THE MEDIATING EFFECT OF BRAND TRUST ON THE RELATIONSHIPS BETWEEN DIMENSIONS OF BRAND EQUITY AND PURCHASE INTENTION TOWARD SMARTPHONE

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ABSTRACT

It has been stated that the technology of smartphone greatly affects the behavior of people and their attitude toward the purchase. However, there are lack of studies on the purchase intention of customer regarding smartphone usage among young adults has been reported by several researchers at particular in Malaysia. Thus, the current study investigates the relationships between brand equity dimensions namely, brand awareness, perceived quality, brand association and brand loyalty on behavior intention to purchase the smartphone brands. Moreover, this study also explores the mediation effect of brand trust on the relationship between brand equity elements and purchase intention towards smartphone brand in Malaysia. The main purpose of this study was to investigate the mediating effect of brand trust (BT) on the relationship between brand awareness (BAW), perceived quality (PQ), brand association (BAS),brand loyalty (BLO), and purchase intention (PI) of smartphone brands in Malaysia. The findings of the study showed evidence of the significant and positive relationship between PQ, BLO, and PI; while BAW and BAS have insignificant relationship. The results also presented that BAS, PQ, and BLO have positive effect on PI, while BAW has insignificant influence. The results further support the positive relationship between BT and PI. Interestingly, the findings of the research further show that BT mediates the relationship between BAS,BLO, and PI. This empirical study provided fruitful implications to marketers by making significant contributions to the brand management. It also contributes to new knowledge on the existing body of brand management literature by systematically exploring the influence BAW, PQ, BAS, BT, and BLO on PI of smartphone brands in Malaysia. Marketers should improve brand quality, and enhance awareness which may encourage customers to purchase the smartphone brand.

ABSTRAK

Telah dinyatakan bahawa teknologi telefon pintar sangat mempengaruhi tingkah laku seseorang dan sikap mereka terhadap pembelian. Walau bagaimanapun, terdapat kekurangan kajian mengenai niat pembelian pelanggan mengenai penggunaan telefon pintar di kalangan orang muda seperti yang telah dilaporkan oleh beberapa penyelidik khususnya di Malaysia. Oleh itu, kajian ini menyiasat hubungan di antara dimensi ekuiti jenama iaitu kesedaran jenama, persepsi kualiti, persatuan jenama dan kesetiaan jenama terhadap niat tingkah laku untuk membeli jenama telefon pintar. Selain itu, kajian ini juga meneroka kesan mediasi kepercayaan jenama terhadap hubungan antara elemen ekuiti jenama dan niat pembelian ke arah jenama telefon pintar di Malaysia. Tujuan utama kajian ini adalah untuk menyiasat kesan pengantara jenama amanah (BT) mengenai hubungan antara kesedaran jenama (BAW),persepsi kualiti (PQ), persatuan jenama (BAS), kesetiaan jenama (BLO), dan niat pembelian PI) jenama telefon pintar di Malaysia. Penemuan kajian menunjukkan bukti hubungan yang signifikan dan positif antara PQ, BLO, dan PI; manakala BAW dan BAS mempunyai hubungan yang tidak signifikan. Hasilnya juga menunjukkan bahawa BAS, PQ, dan BLO mempunyai kesan positif terhadap PI, sementara BAW mempunyai pengaruh yang tidak penting. Keputusan selanjutnya menyokong hubungan positif antara BT dan PI. Menariknya, penemuan kajian selanjutnya menunjukkan bahawa BT mengantara hubungan antara BAS, BLO, dan PI. Kajian empirikal ini memberikan implikasi yang membuahkan hasil kepada para pemasar dengan membuat sumbangan penting kepada pengurusan jenama. Ia juga menyumbang kepada pengetahuan baru mengenai kesusasteraan pengurusan jenama yang sedia ada dengan secara sistematik menerokai pengaruh BAW, PQ, BAS, BT, dan BLO pada PI jenama telefon pintar di Malaysia. Pemasar harus meningkatkan kualiti jenama, dan meningkatkan kesedaran yang boleh menggalakkan pelanggan membeli jenama telefon pintar.

