifestyle (Wong & Hiew, 2005a). Mobile phone users commonly have their own mobile devices (see Figure 2) and statistically showed that there are on standby for approximately 14 hours per day (Bauer et al., 2005).
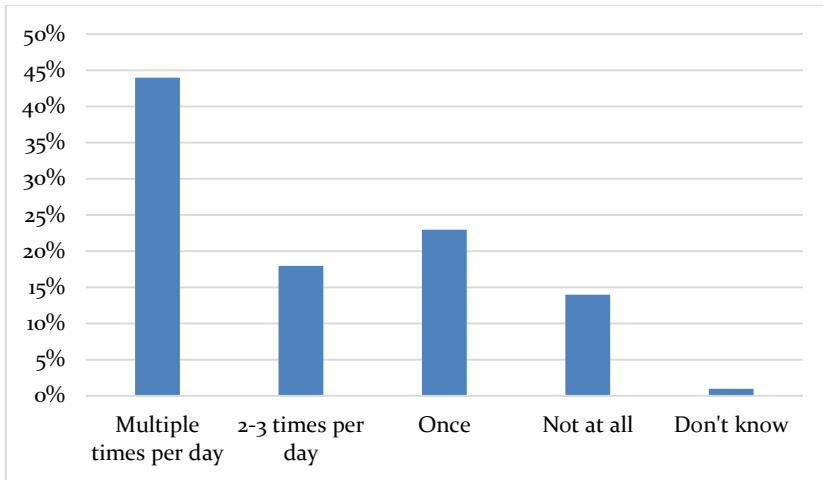
Source: Adapted from our mobile planet, www.ourmobileplanet.com

Figure 2 Malaysia daily online sessions per device - smartphone

With government initiatives to upgrade the mobile broadband network there will be an increasingly availability of smart phones like Apple iPhone, Samsung Galaxy Notes and other brands in the market. As reported by the Malaysian Communications and Multimedia Commission (MCMC, 2008), in Malaysia, the mobile industry is one of the fastest-growing markets in the Asia Pacific region. Some 93.9% of Malaysians own a mobile telephone service and the penetration rate has increased to 110% in the first quarter of 2010; indicating the high potential growth of the mobile market in Malaysia.

1. Factors Affecting Consumer Perceptions

There are numerous factors influencing consumer perception toward mobile marketing (see Table 2). The key findings from the selected literature on consumer perception of mobile marketing are explored below. Most of these studies report perceived usefulness, perceived cost, perceived trust and personal innovativeness, perceived ease of use as important factors to attract potential mobile marketing consumers.

Table 2 A short review of literature on the factor affecting consumer's perception

Factors	Example from previous studies
Perceived Usefulness	Faziharudean & Tan (2011); Leong (2010); Samaneh & Shahriar (2009); Jayasingh & Eze (2009);
Perceived Ease of Use	Faziharudean & Tan (2011); Uchenna et al (2011); Mohammad & Razli (2011); Aw et al. (2009);
Perceived Cost	Uchenna et al (2011); Jayasingh & Eze (2009); Geoffrey et al. (2010)
Perceived Trust	Faziharudean & Tan (2011); Uchenna et al. (2011); Lim (2011); Uchenna et al. (2008)
Personal Innovativeness	Goi & Poh (2011); Geoffrey et al. (2010); Dulyalak & Settapong (2008)

Source: from researcher

1.1 Perceived Usefulness (PU)

Perceived usefulness is always an important factor that influences consumer confidence in acceptation of the new technology to enhance their task performance. Venkatesh et al. (2003) showed that perceived usefulness has a signification and positive relationship on consumer intention to use mobile marketing. Leong (2010) mentioned in his research that consumers normally evaluate their options mostly by the perception of usefulness that depends on their chosen behavior as relates to the desirability to improve their job performance (Uchenna et al., 2011). Therefore, perceived usefulness could have significant relationship on consumer intention to use mobile marketing services.

1.2 Perceived Ease of Use (PEOU)

Perceived ease of use is without contest the most needed product attributes in information communications technology (ICT), particularly in the innovation field. Davis (1989, p.310) built in perceived ease of use in TAM model whereas Rogers (2003, p.175) lean more toward "perceived complexity" in diffusion of innovation. Moore & Benbasat (1991, p.192) regarded these factors, perceived ease of use and perceived complexity, as equally important. The perception of ease to use led to earlier acceptance by the potential adopters due to lower level of learning ability. Davis (1989, p.320) suggests that perceived ease of use does not necessary have a direct effect on consumers' behavioral intention to use. However, recent studies in mobile marketing concluded that perceived ease of use does impact on consumers' behavioral intention to use online services (Klopping & McKinney, 2004, p.35).

