Factors Affecting Smartphone Purchase Decisions of Generation-Y

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Abstract

Smartphones have become an indispensable part of daily life of Generation-Y. Currently, Generation-Y accounts for the biggest proportion of the Malaysian population, and they are the main users of smartphones. The main objective of this research is to determine the factors influencing the smartphone purchase decisions of Generation-Y. Based on a literature review and survey, this study finds seven factors that influence smartphone purchase decisions: brand, convenience, dependency, price, social influence, product feature and social needs. The research used a questionnaire with a 5-point Likert scale for data collection and a sample of 152 respondents (Generation-Y) from the Kuching region of Malaysia. We find evidence that social influence, product feature, and brand image have significant positive impacts on the smartphone purchasing decisions. Other factors, such as convenience, dependency, price and social needs were statistically insignificant.

Keywords: *Brand, Generation-Y, Purchase Decision, Malaysia, Smartphone*

Introduction

Smartphones were introduced in Malaysia about a decade ago, and it's become very popular among the young generation. Most buyers of smartphones are Generation-Y who are more technologically oriented and rely on more technical devices. Generation-Y uses smartphones to obtain information, connect with their friends and family and for entertainment purposes. Smartphone devices are also becoming more affordable. Many companies across Malaysia promote affordable smartphones with standard specifications.

The cellular network was introduced in Malaysia about 20 years ago. However, this is not the case for Sarawak or the Kuching region, where these technologies were only introduced in the last few years. In 2015, the Kuching network was upgraded to 4G to allow users to enjoy high-speed internet access. It also enables the purchase of smartphones with a 4G support specification. Wong (2014) suggests that the growth of smartphone is about 51 percent in Malaysia, and one out of two adults is a smartphone user. There is a potential market available for the smartphone manufacturers and distributors in Malaysia. According to Yong et al (2014), younger consumer segments are becoming one of the most important segments for the smartphone market in Malaysia. This research focuses on the decision making processes of Generation-Y smartphone users in the Kuching region of the state of Sarawak in Malaysia.

Sarawak is the largest state of Malaysia. However, its population density is among the lowest in the country. The city of Kuching is the capital and the most populous city in the state of Sarawak. Kuching has a population of 325,132 according to the Malaysian Census, 2010. The smartphone proliferation rate is still considered to be relatively low in this region compared to the rest of Malaysia. What this suggests is that there are opportunities for the smartphone industry to grow in this geographical location, which is away from the major business hubs of Malaysia. According to Suruhanjaya Komunikasi dan Multimedia Malaysia (SKMM, 2012), in 2012 the smartphone penetration rate per 100 habitants in Sarawak was 105.7. This can be compared with 203.5 in Kuala Lumpur, the capital of Malaysia. Regardless of the growing importance of regions such as Sarawak, the majority of research and statistical surveys are conducted in the larger cities (e.g. Kuala Lumpur) or at national level (Osman et al., 2012).

There are a few published studies on the factors affecting mobile phone purchasing decisions of Generation Y in the State of Kuala Lumpur. These studies focus on particular institutions or small geographical regions such as the Klang Valley in Kuala Lumpur (see, for example, Lay-Yee et al. 2013). The region of Kuching, the focus of our study, is about 972 km from Kuala Lumpur. Many smartphone dealers are small enterprises with limited budgets who cannot afford to conduct extensive studies on consumer behaviour. Information gathered through this study can help smartphone dealers enhance their Generation-Y marketing strategies. Smartphone manufacturers can also utilise the results of this study as design input for the next generation of smartphone development.

The paper is organised as follows. The next section reviews the literature on smartphone use and purchase decisions of Generation-Y. The hypotheses tested in this study is explained next. The following section describes the research design. The penultimate section explains details of the data analyses and states the

results. The final section concludes the paper with recommendations and a discussion of the limitations of this research.

Literature Review

Generation-Y

Generation-Y is one of the consumer groups that has been studied extensively in market segmentation research. This group of individuals are referred to by many different names, such as Millennium Generation, DotNet, Ne(x)t Generation, Nexters, iYGeneration, Net Generation, Gen Wired, Why Generation, First Globals, We Generation, iPod Generation, and Echo Boomers (Mafini et al., 2014). There is no consensus on how this group should be defined based on the time frame within which they are born. However, it is agreed that they fall between Generations X and Z. Table 1 lists the generational groups and the percentage of the Malaysian population falling within each group. Figure 1 shows the distribution of the Malaysian population by age groups as of 2015.