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List of Abbreviation

BAW   Brand Awareness

PQ   Perceived Quality

BAS   Brand Awareness

BLO   Brand Loyalty

BT   Brand Trust

PI   Purchase Intention

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CHAPTER ONE

INTRODUCTION

1.1   Background of Study

The branding practice is an old as history. It can be traced back to time when craftsmen and artists tried to distinguish their products from those of others by way of marking or signing (Hakala, Svensson, & Vincze, 2012). With the increasing need to differentiate some products from others, the brand has now become one of the most powerful marketing tools used by several organizations all over the world. It has been argued that a brand adds effective dimensions to products or services. The addition of these effective dimensions are done through differentiation from other goods or services created to satisfy similar wants and needs of consumers (Hakala et al., 2012). The total value of the brand for the firm and which the brand shows in the customers' mind is considered to be as the brand equity (Keller, 1993).

A vast array of literature and studies have been carried out on brand equity. According to Peng, K. F & Wen,2014), in recent years the brand equity area has acknowledged significant research attention. Yet, very few empirical studies have paid attention to the correlation between how consumers respond and consumer based-brand equity (Buil, Martinez, & De Chernatony, 2013). Similarly, Leone, Keller, Luo, Mcalister, and Srivastava (2006) argue that contemporary marketing interest has been centered on brand equity and customer equity without commensurate research that tries to reconcile the relationship among the two thoughts. Still in the same vein, Broyles, Leingpibul. Ross, and Foster (2010) have observed that brand equity plays a major

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role in behavior intention. Futhermore, based on Knapman (2012) said lately, people pay more attention to the brand when choosing smartphone. Furthermore, brand equity is regarded as a key indicator of how healthy or otherwise a brand is (Aaker, 1991). Additionally, brand equity has been constantly viewed as a necessary step in effective management of any brand (Aaker, 1992).

One of the many important questions holding the attention of today's brand managers is related to how to ensure an understanding of suitable relationship between concepts such as equity of brand and consumer responses, especially with regard to several known antecedents of brand equity in the context of the marketing literature (Taylor, Celuch, & Goodwin, 2004). Taking this into account, brand equity conceptualizations have been proposed by various scholars. For example, most of them, from the view the consumer, supposed that the ultimate strength of brands deceptions lies in the consumers' mind (Leone et al., 2006). On other hand, the monetary value of the brand is considered to be the final decision of consumer response to the brand (Christodoulides & Chernatony, 2010). However, previous research that has investigated brand equity have emphasized on perspective of customers as an approach to study the brand equity.

To move towards a consumer-based approach, the first stage is to try and deconstruct the brand. To accomplish this, it should be understood that the brand is divided into variables that lead to equity of the brand rather than of looking at it as a single whole. In this way, understanding the brand equity concept will be effectively improved. In this context, Aaker (1991) has identified four common antecedents of brand equity, namely, brand awareness, brand associations, brand loyalty, and perceived quality.

All these antecedents can be evaluated or measured through the employment of a survey instrument that was developed by Pappu et al. (2005). It is important to mention that some other studies have classified the dimensions of brand equity into only three: brand awareness, brand loyalty, and brand distinctiveness (e.g., Yasin, Noor, & Mohamad, 2007). Out of these dimensions, brand loyalty contributes more to brand equity development (Yasin et al., 2007). However, this study has its contribution because it emphasizes on how the brand trust mediates the positive relationships between antecedents of brand equity and purchase intention.

In the context of brand equity, considerable has mostly focused on the developed countries such as the USA. Furthermore, research that has been carried out in different geographical settings has mostly attempted to observe American and Asian markets. Moreover, some researchers have reported some limitations on the samples used in previous studies that have focused on brand equity (Broyles et al., 2010; Yoo & Donthu, 2001). Accordingly, the current research will be conducted in the context of Malaysia, as one of the developing countries, in order to provide a better understanding of the influence of brand equity on consumers' purchase intention. To accomplish this study, smartphones would be used as a subject to examine the influence of brand equity dimensions on the intention of purchase through brand trust. Industry mobile will be chosen in this study because it involves high involving durable goods that consumers normally try to make informed decisions about a brand based on prior knowledge and information sought. The proposed model will be tested to ascertain and provide empirical evidence on how consumers respond to brand equity.