1.3 Perceived Cost (PC)

Burman (2004, p.379) identified that the level of income enables potential consumers to invest more and make it easier to adopt a new innovation. Sezgin (2016) found that consumers do consider the cost allocation aspects in term of guarantee, warranty period, predicted usage, future upgrading and after-service support before any purchase. Ram Herstein (2007, p.133) contended that the cost of living and personal affordable level do affect using mobile marketing. Anil et al. (2003, p.191) concluded that the perceived cost is deemed to be the crucial issue that influences the perception and acceptance of mobile marketing usage in Singapore.

1.4 Perceived Trust (PT)

Jayawardhena (2009, p.473) cited that the major elements potentially influencing the buying power and judgment to take part in mobile marketing are purely based on the "trust" factor when evaluating gender patterns. Heffernan (2004, p.114) pointed out that "within the realm of relationship marketing, trust is an important variable for the success of relationships in the consumer relationships". Poong et al. (2009, p.392) concluded in their research that trust is "when one believes that the other party has one or more characteristics beneficial to oneself while trusting intention means one is willing to depend on, or intends to depend on, the other party even though one cannot control that party".

1.5 Personal Innovativeness (PI)

Kwon et al. (2008, p.105) argue that the product characteristic and innovativeness are equally important. McKechnie (2006, p.388) also provided insights in his research about the rationale behind determining the degree to which an innovation is accepted. Rogers (2003, p.175) explained "individuals with personal innovativeness are able to handle high levels of improbability and are able to cope better with accepting something new". In a recent report Uchenna et al. (2011, p.265) indicated that personal innovativeness is the way to anticipate consumer acceptance level of online shopping.

2. Consumer Intentions

Furthermore, the awareness level, belief and attitudes, and subjective norms play a significant role in influencing Malaysians' intention to embrace the mobile marketing initiative. Jayasingh & Eze (2009, p.241) also argued that marketeers need to understand the segmentation, prioritisation and improvement of the mobile marketing as these variables have positive direct influence on behavioral intention. Wong & Hiew (2005, p.135) also conducted a study to

access the drivers and barriers that leverage the mass-market implementation of mobile communication products and services.

Based on many scholars' recent findings, Table 3 identifies key factors and researches that influence consumer intentions toward mobile marketing. These variables are important and useful to develop the model for this study.

Table 3 A short review of literature on the factor affecting consumer's intention

Factors	Example from previous studies
Beliefs and Attitudes	Boonlert (2011); Faziharudean & Tan (2011); Jayasingh & Eze (2009); Nattharika et al. (2009); Koivumaki & Ristola (2008);
Social Norms	Mohammad & Razli (2011); Boonlert (2011); Uchenna et al. (2011); Samaneh & Shahriar (2009); Pousttchi & Wiedemann (2006); Wu & Shu (2005)

Source: from researcher

2.1 Beliefs and Attitudes (B&A)

Hong et al. (2008, p.432) have expanded on Ajzen's Theory of Planned Behaviour (Ajzen, 2002, p.665), also commented that the strong beliefs and attitudes towards behaviour will lead to a higher intention to continue that behavior. Tsang et al. (2004, p.65) stressed that shoppers commonly have undesirable attitudes toward mobile marketing especially in receiving advertising messages without their consent. Nattharika et al. (2009, p.815) argue that the influence of beliefs and attitudes toward mobile marketing mostly relates to the volume of advertisements and past direct experience. Faziharudean & Tan (2011, p.1811) reported that consumer attitude has a direct relationship on the adoption and motivation of using mobile marketing services.

2.2 Social Influence (SI)

According to Ajzen & Fishbein (2008, p.2222), subjective norm is "determined by his or her perception that salient social referents think he or she should or should not perform a particular behavior. A consumer would most likely to recommend a service to his acquaintance if he or she is satisfied with the service". Laukkanen et al. (2007, p.325) explained that the referents either from family or friends could have correlated significantly with the intention of the purchase. However, Hong et al. (2008, p.432) investigated that in general Malaysians are more conscious and collectivists, hence social interaction and media play a powerful role to influence consumer intention to purchase and utilise mobile marketing services (Laukkanen & Kiviniemi, 2010).

3. Theoretical Framework

Based on the literature review, many researchers use different models to predict the intentions of using m-commerce technology. Rogers (1995, p.175) conceived the "innovation diffusion theory" and identified the characteristics like values and behaviors, challenges, difficulty level and compatibility to examine the technology acceptance and its deployment.