Table 1: Generation Group List

Generation	Approximated Year Born	Present Age(2015)	Malaysia 2015 Population (in millions)	Population (%)
Generation Alpha	2010-2015	0-5	3.54	11.61
Generation Z	1995-2009	6-20	8.30	27.21
Generation Y	1977-1994	21-38	8.55	28.00
Generation X	1965-1976	39-50	4.70	15.41
Baby Boomers	1946-1964	51-69	4.40	14.40
Silent Generation	1925-1945	70-90	1.00	3.28
GI Generation	1901-1924	91-114	0.029	0.09

Source: Spire Research and Consulting (2010) and U.S. Census Bureau (2015)

Figure 1: Malaysia's Population Gender Distribution
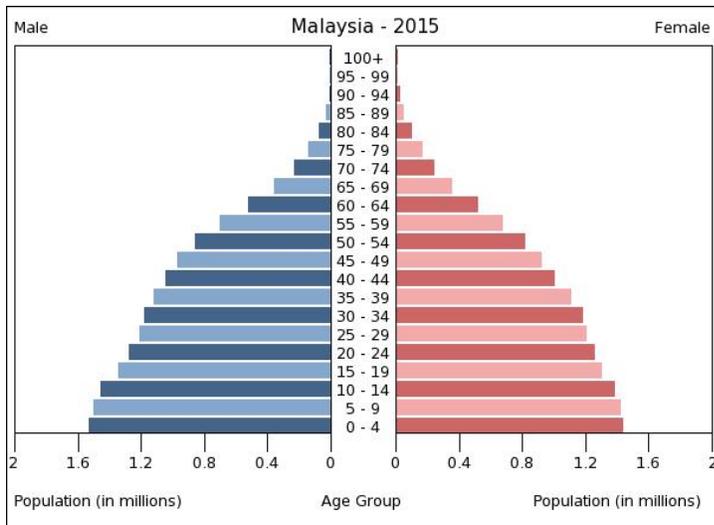
Source: U.S. Census Bureau (2015)

Based on Table 1 and Figure 1, Generation-Y is the largest population group in Malaysia. Therefore, it is not surprising that Generation-Y generates the highest interest in marketing strategy studies. According to Hughes (2008), Generation-Y has greater buying power and will entice the marketers. His prediction is also reinforced by Sanderson (2010), who suggests that the buying power of Generation-Y outpaces Generation X by more than three folds globally. A thorough understanding of Generation-Y including their characteristics and social structure will help marketers capture the attention of this generation, and continue to be successful in the marketplace.

Generation-Y's era has coincided with globalisation. Social networking and instant communication technology have advanced drastically within this era. People can easily communicate with one another through sophisticated communication technologies. Because of their early exposure to the digital world, Generation-Y's development in terms of cognitive, emotional and social outcomes is linked to technology (Immordino-Yang et al., 2012). Besides the technological influence, Generation-Y has been described as a unique customer segment that generally does not follow the behaviours and buying patterns of their parents (Deloitte, 2009). Sanderson (2010) claimed Generation-Y are different from their predecessors and have grown up in a digital world, holding new beliefs and ideologies. Most of them are highly educated, and their expectation of products and services influence their preferences for smartphone devices (Cheng et al., 2011). This generation consumes information from media, five times faster than their predecessor (Wilson and Field, 2007).

Purchase Behaviour

The study of purchase behaviour answers three key questions: i) the reasons behind a consumer's purchase, ii) factors influencing the purchase, and iii) the changing factors in our society. Many related studies have been conducted based on two fundamental models developed by Engel, Kollat and Black Well (1978) and Hawkins, Best, and Coney (1998). The Hawkins, Best, and Coney (1998) model enhances the Engel, Kollat and Black Well (1978) model, by expanding the scope of the former to include external and internal influences.