1.2   Problem Statement

The Malaysia industry of mobile phones has witnessed drastic and enormous changes and developments in the market of telecommunication due to its extensive access to smartphone companies with several brands entering the Malaysian market namely Apple, Oppo, Sony, Samsung, Huawei, Lenovo, HTC, Ninethology, LG, Motorola, Asus, XiaoMi, and Blackberry. Thus, companies of Smartphones frequently introduce their new models of Smartphone for the purpose of competing each other in the telecommunication market (International Data Corporation Malaysia (IDC), (2017)

The launch of new models of smartphones occasionally has yielded a big evolution in the smartphone market, which in turn has affected the users, especially the young generation in terms of motives and choice which are two of the fundamental factors influencing users' decision process to buy smartphones. It has been stated that the technology of smartphone greatly affects the behavior of people and their attitude toward the purchase (Azam et al., 2012). However, the lack of studies on the purchase intention of customer regarding smartphone usage among young adults has been reported by several researchers such as Rahim et al. (2016). The recent report showed that about 57% of students use Smartphones, 60% are addicted to using Smartphones for texting in class, 97% use Smartphones for the purpose of social networking, and 40% of students used smartphones to study and revise textbooks before tests (Ericsson Consumer Lab, 2013). Furthermore, the increase of the Malaysian smartphone market is largely driven by consumers from the age group of 30 and below, accounting for 64% of smartphone users in the country (Star online, 6 July 2017). Despite the importance of this increase, the question remains whether students are affected by the

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strategies of brand equity for the possession of Smartphones. This question is worthy of further research and investigation.

However, recent researchers pointed out the effectiveness of marketing activities, indicating that the brand equity strategies constitute a major reason behind the decreasing number of consumers and consequently buying intention (Star online, 6 July 2017). According to World Bank reports, (2014) mobile phone spread showed to be a higher in Southern Asia countries such as Singapore, Vietnam and in Southeast Asia. However, the mobile phone spread in Malaysia found to be very low then these countries as according to the reports (World Bank,2014). In fact, the popularity of smartphones in Malaysia is somewhat deteriorated if it diverts to statistics where there is a drop in units of 150,000 in 2016 as compared to 2015 (IDC Quarterly Mobile Phone Tracker, 2017). Compared to 2015, smartphone shipments in Malaysia had dropped by 5.9%. According to Utusan Malaysia, reports of August 5 (2017), the total number of LG smartphones is about 13.3 million phones, and actually less than 600,000 units from the corresponding quarter of the previous year of 2017. Moreover, despite the high customers of Samsung sales posted in 2016 but the units have not decreased as the price was very expensive and was not the low-income option.

Meanwhile, Samsung's smartphone sales in the third quarter of 2016 fell 14 per cent year over year because of the disastrous Galaxy Note 7. The 14 per cent decline in Q3 was its worst performance ever, beating the previous low of a 12 per cent drop in the fourth quarter of 2014. However The decision to withdraw the Galaxy Note 7 was correct, but the damage to Samsung's brand will make it harder for the company to increase its smartphone sales in the short term," said Anshul Gupta, Gartner's research

director.(Mobile World Live, 2016). On another hand, Apple is the most profitable smartphone brand compared to other brands driven by the highest brand equity, but Apple is now facing reduction in the number of customers. Similar case faced by Asus, whereby the brand units brought into Malaysia in 2016 dropped sharply by 43.3% from 2015, which was 1,484 million units in 015 (IDC Quarterly Mobile Phone Tracker, 2017) .

It is argued that the number of smartphone users dropped in various brands. This could be due to various negative economic factors, which included the weakening of against the US Dollar, Malaysian Ringgit, rising costs of living in Malaysia and as well as other reason related to quality and image of brand. According to the survey across the country conducted by GfK reported that almost half of respondents stated price was a decisive factor especially in the selection of smartphones (Berita Harian, 13 Februari, 2015).

As a result of these issues, the strategies of brand equity are one of the most important marketing tools that can be employed to increase purchase of Smartphones. Thus, manufactures of smartphones differentiate their products of smartphones based on brand equity and buying the ultimate influence consumer behavior (Zhang, Pitsaphol, & Shabbir, 2014). Regarding to Yoo et al. (2000), dynamic interactions between brand equity and consumer responses need to be studied because understanding consumer responses to brand equity is very vital (Hoeffler and Keller 2003).However, it has been found that there is a limited number of empirical studies that combine perceived quality, brand association, brand awareness and brand loyalty and examine them as factors influencing consumers' buying intention (Mahfooz, 2015).

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Additionally, most of the studies that have focused on smartphones were conducted in developed economies. Buil et al. (2013) argued in Malaysia few empirical studies have investigated the effect of brand association, perceived quality, brand awareness, brand loyalty, and buying intention of consumer. According to Buil et al. (2013), it is assumed that the four dimensions of brand equity are affected by the purchase intention through brand trust.