The theory of TAM is a variation of the Theory of Reasoned Action (TRA) and is used specifically to examine the information system acceptance (Boonlert, 2011, p.313). This research uses the Technology Acceptance Model (TAM) as designed by Davies (1989) to analyse the perception and behavioral intentions for technology or service acceptance (Nysveen et al., 2005, p.247). Figure 3 provides a TAM framework for this research paper.
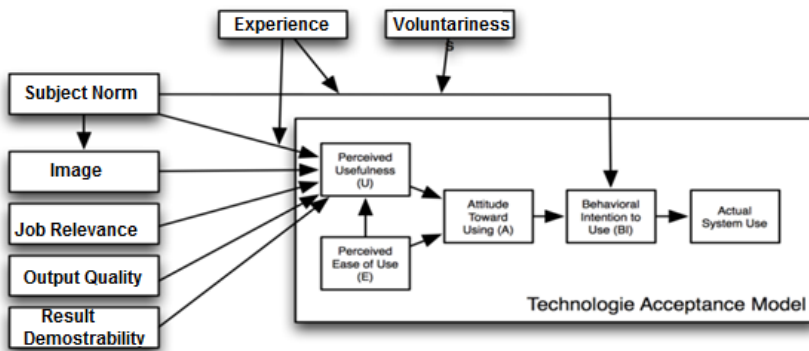
Source: Adapted and modified from Davies (1989)
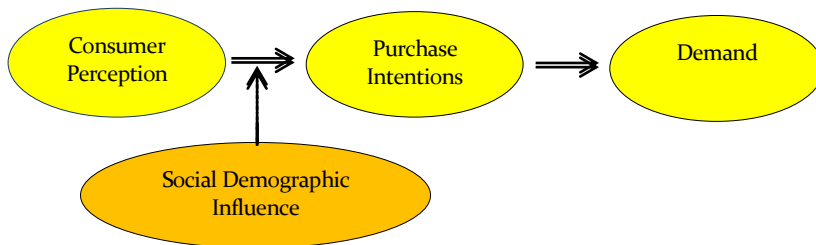**Figure 3 Theoretical framework: TAM-model**

The research study done by Jayasingh & Eze (2009, p.241) also proposed the TAM model to measure the perceived usefulness and predict consumer intentions to use m-commerce. From various research models that have been widely used, the TAM model is the one most broadly accepted among academics to determine the technology adoption, users' perceptions and intentions to use innovative technologies like mobile marketing applications (Samaneh & Shahriar, 2009). This study integrates the powerful factors in the theory of TAM with extended Theory of Planned Behaviour (TPB) model as introduced by Ajzen (2002, p.665). Five variables in TAM include the perceived usefulness, perceived ease of use, perceived cost, perceived trust and personal innovativeness, and two additional variables in TPB include belief

and attitudes, and also social norm to further analyse consumer perception and behavioral intentions of using mobile marketing.

Based on the above, the following hypotheses for this study are formulated as follows:

- There is a significant relationship between demographic charac -teristics and intentions toward using mobile marketing.
- There is a positive relationship between consumers' perceived usefulness and intentions toward using mobile marketing.
- There is a positive relationship between consumers' perceived ease of use and intentions toward using mobile marketing.
- There is a positive relationship between consumers' perceived cost and intentions toward using mobile marketing.
- There is a positive relationship between consumers' perceived trust and intentions toward using mobile marketing.
- There is a positive relationship between personal innovativeness and intentions toward using mobile marketing.
- There is a positive relationship between social norm influence and intentions toward using mobile marketing.

Figure 4 is the theoretical framework for the research paper used to analyse the connection between consumer perception (independent variable) and intention to buy (dependent variable). Figure 5 lays out the study hypotheses and their expected relationships.

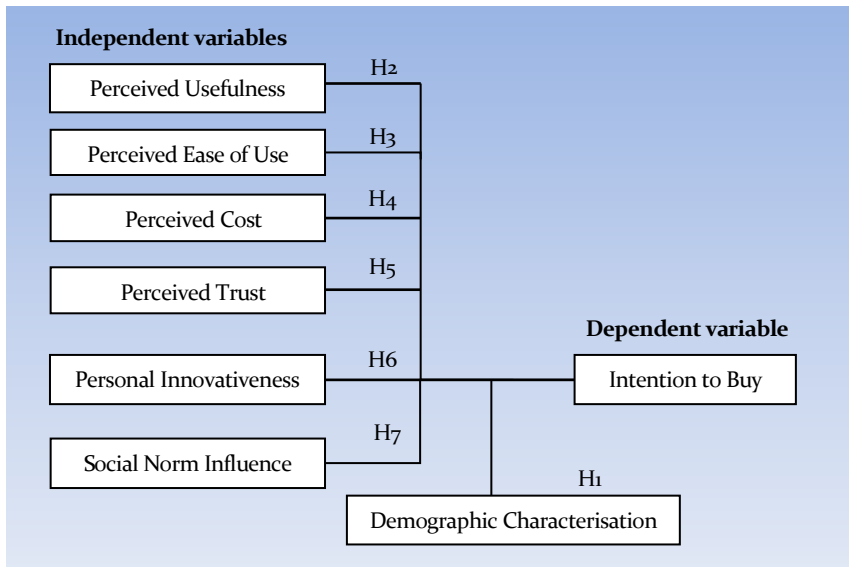**Figure 4 Theoretical framework for analysis**