The consumer behaviour model developed by Hawkins, Best and Coney (1998) suggests that consumer needs are influenced by external influences such as demographic factors, culture, social status, reference groups, subcultures, marketing activities, and family. Internal influences such as perception, learning, memory, motives, personality, emotions and attitudes also drive consumer needs and desires. The two sets of influences combine to form the consumer's self-concept and lifestyle, which in turn drives their needs and desires. These influences lead consumers into a five-stage decision process, which starts with a problem and needs recognition. Once their needs are recognised, consumers will search for information and alternatives. After that, they will evaluate available alternatives and make their purchase decision. The five-stage decision process ends at post-purchase evaluation. This model was developed based on the assumption that consumers make a purchasing decision in a rational manner and assess alternatives before making a decision.

Generation-Y is recognised for their urge for immediacy, which means they want a fast response. The time gap between searching, evaluation and making a purchase decision has reduced tremendously through the advancements in communication technology, such as online and mobile shopping, the internet, and social

media marketing (Hughes, 2008). Generation-Y are not risk takers. They are brand cautious, but can also demonstrate limited brand loyalty, due to the range of options available to them. Thus, they prefer brands known to be customer oriented (Hughes, 2008).

Consumers purchase behaviour is the basis of marketing strategies. Sanderson (2010) suggests that marketers need to understand their target group' thinking processes, characteristics, attitudes, values, and lifestyle. Arguably, traditional marketing strategies such as hard selling will no longer work and need to be replaced with new and innovative ways of capturing the exclusive attention of Generation-Y consumers.

The Smartphone Market

The smartphone is defined as a powerful calculating device, providing traditional wireless voice services with the capability to connect to and run internet-based services such as social networking and emailing services (Kenny and Pon, 2011). The easiest way to differentiate between a smartphone and a cellular phone is the inclusion of a mobile operating system (Kirk, 2011).

The smartphone market has grown rapidly since its inception in the 1990s, despite being a relatively new industry. Based on a report from Counterpoint Technology Market Research (2015), global mobile phone shipments reached 441 million units in the first quarter of 2015, up by 2% from the previous year. Smartphone shipments represent 78% of the total mobile phone shipments during Quarter 1, 2015. Samsung was the top-selling smartphone brand in Quarter 1, 2015, followed by Apple and Microsoft. Total sales from the top eight smartphone brands accounted for almost two-thirds of the global smartphone market share (Counterpoint Technology Market Research, 2015). Regarding smartphone ownership, Nelson (2014) reported that 71% of US population owned a smartphone, with Generation-Y is the largest segment of smartphone owners.

International Data Corporation (2015) and Statisca (2015) forecasts global shipments of smartphones to be 2 billion in 2019. Figure 2 provides an overview of the global smartphone shipment forecast provided by Statisca (2015).

Figure 2: Global Smartphone Shipments Forecast
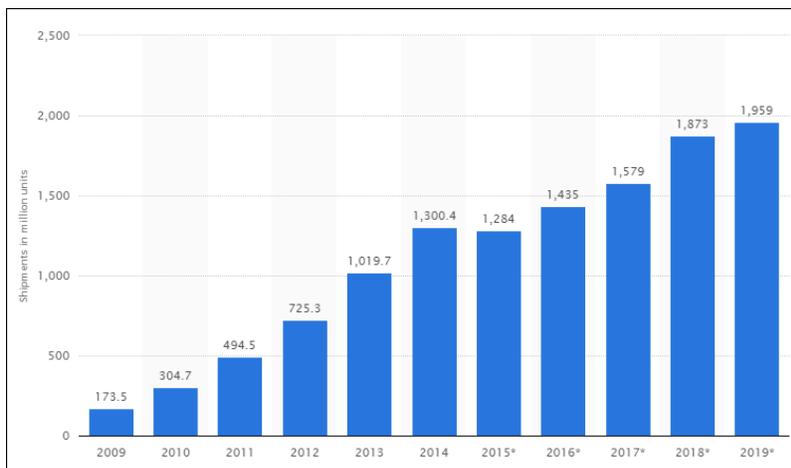
Source: Statisca (2015)

International Data Corporation had predicted that vendors from China and Taiwan would continue to grow their market share to 65% in Malaysia by the end of 2015 due to their innovative marketing strategies.

Factors Affecting Smartphone Purchase Decisions

Table 2 provides a summary of prior studies investigating customer preferences about smartphone purchasing.