Furthermore, despite here are some types of study conducted previously with the intention of purchase of smartphone brands, few researchers concentrated on the relationship among brand equity dimensions and student intention purchase of smartphone brand (Ling, L. P., Lang, P. K., Fong, T. C., & Perinpajothi, T. S., 2014). Hence, this current study investigates the effect of brand trust as a mediating variable between the four dimensions of brand equity and students' purchase intention toward smartphone.

1.3 Research Questions

The current research tries to answer the four following research questions:

1. Do the dimensions of brand equity (brand awareness, perceive quality, brand association, and brand loyalty) influence on purchase intention of smartphones in Malaysia?

2. Do the dimensions of brand equity (brand awareness, perceive quality, brand association, and brand loyalty) influence on brand trust of smartphones in Malaysia?

3. Does the brand trust influence on purchase intention of smartphones in Malaysia?

4. Does the brand trust influence on the brand awareness, perceived quality, brand association, brand loyalty, on purchase intention of smartphones in Malaysia?

1.4   Research Objectives

The current seek to achieve the four objective as follows

1. To examine the influence of the dimensions of brand equity (brand awareness, perceive quality, brand association, brand loyalty) on purchase intention of smartphones in Malaysia.

2. To examine the influence of the dimensions of brand equity (brand awareness, perceive quality, brand association, brand loyalty) on brand trust of smartphones in Malaysia.

3. To examine the influence of the brand trust on purchase intention of smartphones in Malaysia.

4. To explore the mediating influence of the brand trust on the brand awareness, perceived quality, brand association, brand loyalty on purchase intention of smartphones in Malaysia.

1.5   Significance of Study

Although the brand equity has been widely studied (Torres, Augusto, & Lisboa, 2015), few empirical studies have focused on the influence of brand equity on purchase intention. This issue remains to be an important gap that deserves researchers' intention. Taking this into account, this study will try to contribute to the existing

literature of brand equity by giving more insights to the significance of brand equity and purchase intention. Furthermore, marketing practitioners have hitherto focused more on building and managing brand equity. Furthermore, this study will ensure a deeper understanding of how consumers react to brand equity and ensure that marketers integrate a post-brand equity consumer response into their marketing strategy program.

1.6   Scope of Study

The study sought to examine the influence of purchase intention on brand equity. Therefore, the scope of the study covers three identified concepts which are brand equity, purchase intention, and brand trust. This study is limited to concepts that are related to the brand equity. These concepts are perceived quality, brand loyalty, brand association, and brand awareness. The study was conducted in Universiti Utara Malaysia (UUM), Kedah and the data were collected only from UUM students. The justification for this selection of respondents is that the previous research focuses on respondents who belong to the academic category which is beyond professional context. Furthermore, students are enthusiastic about brand preferences in using of Smartphone technology. In addition to these two justifications, for sample selection students can be easily accessed for survey and interviews. Further description of the sample and the sampling technique is presented in Chapter Three.

According to Bernama (2016, January 21), it has been shown that the rise of the Malaysian smartphone market is largely driven by consumers from the age group of 30 and below. Azam et al. (2012) reported that users, especially the young generation, differ in terms of choices and motives, primarily when things are related to decisions

of buying smartphone. Furthermore, based on the report by Enterprise News in 2011, while the highest rate of using smartphone and internet usage in the age group between 25 and 34 was 41%, it reached 38% among users who belong to the age group between 18 and 24, usually the group of generation Y.

1.7 Definition of Key Terms

1.7.1 Brand

The term brand is widely used to refer to a name, term, sign, symbol or even combination of some of these terms, and it is intended to differentiate particular "goods and services of one producer from another" (Kotler & Keller, 2009, p. 236).

1.7.2 Branding

Branding is the process of granting a particular product or service with the power of a brand (Kotler & Keller 2009).

1.7.3 Brand Equity

A set of brand assets and liabilities linked to a brand, its name and symbol. Brand equity adds to or subtracts from the value that are provided by a product or service to an organization or customers of the organization (Smutkupt, et al., 2012, p.542). Brand equity is used to refer to an added value or asset to a brand and/or a product. It is the value that is created based on the positive feelings of consumers, their points of view and actions toward purchasing a product (Senthilnathan, 2011).