Figure 5 The hypotheses and relationships

According to Boonlert (2011, p.313), TAM has received broad attention from researchers as it is well tested in many technologies and research settings. This study mainly aims to understand consumer perception and usage intention for mobile marketing in Malaysia, so the theoretical framework and hypotheses were adapted from a few recent researches conducted in Malaysia and Singapore.

Although the interest in mobile marketing is increasing due to growing consumer awareness about this innovation, this product and service are still considered "new concepts" in Malaysia. Today, Malaysians still do not clearly understood the benefits and convenience of this service; they are more worried about the problems of privacy and security risk when using this technology. Hence, understanding the perception and adoption intention is important to the telecommunication industry as it allows the marketeers to build the technology to get widely accepted by the public.

III. Research Methods

With TAM's tested model as defined by Davies (see Figure 4) and integrated TAM model (Venkatesh et al., 2002), some researchers also found that consumer intentions were influenced by perceptions and demographic characteristics (Samaneh & Shahriar, 2009).

Hence, this study is targeted at factors influencing adoption of mobile marketing as a proposed model and is intended to examine the direct relation between the dependent and independent variables in mobile marketing. The chapter describes the methodology and measurement used to manipulate the result. It covers descriptions of statement of hypothesis, research variables, approaches, methods as well as research measurements.

1. Measurement

This primary data was gathered through a questionnaire respondents could access from mobile device or online. First, the researcher started with sending a sample mobile advertisement to the selected groups via MMS and SMS. After a few hours, the researcher continued with sending a text message to all the target samples to answer a questionnaire to participate voluntarily in this study. The respondents could choose by clicking the link from their mobile phone to answer the questionnaires or alternatively go to Internet to answer the same. Among 500 sets of questionnaires distributed in Malaysia's big cities, 112 usable questionnaires were collected which is equivalent to a response rate as high as 22.40 per cent. Considering the mobile survey is a relatively innovative method for data survey, this response level could be reflected as adequate for this study (Hair et al., 2006, p.101).

As user perceptions and intentions are considered as key influential factors of mobile marketing, this research aims to explore the elements that impact on purchase intentions and the correlations on the factors hypothesised that affect the mobile marketing demand in the market. Table 4 suggests that the statistical tests should look deeper into the relationship between the variables. The proposed test instruments such as ANOVA, Chi-Square Test, Multi Regression Analysis and Pearson's Correlation Test are the most recommended tools to investigate the nature of consumer perceptions and intentions (Malhotra & Birks, 2006, p.485-503).

Table 4 Research questions, hypotheses and proposed statistical tests

Question	Hypotheses	Independent variable	Dependent variable	Statistical Test
1- Do consumer perceptions affect the intentions for buying MMP&S?		Consumer Perception score on TAM measured by questionnaires (Section C)	Intention	Descriptive Analysis, Pearson Correlation Analysis
2- Is there a positive relationship between social factor and intentions to buy MMP&S?	H7: There is a positive relationship between the social factor and intention level on MMP&S.	Social factor (Section B)	Intention	Descriptive Analysis, Chi-Square Test

The questionnaire consists of 43 questions. The questionnaire is segregated into a few categories such as demographics, the TAM constructs, consumers' past experiences toward perception and behavioral intention on mobile marketing (Hong et al., 2008, p.431). The questionnaire is structured in such a way that 11 items involved respondents' socio-demographic information, 15 items related to consumer perception and seven items are about the purchase intentions. Table 5 presents key highlights of the measures used for this research study.

The social-demographic section consisted of 11 items. Socio-demographic factors that include age, gender, race, marital status, education level, employment status, and income level are generally not clearly quantified in the TAM. Nevertheless, differences in socio-demographic factors could affect the relation to consumer perceptions or purchase intentions (Riefer & Hamm, 2008).