Table 2: Previous studies on Consumer Brand Preferences in the Mobile Phone Market

Author details	Antecedents of mobile phone preferences
Singh and Goyal (2009)	Physical appearance, core-technical features, brand, post-purchase services, value-added services
Yang et al. (2007)	Newest technology, design and appearance, price, calling plan, interpersonal influence
Karjaluoto et al. (2005)	Price, brand, interfaces, properties, size, other factors e.g. sales staff
Ebrahim (2012)	Brand experience, brand attributes, brand personality, brand congruence, brand choice
Riquelme (2001)	Mobile phone features, connection fee, access cost, call rates, free calls, mobile-to-mobile phone rate
Chow et al. (2012)	Product features, brand name, price, social influences

Based on these studies we identify seven factors affecting smartphone purchases: brand, convenience, dependency, price, product features, social influence and social needs. Mudondo (2014) found that mobile phone features, design, price, appearance and technology applications are the most important influencing factors determining mobile phone brand preferences of the Generation-Y. Lay-Yee et al. (2013) found that Malaysian Generation-Y's smartphone purchasing decisions are influenced by factors such as the brand, price, product features and social influence. These factors are discussed below.

Brand

The brand is something more than a name or symbol. The brand name creates an impression in the customer's mind about the quality of the service it offers. If the customer is satisfied with the branded product, they may make word of mouth recommendations, which can influence other consumers to purchase the brand. Brands have a positive impact on female customers more than male customers (Azad and Safaei, 2012). There is evidence that brands create a greater impact on people who have limited purchasing capabilities (Bhattacharya and Mitra, 2012). People also prefer branded products because of the perceptions of their performance, quality, service and the social status associated with the brand. Mudondo (2014) suggest that age is an important factor for technological advancement of the younger generation. He finds evidence that the younger generation has a better understanding of the technological advancement in mobile phones, influencing their purchasing decision.

Convenience

Consumers appreciate convenience because of time scarcity (Genova, 2010). Convenience refers to a condition where work is simplified, made easy and can be done with less exertion, without distress or difficulty. Smartphones provide convenience. The smartphone is smaller and lighter than a laptop, making it easy to carry everywhere. The proliferation of internet and Wi-Fi services make smartphones more convenient and connective. Yong, Boon, and Chin (2014) propose that convenience, social needs, and influences were factors that influenced the dependency of students on smartphones.

Dependency

Dependency on something means to use it habitually and intensely, and reluctance to stay away from it (Ding et al., 2011). The smartphone is not only a conventional phone for talking or messaging; people can use them for a range of reasons, including banking, emailing, documenting, playing games, sharing photos, and social networking. It is estimated that Malaysian people use smartphones for around 20 hours per week for online surfing. Research has suggested that high levels of smartphone dependency can lead to martial issues, and a reduction in social and communication skills, as texting becomes a common means of communication (Lay-Yee et al., 2013).

Price

Price is the quantity of money that a consumer is willing to exchange for a service or product (Kotler and Armstrong, 2010). Price is an important factor that influences buyers to make a buying decision. In 2013, the Malaysian government granted rebate of RM200 on smartphones to those aged 21 to 30 and those earning less than RM3000 per month (The Star, 2013). Chew (2012) identified that among Malaysian young adult population, the price is a significant factor in smartphone purchase intention. Others have found that price and after sales customer service plays an important role in consumer satisfaction; but the price of the device creates more impact than other factors (Hanif et al., 2010).

Product Features

Hardware and software are important product features of a smartphone. Osman et al. (2012) reveal that 56% of people give importance to smartphone's design, 38.5% to Wi-Fi connectivity, 34.2% to computing power, and 30.2% to the price of the device. He argues that software features are more important than hardware features in people's smartphone purchase decisions. Extra features like cameras and the weight of the phone also impact on consumer decision-making. Color and size are treated as additional motivating factors (Mudondo, 2014).

Social Influence

Consumer behaviour and decision-making processes are influenced by family, friends, social roles and status (Kotler and Armstrong, 2010). Ernest et al. (2010) show that the purchasing decisions of Malaysians are impacted by direct and indirect role models. Indirect role models (e.g., celebrities) have a higher impact

than direct role models (e.g., parents). According to prior studies, social influence has a direct effect on behavioural intentions (Ajzen, 1991; Venkatesh and Davis, 2000; Mudondo 2014).

