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Factors Influencing Purchasing Intention of Smartphone among University Students

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Abstract

Mobile communication has made an impact towards interaction between people while conducting business either locally or internationally. The expansion of mobile communication technology e.g. wireless internet, mobile phone and Global Positioning System (GPS) are constantly evolving and upgrading as a result of consumers' changing needs and preferences. Therefore, this paper examines about factors influencing purchasing intention of smartphone among university students. The result shows that three variables that are product features, brand name and social influence have significant relationship except one variable, product sacrifice that has no significant relationship with purchasing intention.

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Keywords: Purchasing Intention; Product Features; Brand Name; Social Influence ; Product Sacrifice

1. Introduction

A mobile communication device is basically designed to convey traditional voice between two individuals, sending text messaging and executing basic functions, nevertheless cell phone had undergone numerous transformations, making its functionalities increasing tremendously against time resulted from the changing needs of cell phone subscribers (Kushchu, 2007; Hakoama and Hakoyama, 2011).

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Research from Strategy Analytics revealed 1 billion of smartphones are being used worldwide, a penetration of 1 in 7 while in Malaysia, the penetration for comparison stand at 1 in 4 and the highest percentage, 17.3 percent of smartphone user's age is between 20-24 years old. In current situation, consumers no longer view smartphones just as devices for calling and texting, instead as multi-use devices for gaming, socializing, and downloading applications which results in a radical shift in behaviour patterns. A survey done by Ericsson, 2014 reported that smartphones adoption is predicted to increase dramatically during the coming years with smartphone subscriptions growing by almost five times between 2013 and 2019 which will result in an excess of 700 million smartphone subscriptions in the South East Asia and Oceania.

1.1. Problem Statement

Mohd Azam Osman *et al* (2012), agreed that smartphone technology is changing peoples' behaviours especially young adults however surveys that have been carried out are still insufficient. There are lacks of understandings on the behavior and consumers' preferences towards the smartphone usage especially for young adults. According to Ericsson Consumer Lab (2013), 57 percent of university students use smartphone, 60 percent feel addicted to their phone, while 75 percent of them sleep next to their phones, 88 percent texted in class, 97 percent use them for social networking, and 40 percent utilized smartphone to study before test. In addition, the industry of mobile phone always showed drastic and tremendous changes or development in the telecommunication market. New models of smartphone are launched to the market from time to time in order to gain the competitive advantage in the market. The evolution of smartphone market has affected the users especially the young generation in term of motives and choice underlying the smartphone buying decision process.

1.2. Research Objectives

The main objective of this research is to determine the significant influence of product features, brand name, social influence and product sacrifice on the demand for smartphones among Malaysian students particularly among university students.

1.3 Research Questions

Is there any significant relationship influence of product features, brand name, social influence and product sacrifice on the purchasing intention of smartphones?

1.4 Research Hypotheses

- H₁: There is a significant relationship between product features and purchasing intention of smartphones
- H₂: There is a significant relationship between brand name and purchasing intention of smartphones
- H₃: There is a significant relationship between social influence and purchasing intention of smartphones
- H₄: There is a significant relationship between product sacrifice and purchasing intention of smartphones

2. LITERATURE REVIEW

The first cellular network in Malaysia is being introduced by Telekom Malaysia in 1985 and the country successfully distinguished itself by becoming one of the first countries in the Asia-Pacific region to introduce mobile telephony. Afterwards, in 1989 Celcom the second cellular operator started introducing Automatic Radio Telecommunication 900. Followed by adopted 2G network system in the middle of 1990 and by 2004, the company had launched 3G high speed cellular services (Avaxx Mobile Technologies, 2011). In 2000, Celcom introduced Wireless Data services and in March 2003, two 3G licences were issued with the first service beginning in May 2005 in certain densely populated parts in Malaysia (M2M Evolution, 2009). Recently, Malaysian Communication and Multimedia Commission (2012) have reported that 86.3 percent Malaysian citizen own cell phone and among

handphone users, Malays form the predominant ethnic group accounting for 66.1 percentage among all users.