Table 5 Description of measures adapted for this research

Variables	Description of measures	Reference
Perceived Usefulness Hong et al. (2008)	I find SMS and MMS mobile advertising message useful.	Davis et al. (1989)
	I am very concerned about low prices, but I am equally concerned about product usefulness.	Davis et al. (1989)
	The higher the price of the services and products, the higher the quality and usefulness.	Davis et al. (1989)
Perceived Ease of Use Hong et al. (2008)	I think using mobile marketing is easy.	Venkatesh & Davis (1996)
	I think finding what I want via mobile marketing is easy.	Venkatesh & Davis (1996)
	I expect that it would be easy for me to become skillful at using mobile marketing services.	Venkatesh & Davis (1996)
Perceived Cost Hong et al. (2008)	If the prices of products and services in mobile shopping are lower than in traditional shopping, I prefer mobile shopping.	Dodds et al. (1991)
	I usually purchase the least expensive mobile marketing products or services.	Dodds et al. (1991)
	The price of a mobile marketing like mobile coupon is a good indicator of price.	Dodds et al. (1991)
Perceived Trust Jayasingh & Eze (2009)	I think using this service in monetary transactions is safe.	Pikkarainen et al. (2004)
	I think the mobile service provider will not provide my personal information to other without my consent.	Pikkarainen et al. (2004)
	I think there are no security problems in mobile shopping.	Pikkarainen et al. (2004)
Perceived Innovation Jayasingh & Eze (2009)	I think using this service in monetrary transactions is safe.	Han (2005)
	I think the mobile service provider will not provide my personal information to other without my consent.	Han (2005)
	I think there are no sevurity problems in mobile shopping.	Han (2005)
Perceived Social Influence (example, peers, family members, superiors & colleagues) Hong et al. (2008)	Using mobile marketing services would help me to feel acceptable by others and social approval.	Mathieson (1991)
	My family and friends have influencing power on using mobile marketing services.	Mathieson (1991)
	Using mobile marketing services would make a good impression on other people.	Mathieson (1991)
Belief & Attitudes Jayasingh & Eze (2009)	Overall, I like mobile marketing and advertising products and services.	Fishbein & Azjen (1975)
	Mobile marketing is informative and interesting.	Fishbein & Azjen (1975)
	In general, I am interested in using mobile marketing products and services.	Fishbein & Azjen (1975)
	I would be willing to recommend this mobile marketing service to my friends.	Fishbein & Azjen (1975)

Source: from researcher

2. Data Analysis Method

The primary data from the survey was gathered, compiled, processed and analysed using Statistical Package for Social Sciences (SPSS) application, version 21.0. To test the reliability and consistency of data, the Cronbach's alpha test was conducted to validate that each construct has high reliability and can be used for further analysis (Pallant, 2007, p.85). As this paper intended to test which factors have greatest impact on the response, various statistical techniques like Descriptive Study, Chi-Square Tests, ANOVA Analysis, Pearson Correlation Analysis and Multi Regression Test were applied to measure the relationship for the mediator, independent and also dependent variables.

The data were then interpreted by using tables and graphs to access which independent variables or demographic factors have the significance relationship to the dependent variable and also check the correlation between variables.

The value for reliability of scale for a research is important to indicate the good internal consistency reliability (Pallant, 2007). All the variables in this research were tested. Table 6 shows the result of the Cronbach's alpha for consumers' perceived values and intentions. Cronbach's alpha shows that consumers' perceptions and intentions were in the range of 0.634 to 0.828. For the dependent variable (intention to buy) and independent variables (consumer perceptions consist of perceived usefulness, perceived ease of use, perceived cost, perceived trust, perceived innovative and social influence values) were relatively high with an average of 0.887. As a result, all variables are considered having high degree of consistency and can be retained for the next stage of the analysis.

Table 6 Reliability of data

Variables	No of Item	Cronbach's Alpha
Perceived Usefulness	3	0.868
Perceived Ease of Use	3	0.748
Perceived Cost	3	0.662
Perceived Trust	3	0.763
Perceived Innovativeness	3	0.634
Social Influence	3	0.776
Intention	4	0.826

IV. Result

1. Pearson Correlation Analysis (Perceptions vs Intentions)

A Pearson correlation test was applied in this research to examine the individual relationships between the independent variables (the 15 statements of consumer perceptions) and the dependent variables (the seven statements of social influence, and belief and attitudes). In this context, it is crucial to identify the relationship between consumer perceptions and intentions. Table 7 presents the correlation result between these variables. The test observed that all the independent variables have a significant correlation (bivariate correlation between independent variables is less than 0.7) to the purchase intention except for "Perceived Cost".

This result illustrates that the correlation between "perceived usefulness" (p=0.31), "perceived ease of use" (p=0.377), "perceived trust" (p=0.319), "perceived innovative" (p=0.277) and intention are positive and highly significant. "Perceived Cost" was not significant influence on consumers' purchase intentions (correlation is more than 0.05). This is aligned with Faziharudean & Tan's (2011, p.1818) findings that these variables control consumers' behavioral intentions to use mobile marketing.