Social Needs

Social needs are the social necessities of a person, and in the context of smartphones, may represent the necessity for keeping in touch with friends, family, and associates (Tikkanen 2009). In the 21st century, having a smartphone is a social necessity for Generation-Y, as it is argued that smartphones are an important facilitator of social ties (Wei and Lo, 2006). Generation-Y customers look for mobile applications that are congruent with their lifestyles and their needs and wants (Mudondo 2014; Bridges et al. 2010).

Hypotheses

Seven hypotheses are designed to examine the influence of each of the seven factors above on smartphone purchasing decisions. Figure 3 explains the hypotheses diagrammatically.

Figure 3: Conceptual Framework
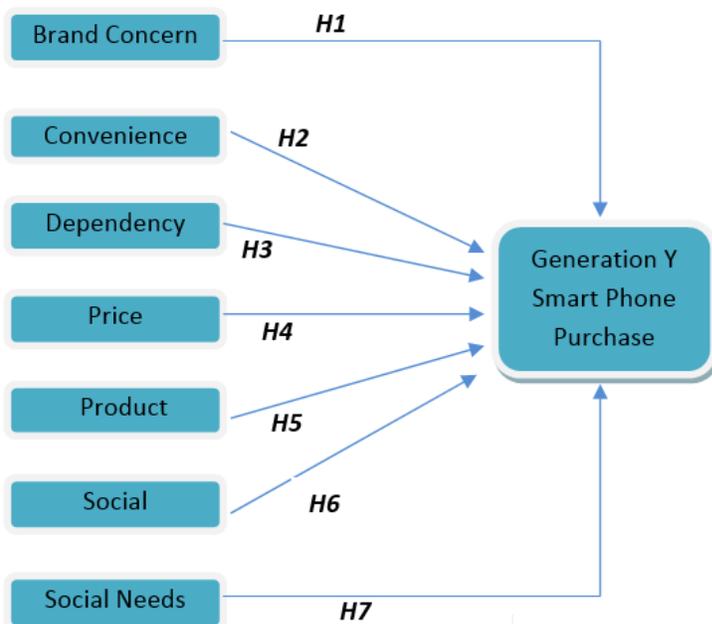
Source: Adapted from Lay-Yee et al. (2013) and Wei and Lo (2006)

Many studies have confirmed that brand has a strong influence on smartphone purchase decisions (Bhattacharya and Mitra 2012, Khan et al. 2014, Lay-Yee et al. 2013, Mudondo 2014). Therefore, the following hypothesis is proposed.

Hypothesis 1: There is a significant relationship between brand concern and smartphone purchase decisions of Generation-Y in Kuching.

Liew (2012), Lay-Yee et al. (2013), Ding et al. (2011), Mudondo (2014) and Suki (2013) found that there is a significant relationship between convenience and smartphone purchase behaviour. Thus, it is proposed that we should expect a strong correlation between these two variables in our sample. Thus Hypothesis 2 is formed.

Hypothesis 2: There is a significant relationship between convenience and smartphone purchase decisions of Generation-Y in Kuching.

Dependency is another factor that has been widely studied by researchers who have demonstrated an affirmative connection between dependency and smartphone purchases (Ding et al., 2011, Lay-Yee et al., Suki, 2013).

Hypothesis 3: There is a significant relationship between dependency and smartphone purchase decisions of Generation-Y in Kuching

Price concerns are a key element tested by researchers in determining the demand for smartphones. The significance of this factor in influencing smartphone purchase decisions has been confirmed by Chow (2011), Chew (2012), Khan et al. (2014) and Lay-Yee et al. (2013).

Hypothesis 4: There is a significant relationship between price and smartphone purchase decisions of Generation-Y in Kuching

The smartphone is designed to have numerous product features. Mudondo (2014) proposes that extra designs features can influence the decision to purchase a smartphone.

Hypothesis 5: There is a significant relationship between product features and smartphone purchase decisions of Generation-Y in Kuching

Hypothesis 6: There is a significant relationship between social influence and smartphone purchase decisions of Generation-Y in Kuching

The following hypothesis is postulated based on the research conducted by Wei and Lo (2006) who find a positive correlation between social needs and smartphone purchasing.