2.1 Purchasing Intention

Purchase intention is planning in advance to buy certain goods or services in the future, not necessarily to implement the purchase intention due to it depends on individual's ability to perform (Warshaw & Davis, 1985 in Qun *et al.*, 2012). According to Blackwell *et al.* (2001), what is cross in the customers' mind signifies intention to purchase by them. The similar researchers state that consumers will go through the process of recognized the product to purchase, then they will find the information about the product, evaluate, purchase and feedback. Therefore, they will purchase a product after making research in advance so that they will purchase right product that meet with their needs and wants.

There are many choices brands of smartphones in the market in order to satisfy the customers' needs and wants. Therefore, different consumers will have different tastes and preferences. Thus, the behaviour of consumers to purchase are depending to their characteristics such as brand name, price, quality, recreation and innovation awareness, mixed up with other choices as well as impulsiveness (Leo *et al.*, 2005). Thus, it is important to examine factors that lead to the consumer's decision to purchase a smartphone. This study is to examine variables such as product features, brand name, social influence and product sacrifice towards purchasing intention among consumers of smartphone.

2.2 Product Features

Nowadays, there are many high technology features of smartphones in the market. Thus, different people will choose different features of smartphones that can meet with their needs and desires. According to Oulasvirta *et al.* (2011), smartphones nowadays are being featured with wireless connectivity, a built-in web browser, application installation, full programmability, a file management system, multimedia presentation and capture, high-resolution displays, several gigabytes of storage and location as well as movement sensors. Based on previous research, there are five design characteristics of mobile phone being preferred by consumers such as camera, color screen, voice-activated dialing, internet browsing and wireless connectivity (Ling *et al.*, 2006). Based on study done by similar researcher indicates that the respondents that mostly college students more prefer to purchase mobile phone due to its physical appearance, size and menu organization.

Product features can be defined as the attributes of a product that can satisfy consumers' preferences through having the product, using and applying the product (Kotler & Armstrong, 2007). According to Lay-Yee *et al.* (2013), hardware is the surface of device that can be physically touched such as body of the smartphone, size, weight, color as well design. Meanwhile, software includes computer programs, procedure and documentation. In addition, operating platform, storage or application also can be categorized as software. There are several types of operating software such as iOS, Android, Windows, RIM Blackberry, Symbian, Bada and maemo. Hardware and software can be categorized as product features. Based on previous research conducted by Russell (2012), consumers in Malaysia mostly prefer Android consists of 41%, followed by IOS with 18%, RIM Blackberry and Windows recorded the same with 6%. The users in the other countries such as Singapore, Australia, New Zealand, Thailand and Vietnam mostly use Android operating system. Based on previous done by Lay-Yee *et al.* (2013), 31% of users prefer software compare to hardware only 17.6%. This indicates consumers will look more on software rather than hardware in purchase the smartphone.

2.3 Brand Name

Organizations will always find ways to differentiate them from the others especially in smartphone industry that keep always changing the technology. The organizations have to find new technology that not available in the market and meet demand the customers. Brand name can be an identity and exclusivity that represent the organization. Brand name can be as name, term, symbol and design to differentiate the organization from the competitors. According to Cornelis (2010), most of organizations emphasize about brand name that can be as an invaluable assets to their products and services. This can be the competitive advantage to the organization.

Nowadays, customers prefer smartphones that have unique features such as could quickly display information with minimal aggravation and clear graphical interface for touch screen interactions (Norazah, 2013). For example, brand of Samsung, BlackBerry, Apple HTC, Nokia, and LG are smartphones mostly purchased by the customers. According research done by ChangeWave Research (2010), smartphones brand of Apple has high number of customers that loyal to the brand due to it differentiate different types of customers by selling different versions with different amounts of storage space and different colors at different price points. Based on previous research, it was found that product's brand name influence customers' evaluation and affect to their buying decision (Khasawneh, 2010). This also can be supported by the other research done by Norazah (2013), brand name was found to have a significant effect on the demand for smartphones among Malaysian students'.

2.4 Social Influence

According to Rashotte (2007), social influence is about changing of feelings, attitude, thoughts and behavior, intentionally or unintentionally influenced by the other person. It is due to the interaction with other people that know each other such as parents and peers. Consumers would be influenced by media, parents and peers in order to purchase the smartphones (Nelson & McLeod, 2005). Nowadays, people can develop their social network online through social media such as Facebook, Twitter, Instagram and so on. They can find not only the information regarding smartphones but they can also get comments and product reviews from the other users that currently or previously used the smartphones.