Table 7 Pearson correlation between consumers' perceptions and intentions

Correlations

		I	SI	PU	PEOU	PC	PT	PI
I	Pearson Correlation	1	.528**	.310**	.377**	.133*	.319**	.277**
	Sig. (2-tailed)		.000	.000	.000	.015	.000	.000
	N	448	336	336	336	336	336	336
SI	Pearson Correlation	.528**	1	.212**	.328**	.133*	.387**	.168**
	Sig. (2-tailed)	.000		.000	.000	.014	.000	.002
	N	336	336	336	336	336	336	336
PU	Pearson Correlation	.310**	.212**	1	.146**	-.029	.171**	.129*
	Sig. (2-tailed)	.000	.000		.007	.591	.002	.018
	N	336	336	336	336	336	336	336
PEOU	Pearson Correlation	.377**	.328**	.146**	1	.079	.348**	.238**
	Sig. (2-tailed)	.000	.000	.007		.151	.000	.000
	N	336	336	336	336	336	336	336
PC	Pearson Correlation	.133*	.133*	-.029	.079	1	.127*	.197**
	Sig. (2-tailed)	.015	.014	.591	.151		.020	.000
	N	336	336	336	336	336	336	336
PT	Pearson Correlation	.319**	.387**	.171**	.348**	.127*	1	.151**
	Sig. (2-tailed)	.000	.000	.002	.000	.020		.006
	N	336	336	336	336	336	336	336
PI	Pearson Correlation	.277**	.168**	.129*	.238**	.197**	.151**	1
	Sig. (2-tailed)	.000	.002	.018	.000	.000	.006	
	N	336	336	336	336	336	336	336

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

2. ANOVA Test (Factors Influencing Perceptions and Intentions)

In order to test the third research question to determine the factors influencing the perceptions and intentions on the adoption of mobile marketing, a one-way ANOVA was conducted. ANOVA with a unique independent variable is called "One-way Analysis of Variance" (Malhotra & Birks, 2006, p.485). This ANOVA test attempts to examine the relationship between the independent variables (social influence and, attitudes and belief) and the dependent variables (perceived usefulness, perceived ease of use, perceived cost, perceived trust and perceived innovative).

To test any positive relationship between the dependent and independent variables, individual construct of consumer perception (perceived usefulness, perceived ease of use, perceived cost, perceived trust and perceived innovative)

was loaded and analysed separately from using one-way ANOVA. Table 8 shows the results of one-way ANOVA tests.

Tests indicate that apart from "perceive cost" ($P < 0.065$), the rest of the independent variables like "perceived usefulness", "perceived ease of use", "perceived trust" and "perceived innovative" ($P < 0.000$) are significantly and positively related to the intention toward using mobile marketing. Leong's (2010) study in Malaysia also found that it is very likely that consumers will depend on factors like perceived usefulness, ease of use, quality, and product innovativeness and trust when using a product or service. Haque et al. (2007, p.50) study among 615 consumers in Malaysia also revealed similar findings. In addition, Faziharudean & Tan (2011, p.1820) pointed out that perceived cost related to monetary value was seen as insignificant towards consumer intentions in buying mobile marketing products or services.

Table 8 ANOVA analysis of consumer awareness level on market expenditure

		Sum of Squares	df	Mean Square	F	Sig.
PU	Between Groups	41.501	4	10.375	10.455	.000
	Within Groups	328.473	331	.992		
	Total	369.973	335			
PEOU	Between Groups	39.872	4	9.968	15.703	.000
	Within Groups	210.116	331	.635		
	Total	249.988	335			
PC	Between Groups	7.574	4	1.893	2.237	.065
	Within Groups	280.129	331	.846		
	Total	287.702	335			
PT	Between Groups	41.534	4	10.384	10.484	.000
	Within Groups	327.820	331	.990		
	Total	369.354	335			
PI	Between Groups	26.058	4	6.514	13.669	.000
	Within Groups	157.752	331	.477		
	Total	183.810	335			

3. Linear Regression Analysis (Test the Hypotheses)

A test is then conducted to give an indication on the relationship between the independent variable (consumers' perceptions) and the dependent variable (intention to buy). To test the hypotheses, the ANOVA and Linear Regression test model were examined.

To examine the determinants of consumer perception along with intention to buy, the study has proposed the following directional hypotheses.

Table 9 shows the properties of the Linear Regressions test including t-values, p-values, coefficient and verification for each equation in the hypothesised model as demonstrated. Overall, this analysis supported H2, H3, H6 and H7. However, H1, H4 and H5 are not supported.