Hypothesis 7: There is a significant relationship between social needs and smartphone purchase decisions of Generation-Y in Kuching

Research Design

We used questionnaires to collect primary data from individual respondents. The questionnaires were distributed among individuals living in the Kuching region in the state of Sarawak from August 2016 till January 2017. We used two techniques to distribute the questionnaires: physical distribution and an online survey, distributed through email and social media to people belonging to Generation-Y who live in Kuching. The state of Sarawak is home to universities such as the University Malaysia Sarawak (UNIMAS), Swinburne University of Technology (Sarawak Campus) and Curtin University of Technology (Sarawak Campus). We

invited students from these universities to participate in the survey. One hundred and fifty-two responses were collected. The Cronbach's alpha analysis technique was used to calculate the reliability of the data.

The questionnaire was designed in English with a cover letter as an introduction to convey the purpose of the survey to the respondents. The questionnaire section was divided into three sections. Section A collected demographic information such as gender, age, education level, income level and smartphone ownership. Section B gathered information on respondents' attitudes towards each independent variable by using a 5-point Likert scale with 1 (strongly disagree) to 5 (strongly agree). Section C asked about respondents' purchase decisions.

A reliability test is used to identify the overall consistency of the items that were used to define scales. Cronbach's alpha is a widely used technique to measure reliability. An alpha value greater than 0.7 is considered to be a good fit and an alpha value greater than 0.6 is considered to be satisfactory (Malhotra 2010; Hair et al., 2010). This study provides evidence of Cronbach's alpha greater than 0.6 for most of the factors, except Social Need. Hence, the variable for social needs is excluded from further analysis and hypotheses testing, The Cronbach's alpha values for the eight scales are shown in Table 3.

Table 3: Reliability Test Result

Factors	No. of Items	Cronbach's Alpha
Brand	8	0.827
Convenience	6	0.688
Dependency	6	0.856
Price	5	0.637
Product feature	6	0.898
Social Influence	6	0.779
Social Need	5	0.394
Purchase Intention	8	0.920

Data Analysis and Interpretation

Demographic Profile of the Respondents

Out of the 152 respondents, 51% were male and 49% female. The majority of the respondents (45%) were aged between 29 to 32 years. The majority of respondents (42%) holds a Bachelor's degree, and 25% also holds a Master's degree. Thirty-seven percent of respondents earned between RM 2,001 to RM 3,000 and the second largest income level grouping was RM 1,001 to RM 2,000 group. However, 4% of the respondents did not disclose their income details. Demographic information of the sample is detailed in Table 4.

Samsung is the most used mobile phone brand among the respondents. It is found that the majority (30%) of respondents get information about smartphones from their family and friends. In addition, 22% of respondents get this information from the internet.

Table 4: Demographic Information

Variable	Categories	Frequency	Percent	Valid Percent	Cumulative Percent
Age	<21 years old	8	5.3	5.3	5.3
	21-24 years old	17	11.2	11.2	16.4
	25-28 years old	37	24.3	24.3	40.8
	29-32 years old	68	44.7	44.7	85.5
	33-36 years old	18	11.8	11.8	97.4
	Above 36 years old	4	2.6	2.6	100
	Total	152	100	100	
Gender	Male	77	50.7	50.7	50.7
	Female	75	49.3	49.3	100
	Total	152	100	100	
Income level	Less than RM 1,000	36	23.7	24.7	24.7
	RM 1,001 – RM 2,000	27	17.8	18.5	43.2
	RM 2,001 – RM 3,000	56	36.8	38.4	81.5
	RM 3,001 – RM 4,000	20	13.2	13.7	95.2
	Above RM 5,000	7	4.6	4.8	100
	Missing System	6	3.9		
	Total	152	100		
Education	High School	9	5.9	5.9	5.9
	Diploma Level	31	20.4	20.4	26.3
	Bachelor's Degree	64	42.1	42.1	68.4
	Master's Degree	38	25	25	93.4
	Doctoral Degree	10	6.6	6.6	100
	Total	152	100	100	
Brand of smartphone used	Apple	25	16.4	16.4	16.4
	Samsung	55	36.2	36.2	52.6
	Nokia	4	2.6	2.6	55.3
	HTC	13	8.6	8.6	63.8
	Others	55	36.2	36.2	100
	Total	152	100	100	
Information sources used for smartphone purchasing	Social Media (Facebook, Twitter, Youtube, etc)	28	18.4	18.4	18.4
	Internet Websites	34	22.4	22.4	40.8
	TV/Radio	10	6.6	6.6	47.4
	Family/Friends	46	30.3	30.3	77.6
	Magazine/Newspaper	4	2.6	2.6	80.3
	Promotion	30	19.7	19.7	100
	Total	152	100	100	

Pearson's correlation coefficient is used to examine the linear relationship between the variables. Table 5 illustrates the results of the Pearson's correlation coefficient analysis.