According to Kotler and Armstrong (2007), consumers' action is being influenced by people surrounding them. They would seek for suggestion, advice as well as experiences of people that already purchase and use the smartphones. They might tend to get it from different type of people especially for those that close to them such as friends, peers, family members and spouse. Based on previous research conducted in Malaysia by Mohd Azam Osman *et al.* (2012), 35.6% of the respondents prefer to purchase the smartphones according to the trend in the community. This can be supported by research done by Suki and Suki (2013), young generation especially students depend highly over people surrounding them in order to purchase the smartphones. Consumers tend to get advice and opinions from their friends and families based on features of smartphones and will purchase the similar smartphones that their friends and families use.

2.5 Product Sacrifice

Consumers might find information regarding a product that they want to purchase based on their tastes and preferences. The consumers also will make comparison between different types of the products so that they can purchase their products within their budget suit with their needs and wants. Other than that, they also make comparison in term of quality, benefits as well as price of the product. They also need to sacrifice to purchase other things in order to get their preferable products. Product sacrifice can be said as giving up something important or valuable to consumers in order to purchase smartphones.

Consumers can sacrifice to buy other things in term of monetary and non-monetary cost (Zeithmal, 1996 in Sok, 2005). Monetary cost can be in term of purchase price, acquisition cost, transportation, installation, order handling, repairs and maintenance risk of failure or poor performance. Meanwhile, non-monetary costs can be in term of time cost, search cost and psychic cost when it comes to make decision whether to purchase or re-purchase smartphone. Therefore, consumers will sacrifice not only in term of monetary but also non-monetary costs such as time, effort and energy in finding the information about different brand name of smartphone in advance before making decision to purchase smartphones. This can be supported by previous research done by Sok (2005), there was positive significant relationship between product sacrifice and purchasing intention among consumers.

2.6 Theoretical Framework

According to Sekaran & Bougie (2009), theoretical framework is the foundation on which it is a logically developed, described and elaborated network of associations among the variables deemed relevant to the problem situation and identified through such processes as interviews, observations and literature review.

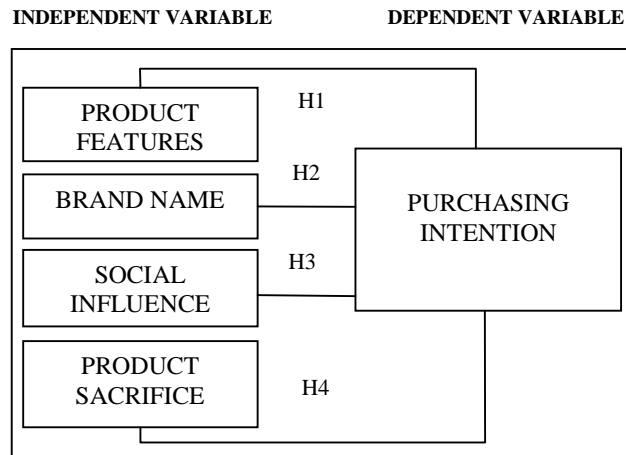


Fig. 1 Adapted from: (Chow M. M., Chen L. H. & Wong P. W. (2012), Conceptual Paper: Factors Affecting the Demand of Smartphone among Young Adult, 2012)

3. RESEARCH METHODOLOGY

3.1 Samples

This study uses both types of data collection method which are primary and secondary data. This study used survey questionnaire as the primary data source by using questionnaire, while in the secondary data collection is from journal, articles, internet, text book, media publications, electronic library database and article. According to Krejcie and Morgan (1970), if the population is around 7,000, the respondents needed are 364. Therefore, in this research, 367 sets of questionnaire were distributed to diploma students who study in Universiti Teknologi MARA, Kedah. The target population is the collection of the elements or objects that possess the information the researcher is seeking for (Malhotra and Peterson, 2006). This research selects diploma student of Universiti Teknologi MARA, Kedah as a main population to draw conclusion about the entire population which approximately of 6,993 students that gathered from 7 faculties.

4. DATA ANALYSIS

According to Sekaran (2003), the objectives of data analysis are getting a feel for the data (descriptive analysis), testing the goodness of the data (scale measurement) and testing the hypotheses develop for the research (inferential analysis). Statistical Package for Social Science (SPSS) technique computer software version 20.0 is used to conducted data analysis in this research. The results are then analyzed.