Table 9 Hypotheses testing

Hypothesis		t	p	Decision
H1	Demographic characteristics -> intentions	0.461	0.521	Not supported
H2	Perceived usefulness -> intentions	5.968	0.000	Supported
H3	Perceived ease of use -> intentions	3.648	0.000	Supported
H4	Perceived cost -> intentions	0.559	0.576	Not Supported
H5	Perceived trust -> intentions	1.420	0.157	Not Supported
H6	Personal innovativeness -> intentions	3.197	0.002	Supported
H7	Social norm influence ->intentions	8.345	0.000	Supported

Hypothesis 1 generally analyses the moderating effect between demographic characteristics (social demographic profile) and intention to buy in respect to mobile marketing. Below is the statement of the hypotheses.

As per the analysed result, it showed that the null hypothesis was accepted as the significance of value is mostly larger than 0.05. Although in their research paper 'An Efficient Model to Improve Customer Acceptance of Mobile Banking' (2009, p.981), Samaneh & Shahriar stated that the demographic factor could be a background with a moderating effect that influenced some of the major factors toward using mobile marketing. However, this study found that there is no moderating effect between demographic characteristics and intention to buy, hence this hypothesis is not significance.

Hypothesis 2 mainly tests the relationship between perceived usefulness and intention to buy in respect to mobile marketing. Below is the statement of the hypotheses.

Referring to table 9, the null hypothesis was rejected as the significance of perceived usefulness value in ANOVA is between 0.00 and 0.05. This study

found that the relationship between perceived usefulness and intention to buy is significance. This finding is consistent with Hsu et al. (2006, p.309) recent report on m-commerce research.

> Hypothesis 3 concerns the perceived ease of use. Numerous studies have focused on the topic "perceived ease of use" with "purchase intentions" in respect to m-commerce. Hypothesis 3 is tested to study the relationship between consumer's perceived ease of use and intention to buy in respect to mobile marketing. Below is the statement of the hypotheses.

The result of ANOVA and Liner Regression tests shown that the null hypothesis was rejected. The test supported and proved the significance value of perceived ease of use (p < 0.05). Using TAM to access customer acceptance of mobile banking, Samaneh & Shahriar (2009, p.978) found that perceived ease of use is important to purchase intention as individual believes using a system or application would be free of effort.

> Hypothesis 4 is concerned about perceived cost and intention to buy the product or service via mobile device. The perceived cost of using mobile marketing is always found to be insignificant to consumer intentions to purchase the product or service (Laukkanen & Kiviniemi, 2010). Many researchers found that there is an apparent absence of significance of perceived cost in intention to use.

As expected, hypotheses 4 was supported in that perceived cost related to monetary value had not significance positive effects toward using mobile marketing. Hence, the null hypothesis was approved. Faziharudean & Tan (2011, p.1820) cited an example on the cost issues faced by Malaysians. Using a download game as a study case, they found that the regular mobile data subscription fees started from estimated range of RM1.00 (USD$0.32) to RM5.00 (USD$1.60) per download (subject to the size of the downloaded content). Any other download apps like online games can range from RM5.00 (USD$1.60) to RM8.00 (USD$2.56) depending on the quality and size. As such, consumers have to pay on average RM6.00 (USD$1.92) to RM13.00 (USD$4.16) to download additional apps. In general, consumers feel like MMP&S are too expensive to be value for money (Leung & Matanda, 2013).

In hypothesis 5, Greenville (2005, cited in Jayawardhena et al., 2009, p. 473) emphasised that perceived lack of consumer trust is one of the barriers and key highlight to slow down the progress and impact promotion of mobile marketing. More than half of the respondents' said they generally do not trust the services on mobile applications especially due to personal data and online payment. Based on this argument, hypothesis 5 is tested.

The result supports that perceived trust had not significance positive effects intention toward using mobile marketing. Again, the analysis shows that the null hypothesis for H5 was approved. Respondents are generally afraid that service providers would share their private data, i.e. contact number, credit card info with third party without their consent and they are thus concerned about the security of m-commerce (p=0.056, p=0.948) (Phan & Ghantous, 2013).

Bedford (2005) suggested that perceived trust is a key element enforcing the behavioral intention. This component could increase the discrepancy of the basic model by at least 2%. Julia's (2010, p.15) research also found that consumers seem to have strong mistrust about mobile advertising. Hence, it is important for marketeers to increase the credibility and trustworthiness toward mobile marketing (Schierz & Wirtz, 2010).

Findings related to Hypothesis 6 shows that perceived innovative has a positive effect on the purchase intention (Dulyalak & Settapong, 2008, p.30). Based on TAM, Davis (1989, p.319) included "perceived innovative" as one of the factors and he commented that this variable is always stronger and consistent than other variables in his study.