Table 5: Pearson Correlation Analysis (N=152)

	Brand	Convenience	Dependency	Price	Product Feature	Social Influence
Convenience	.476**					
Dependency	.456**	.661**				
Price	.299**	0.129	.404**			
Product Feature	.467**	.719**	.630**	.333**		
Social Influence	.457**	.373**	.271**	0.04	.369**	
Purchase Intention	.159*	.243**	0.073	0.048	.344**	.533**

Note**. Correlation is significant at the 0.01 level (2-tailed), *. Correlation is significant at the 0.05 level (2-tailed),

Our analysis finds evidence that there are strong correlations separately between the brand of the smartphone, convenience, product features, and social influence and smartphone purchase decision of Generation-Y. Dependency and price are not statistically significantly correlated with the smartphone purchase decision of Generation-Y.

Multiple Regression Analysis

The study uses stepwise multiple regression to calculate the value of the variables. Stepwise regression is a method for picking a useful subset of effects in a regression model. This method analytically adds the most significant variable or removes the least significant variable during each step. It helps to interactively discover which predictors seem to provide a good fit. Using stepwise regression, we determined that social influence, product features and brand are the best predictors of the decision to purchase a smartphone.

Table 6 illustrates the model summary and shows that the R² value is 0.336 for the model that includes social influence, product features and brand as independent variables. The Durbin-Watson test resulted in a value of 1.104, which is within the acceptable limit (Durbin and Watson, 1951).

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
3	.580c	.336	.322	.57419	1.104

Table 7 shows that the three independent variables statistically significantly predict the dependent variable, $F_{(3, 148)} = 24.955$, $p < .0005$. The F-test test statistic indicates that there is a linear relationship between the variables in this model and that the regression model is a good fit for the data.

Table 8 shows the standardised and unstandardised coefficients of each independent variable along with the t statistics with the corresponding p-values. Social influence and product features have a positive relationship with smartphone purchase decisions of Generation-Y. Brand has a negative but significant relationship with smartphone purchase decisions.

Table 7: ANOVA Test Result

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	24.682	3	8.227	24.955	.000d
Residual	48.794	148	.330		
Total	73.476	151			

Table 8: Correlation of Coefficients Results

Variables	Unstandardised Coefficients		Standardised Beta	t	Sig.
	B	Std. Error			
(Constant)	1.754	.361		4.853	.000
Social Influence	.516	.074	.535	6.963	.000
Product Feature	.278	.090	.239	3.090	.002
Brand	-.211	.086	-.197	-2.437	.016

Conclusion

A smartphone is a useful tool for communication. It has been argued that smartphones have revolutionised communication. It has become a part of human life, and it is unimaginable for the new generation to be without a smartphone.

We find evidence of a statistically significant correlation between the decision to purchase a smartphone by people belonging to Generation-Y in Kuching and separately, brand of the smartphone device, product features and social influence. Our findings are also aligned with the previous literature, which suggests that brand image plays a significant role in smartphone purchasing decisions (see, for example, Liew 2012; Lim et al. 2013; Ding et al. 2011; Mudondo 2014; Suki 2013). Innovative product features (software and hardware) are essential aspects of generating customer demand. Prior research also finds social influence to be a determinant of smartphone purchasing (see, for example, Ding et al. 2011; Suki 2013; Chew 2012). Hence, our results support H1, H5 and H6. However, our research could not establish statistically significant correlations separately between dependency, price, convenience and social needs and smartphone purchase decisions of Generation-Y. For this reason, H2, H3, H4, and H7 are not supported.

This study is particularly important for smartphone producers and distributors in Malaysia, in general, and in the Kuching region, in particular. Our evidence suggests that manufacturers and distributors focus on product features and brand image of their smartphones and social needs of Generation-Y consumers to make the smartphones more attractive to the Generation-Y.