4.1 FINDINGS

The demographic characteristics of respondents are depicted in Table 1. Based on gender background, 20.2% of the respondents are male, whereas the percentage of female respondents is 79.8%. The majority of the respondents fall in the age group from 18-19 years old which recorded at 54.5%, followed by 42.5% for the age level from 20 to 21 and only 3% of respondents with the age above 21.

Table 1. Demographic Characteristics

Items	n	%
Gender		
• Male	74	20.2
• Female	293	79.8
Age (years)		
• 18 – 19	200	54.5
• 20 – 21	156	42.5
• Above 21	11	3.0
Budget range		
• Below RM 300	56	15.3
• RM 301 – RM 600	128	34.9
• RM 601 – RM 900	98	26.7
• RM 901 – RM 1,200	41	11.2
• Above RM 1,200	44	12.0
Number of hand phone		
• 1 hand phone	211	57.5
• 2 hand phones	140	38.1
• More than 2 hand phones	16	4.4

Meanwhile, for the price or budget range to purchase a smartphone among students, 15.3% of respondents is below than RM 300, 34.9% for budget between RM 301 – RM 600, and 26.7% of respondents are willing to spend RM 601 – RM 900 for purchasing a smartphone. On the other hand, for the high budget category of smartphone, there is only 11.2% of respondents are allocating expenditure between RM 901 to RM 1,200 and only 12.0% of students are willing to spend more than RM 1,200 for purchasing a smartphone. Next, survey on number of hand phone owned by respondents showed that most of the students (57.5%) have 1 hand phone. Only 38.1% of respondents are reported that possessed 2 hand phones while 4.4% of respondents have more than 2 hand phones.

Table 2. Reliability Analysis Test for Dependent and Independent Variables

Variables	No of Items	Alpha
ALL	18	0.778
Purchasing Intention (PI)	4	0.760
Product Features (PF)	4	0.699
Brand Name (BN)	3	0.611
Social Influence (SI)	3	0.612
Product Sacrifice (PS)	4	0.729

Cronbach's alpha coefficient is the most frequently used to test the internal reliability of the items used in the study. Cronbach's alpha reliability coefficient normally ranges between 0 and 1. If the value of cronbach's alpha coefficient closer to 1.0, it means that the greater the internal consistency of the items in the scale. All 18 items used in this study obtained Cronbach's alpha value with 0.778 which greater than 0.6. This indicates that all questions for the independent and dependent variables are standardized and can be accepted as refer to the rules of thumb about cronbach's alpha coefficient (Nunnally & Bernstein, 1994). The cronbach's alpha of 4 items measuring purchasing intention (PI) is 0.760 which is highest as compared to other variables used in the study. The second highest value of cronbach's alpha is 0.729 which used to measure product sacrifice (PS) with 4 items. Next, the 4 items measuring product features (PF) recorded at 0.699 for cronbach's alpha. Meanwhile, the cronbach's alpha value for the social influence (SI) is 0.612. The lowest value of cronbach's alpha is 0.611 which obtained by brand name (BN) with total 3 items.

The main focus in this study is to examine the relationship between dependent variable and dependent variables.

The result of Person Correlation Analysis is showed at Table 3.

Table 3. Pearson's Correlations Coefficient

Variables	PI	PF	BN	SI	PS
PI					
PF	.359**				
BN	.280**	.494**			
SI	.307**	.280**	.284**		
PS	.061	.083	.163**	-.045	

Notes: ** $p < 0.01$

Hypothesis 1: There is a significant relationship between product features (PF) and purchasing intention (PI). The results showed that a significant positive correlation coefficients between PF and PI ($r = .359, p < .01$). Rules of thumb have been suggested to characterize the strength of the association between variables (Hair *et al.*, 2007). The result demonstrated that the strength of association between PF and PI was weak.

Hypothesis 2: There is a significant relationship between brand name (BN) and purchasing intention (PI). A significant positive correlation coefficients showed between BN and PI with the value of .280 ($p < .01$). The strength of relationship between BN and PI was weak.