The result of this study agrees that perceived innovative had a significant positive influence with consumers' usage intentions toward mobile marketing. This paper empirically states that the null hypothesis for H6 was rejected. Respondents widely perceived that innovative and flexibility enables them to enjoy (p=0.001) and keep them up-to-date at anytime and anywhere (p=0.002). This is consistent with the finding by Uchenna et al. (2011, p.268). Perceived innovative is the important predictor in determining the effectiveness of mobile marketing execution (Revels & Tsarenko, 2010).

Bedford (2005) commented that perceived trust is one of the determining factors towards behavior intention. This element could increase the total variance of the basic model by at least 2%. Boonlert (2011, p.315) concluded in his study that consumers with a high-level of innovativeness using mobile marketing would be more confident, displaying a good attitudes and intention on using mobile marketing services. This is, however, in contrast with Jayasingh & Eze's (2009, p.237) research. They argue that personal innovativeness has no direct connection to purchase intention. Among 781 data collected in Malaysia, they found that innovation is respectively new and insignificant to consumers' usage intention in Malaysia for m-coupon business.

According to the result extracted from previous academic studies, social influence is also considered another important factor to have a significant positive effect on the prediction of purchase intentions towards mobile marketing products and services (Venkatesh et al., 2003, p.19).

The importance of Hypothesis 7 is also supported - social influence had a significant positive effect on behavioral intention to use mobile marketing. It is

apparent that H7 null hypothesis was rejected. Social influence is a critical factor in affecting respondent's own behavior in particular using innovative technology. It could create a social acceptance (p=0.006), tend to shaping individual's perception (p=0.004) and feel good impression (p=0.000) to adopt new technology. Mohammad & Razli (2011, p.12538) also claimed that the higher the influence of social power, the stronger the intention to start using mobile marketing services.

V. Discussion and Conclusion

This study aims to examine the relationship between consumer perceptions and their intentions, and discover factors that affect consumers to continue using mobile marketing. Based on a research sample, the testing of hypotheses summarized in Table 9 shows that perceived usefulness (H2), perceived ease of use (H3), perceived innovative (H6) and social influence (H7) are supported. This outcome is in line with another exploration done by Aw et al. (2009, p.37) & Mohammad & Razli (2011, p.12531) in developing countries. Consistent with prior studies, Jayasingh & Eze (2009, p.242) also used TAM to investigate factors and confirmed perceived usefulness, perceived ease of use, perceived innovative and social influence were found to be significant in influencing the behavioral intention toward m-commerce.

This study supports and is in line with prior research in which perceived cost (H4) and perceived trust (H5) factors from consumer perception have no direct relationship on the intention of using mobile marketing. These two variables were set as the barrier and changing behavioral intention to consider mobile marketing. This is consistent with Faziharudean & Tan's (2011, p.1811) finding in Malaysia.

1. Implications

With the tested model, this paper provides a valuable framework for academic scholars, theorists and industry practitioners to increase the holistic view of mobile marketing literatures and acceptance for mobile marketing. Consumer perceptions and intentions are found to be important determinants of the adoption of mobile marketing (Wang et al., 2015). This study not only contributes to this research area and can be a future reference for the academic community, scholars and marketeers to know more about the consumer perceptions and intentions and can proactively design more marketing campaigns in attracting more potential users (Shen, 2012).

2. Future Research

Since mobile marketing is still considered relatively new in Malaysia, there are various research avenues opened where potential detailed research on mobile marketing could be further investigated. It would be remarkable for further research to focus literally on exactly how mobile technology will affect consumers purchasing behavior (Wang et al., 2012). Consumer choice of self-managed tools: the roles of situational influences and previous know-how, skill and ability of mobile marketing usage. Wang et al. (2012) studied the variables for not successfully using an appropriate service across the countries; it incorporates Innovation-Diffusion Theory (IDT) as supported by Roger (2003) to understand the innovation characteristics.

3. Limitations

This present study is subject to several restrictions. The limitation of these findings derives from the fact that the sample is limited to respondents in Malaysia. Due to limitation of time and resource - only 112 samples were collected for this survey - this data could not represent the total population of Malaysian consumers. This paper only focused on the overall adoption of mobile marketing. Another possible research could understand the various consumer segments, explore specific type of mobile marketing, i.e. mobile coupons, and also include more relevant constructs to the existing TAM theoretical framework. In all, this research paper has achieved the objective to identify the key benefits, barriers and factors that impact consumer intention to adopt mobile marketing. Nevertheless, the underlined limitations must be taken into account by any researcher conducting similar studies in the future.

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