The study has limitations. The study is based on a small sample size of 152 respondents. A bigger, more representative sample could lead to more robust results. This research was conducted in one geographical location – the Kuching area of the State of Sarawak in Malaysia. This research uses only seven independent variables to understand the smartphone purchase decisions of Generation-Y. However, there could be other factors that influence smartphone purchasing decisions of the Generation-Y.

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Appendix: Questionnaire

Section A: Demographic information

1. Please specify your gender. Please tick "√" on the most appropriate box.

	Male
	Female

2. Please specify your age. Please tick "√" on the most appropriate box.

	<21 years old
	21-24 years old
	25-28 years old
	29-32 years old
	33-36 years old
	Above 36 years old

3. Please specify your education level. Please tick "√" on the most appropriate box.

	Primary School
	High School
	Diploma Level
	Bachelor's Degree
	Master's Degree
	Doctoral Degree
	Others, Please Specify:

4. Please specify your income level. Please tick "√" on the most appropriate box.

	Less than RM 1,000
	RM 1,001 – RM 2,000
	RM 2,001 – RM 3,000
	RM 3,001 – RM 4,000
	Above RM 5,000

5. Which brand of smartphone are you currently using? You can tick more than one.

	Apple
	Samsung
	Nokia
	HTC
	Blackberry
	Others, Please specify:

6. Where do you get the smartphone information? You can tick more than one.

	Social Media (Facebook, Twitter, Youtube, etc.)
	Internet Websites
	TV/Radio
	Family/Friends
	Magazine/Newspaper
	Blog
	Promotion
	Dealer
	Others, Please specify:

Section B: Factors affecting smartphone purchase decision

Please indicate the degree of agreement with the following statements.

Assessment Scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree (Please tick "√" on the most appropriate box)

Categories	1	2	3	4	5
Brand Concern					
The brand is important in smartphone purchasing.					
I prefer a well known and prestigious smartphone brand.					
I care about how other people judge me based on the smartphone I use.					
I prefer an elegant and fashionable smartphone.					
I prefer an international recognised smartphone with good reputation.					
I like the glamour of having a branded smartphone.					
I seldom change my smartphone due to the brand.					
I consider myself to be loyal to my smartphone brand.					
Convenience					
I can accomplish my tasks more quickly by using a smartphone.					
I prefer carrying a smartphone than a laptop or a computer.					
Smartphone saves my time in browsing the internet.					
I can keep in touch with my friends anytime and anywhere using my smartphone.					
The smartphone shortens communication and interaction.					
I can complete my assignments faster by using a smartphone.					
Dependency					
In my day-to-day life, usage of a smartphone is high.					
I feel anxious when my smartphone is not with me.					
I always use my smartphone to deal with my job and studies.					
I prefer online shopping and banking through my smartphone.					
I feel easy to be on social media sites using my smartphone than my personal computer.					
I am completely dependent on my smartphone.					
Price					
I prefer purchasing a smartphone for a high price.					
I prefer buying a smartphone for a reduced price.					
I think smartphones are expensive.					
I think the price is a vital element in judging the quality of a smartphone.					
I consider the price mainly when I decide to buy a smartphone.					
Product Features					
I prefer a smartphone equipped with front and rear camera with more megapixels.					
I prefer a smartphone equipped with a good sound system.					
I love a smartphone that can be connected with On-The-Go USB.					
I prefer a smartphone that supports the 4G connection.					
I will buy a smartphone that has a high capacity.					
I will buy a smartphone based on the shape and sizes.					
Social Influence					
I feel like buying a new phone when my family and friends show their new phones to me.					
I usually consult my family and friend before buying a new phone.					
I want to have a high specification phone as my friend does.					
My friend always persuades me to buy the same phone as theirs.					
I love to have the same smartphone as my family members.					
I usually look for information about smartphones on the internet.					
Social Needs					

Categories	1	2	3	4	5
I rarely use my smartphone.					
I use my smartphone to connect with my friends and family.					
I always play games on my smartphone.					
I do my revision by using a smartphone.					
My smartphone is my everything.					
Purchase Decision					
I have a plan to purchase a smartphone in the near future.					
I search for information about smartphones on regular basis.					
I always discuss smartphone with my friends and family.					
Buying a smartphone is beneficial for daily life.					
I will consider the brand of smartphones before I purchase it.					
I will consider the price of smartphones before I purchase it.					
I will consider the product feature of smartphones before I purchase it.					
I will suggest my family and friend to buy smartphones.					