Hypothesis 3: There is a significant relationship between social influence (SI) and purchasing intention (PI). The final findings indicated that there is a significant positive correlation coefficients between SI and PI ($r = .307, p < .01$). The correlation coefficient gained shows a weak relationship.

Hypothesis 4: There is a significant relationship between product sacrifice (PS) and purchasing intention (PI). The results showed that there is no significant relationship between PS and PI.

Thus, H1, H2 and H3 are accepted and H4 is rejected. In summary, this results shows that there is a significant relationship between PF, BN and SI towards purchasing intention of smartphone among university students in UiTM Kedah.

5. CONCLUSION AND RECOMMENDATION

The purpose of this study was to investigate the factors influencing purchase intention of smartphone among university students in Malaysia. Specifically, this study examined the relationship between product features, brand name, social influence, product sacrifice and purchase intention of smartphone. Data was gathered from 367 diploma students from UiM Kedah and analyzed. Four hypotheses were presented to test the relationship between the independent variables; product features, brand name, social influence, product sacrifice and purchase intention of smartphone. The finding indicated that three hypotheses were supported.

This study confirmed that product features was significantly and positively related to purchase intention of smartphone. Thus, the first hypothesis (H1) is supported. The result was consistent with the findings of the previous studies. It was found that product features was positively related to purchase intention of smartphone (Ling *et al.*, 2006; Lay-Yee, Kok-Siew, & Yin-Fah, 2013). The finding showed that there was a significant and positive relationship between brand name and purchase intention at $p = 0.01$ level. However the strength of the relationship was weak. Hypothesis 2 is also supported. This result is consistent with the findings in previous studies which had suggested a positive relationship between brand name and purchase intention. Lay-Yee *et al.* (2013) has conducted a study among Malaysian generation Y in Klang Valley, Malaysia. The study indicated that smartphone purchase decision of Generation Y is influenced by brand name. Smartphone manufactures could emphasize on brand name when promoting smartphones to students. Besides, brand managers may draw a good loyalty program for their existing customers in order to retain them.

This study also found that there was a significant and positive relationship between social influence and purchase intention of smartphone. Thus, Hypothesis 3 is also supported. Similar findings were reported in the study of social influence and purchase intention (Mohd Azam, 2012; Suki & Suki, 2013; Lay-Yee *et al.*, 2013). According to Ibrahim *et al.* (2013), social influence was found to be positively related to purchase intention of smartphone and the strength is moderate at 0.463. The study was conducted among adolescents aged 19 to 26 years in Perlis. Ting *et al.* (2011) also found that university students' dependency on smartphones is influenced by social influence and dependency is positively related with purchase behavior. Ting *et al.* (2011) recommended that marketer could possibly stimulate positive word-of-mouth among friends and family to encourage more university students in using smartphones. Social influence may be a key role in the use of smart phone since the decision to use the smartphones is beyond individuals' independent decision-making (Park *et al.*, 2013)

However, we found that product sacrifice did not have a significant relationship with purchase intention, as we hypothesized. The result in this study contradicted the findings of Sok (2005). This contradictory finding could be attributed to the sample use in this study. Smartphone has become parts of the daily usage among university students and they will not sacrifice something important in order to purchase smartphones.

The findings of this study have several implications for the smartphone producers. This study resulted in information that will provide smartphone producers on factors that influence purchase intention of smartphone. This study concludes that product features, brand name, social influence are positively related to purchase intention. The present study was not without its limitation. First, given the cross-sectional research design of the study, no causal relation between the variable could be inferred. To obtain further support for potential causal links between these variables, future studies should be based on longitudinal design. The second limitation was the sample was limited to the UiTM's students. As such, the findings might not be applicable to the students in other universities in Malaysia. Consequently, research is needed on different samples across university students in order to improve the generalizability of the findings.

In conclusion, the present research helps us to understand the importance of product features, brand name, and social influence on purchase intention of smartphone among University students. Contrary to expectation, product sacrifice did not have a significant relationship with purchase intention. Future studies need to be carried out to investigate other factors which may influence purchase intention of smartphone. In sum, the results of this study suggested that it is very importance for the smartphone manufacturers to understand what determinants influencing University students' purchase intention towards smartphone because they represented the future main uses of smartphone. Moreover, it is the key to increase their own market share within the respective market segment.

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