1.7.4 Brand awareness

Brand awareness is the power of a brand's presence in consumers' minds. This concept has been identified as an essential component of brand equity (Aaker, 1991; Keller, 1993).

1.7.5 Perceived quality

Indicate to the perceived quality the consumer's subjective assessment of a product which may not be the actual quality of the product (Zeithaml, 1988).

1.7.6 Brand association

According to Boisvert (2011, brand association would relief buyers search besides deal by information. Besides, Len, Cind & Lynn (2007), brand association would deliver buyers with a purchasing cause, because most brand associations are correlated to brand attributes, the aim consumer market, and the profits that consumers essential, so that they procedure the basis of brand loyalty and consumers' purchasing decisions.

1.7.7 Brand loyalty

Kuscu & Ozcam 2014 define brand loyalty is the attachment that a buyer has to a brand. Meanwhile, Said (2014) mention that brand loyalty as a definitely biased sensitive, estimate and/or behavioral reaction tendency to a branded, categorized or graded another or choice by an personal in the size as the consumer, the choice producer, and/or the purchasing agent.

1.7.8   Purchase intention

Spears and Singh (2004) defined purchase intentions as "an individual's conscious plan to try to purchase a brand" (p. 56). Belch and Belch (2003) contended that purchase intentions are constructed a match between purchase motives and brand attributes exists (p. 120).

1.7.9   Trust

Trust refers to the belief that a person, group, or an organization can show to accomplish their promises. Trust possesses an essential role in developing customers' loyalty (Newell, Wu, Leinpibul, & Jiang, 2016).

1.7.10 Brand trust

Brand trust is used to refer to the willingness of an average consumer to rely on the ability of the brand to perform its stated functions (Chaudhuri & Holbrook, 2001, p. 82).

1.7.11 Smartphones

A smartphone is a cell phone that comes with a coordinated PC and different highlights which are not originally connected to the phones. Examples of these highlights are a working framework, Web perusing and the capacity to run programming applications (http://searchmobilecomputing.techtarget.com/definition/smartphone).

1.8   Organization of the Study

This thesis consist of five chapters. Chapter one presents the background to the study, the statement of the problem, research questions and research objectives. Chapter One

also explains the significance and the scope of the study. Definition of key terms are also presented in Chapter One, The study organization and the total number of the chapters of the thesis are provided in Chapter One. Chapter Two reviews previous studies that are related to the brand variables and purchase intention. The theories that have informed the design and the progress of the study are presented and discussed in detail in Chapter Two. Chapter Three provides the proposed framework of the research, hypotheses development, the design of research, measurement of variables, sampling, and sampling techniques. In addition to these issues, data collection procedures and the methods of data analysis are also provided in Chapter Three. Chapter Four presents in details the results of the data analysis. Chapter Four also discusses the findings of the study with reference to each research questions and the findings reported by previous studies. The last chapter, Chapter Five, summarizes key findings the research based on objectives as well as the significant theoretical, implications and recommendation for future research. Chapter Five also deals with the conclusions and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

While the previous chapter mainly focused on background to the study, the statement of the problem and research objectives, this current chapter deals with literature review. Specifically, this chapter aims at reviewing the existing related studies and theories Aaker's Brand Equity Model that are related to the constructs and variables which are the focus of this study. This chapter also provide overview of smartphone industry in Malaysia and reviews some important concepts which are purchase intention, brand awareness, , perceived quality, brand association brand loyalty, and brand trust. Subsequently, empirical studies that explain the relationships between dependent, mediator and predictor variables, as well research framework, hypotheses development.

2.2 Overview on Smartphone Industry in Malaysia

Smartphones can provide individuals with voice communication as well as numerous interesting Smartphone applications (apps) and innovations to achieve necessary requirements of people information services (Pitt, Junglas, Chan, & Spyropoulou et.al, 2011). Additionally, there are various similarities between the functions of Smartphones and those of personal computers. For example, both have enough capability to transfer a great pieces of information and to perform functions such as accessing the Internet and the management of some other matter such as personal tasks and schedules (Osman, Sabudin, Azlan, and Tan, 2011). Other functions that can be

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carried out by both Smartphones and personal computers are obtaining content and information in a short time with speedy response. If only Smartphones are considered, it has been proven that accessing the internet through Smartphones can provide the users with the abilities to extend the functions of their mobiles to include social networking services (such as SMS, Twitter, and Facebook) that are useful platforms for to accessing and sharing information in an easy manner (Pitt et al., 2011). Furthermore, many mobile users prefer to use their Smartphones SMS to access travel agencies and websites which can give mobile users updates about locations and provide them with pieces of advice conceding scenic spots, transportation, accommodation, important events, dining places and some more needed information (Lyu & Hwang, 2015).

Today, there exist a huge number and great variety of smartphone applications that can allow users to easily alter things through adding new functions that can assist users in the accomplishment of various activities such as banking, navigating, playing games, taking notes, or sightseeing. In this way, Smartphone users can easily turn their phones into cameras, musical instruments, sketchbook, dictionaries, or even bus schedules (B¨ohmer & Kr¨uger, 2013). Smartphone is the only tool that can be connected to the Internet without the need to travel under hard circumstances.

In 2010, 20 percent of the world's population used Smartphone and this percentage increased to reach 37% by 2014. According to the Statistics Portal (2017), the number of Smartphones users reached 16.54 million in 2015 and this number is expected to reach 23.31 million in 2022. Furthermore, in Malaysia the report produced by Enterprise News in 2011 has revealed that the range of people who use Smartphones

falls between 25 to 35 years of age. The report has also shown that most of the Smartphones users are highly educated and fully employed with a monthly income of RM5000 and above. Furthermore, the maximum rate of individuals who access the Internet via Smartphones falls between the ages of 25 to 34, constituting 41 percent of the entire users. It has bee also reported that Smartphones users who are 18 to 24 years old constitute 38 percent. This reflect that most of the users belong to Generation Y.

Despite the emergence of Smartphones and their wide spread in the market, standard mobile phones have stood the test of time and are still highly popular all over the world. The facts are highly common in poor and developing countries. In fact, the effects of the increasing use of Smartphone have affected the Gross Domestic Products (hereafter referred to as GDP) across countries. For example, while growth rate in GDP was 1.8% Egypt, in the United Kingdom it reached 24.9%. In Malaysia, reports have recently indicated that the number of smartphone users is expected to reach elven million in 2017, with an annual growth rate of 10% from the year 2013 to 2017. The rise of the Malaysian Smartphone market is largely driven by consumers from the age group of 30 and below, accounting for 64% of Smartphone users in the country. Sales of smartphones increased by reaching record sales of 8.5 million units. The total purchase of smartphones by Malaysia users of Smartphones was RM6.8 billion in 2016. The smartphone market has maintained growth for the 10th consecutive year since the smartphones were introduced in the country in 2004 (Utusan Malaysia (21/1/2016).

The year 2016 has witnessed a remarkable achievement for Samsung, a Korean smartphones company, when this company scored the top Smartphone brand as a result

of shipping 877,000 Samsung Smartphones to Malaysia. Although there was a disaster for Galaxy Note7, 77% smartphones were sold, compared to the same duration in 2015. Although the battery issue caused no noticeable impact on the reputation of the company, most shipments came from the affordable type which is Galaxy J series. About 351,000 units of Apple Smartphones at 2 were shipped to Malaysia in the second quarter. This number of shipped units were accompanied by the release of iPhone 7 and iPhone 7 Plus, which were the new models of this brand. Although there was an increase in the price of these Smartphones, more units were sold compared to the fourth quarter in 2015. Regarding this shipment, IDC has reported that most units of these Smartphones were purchased through Teclo contracts.

OPPO at 3 has witnessed the biggest growth in the fourth quarter of 2016 by more than the double of its shipment in 2015. Specifically, While OPPO shipped 293,000 in 2016, the shipped units of Huawei at 4 reached only 221,000 units. While the remarkable feature of OPPO is its selfie-centric smartphones, P9 series of Huawei has benefited this company by assisting it to confirm its foothold in the flagship segment. ASUS could maintain its rank as one of the top 5 list because it succeeded to ship 205000 units. Compared to 2015, both the new ZenFone 3 series and ZenFone 2 did not show good achievement. This low performance in the market was attributed to the high price of ZenFone 3 and to the intention of the Taiwanese brand to be the premium brand.

Table 2.1 reveals that the year 2016 witnessed the shipment of over 3 million Samsung smartphones to Malaysia. This particular shipment reflects a steady growth that reached 17.2% in 2016. Observations of the market of Smartphones have revealed that

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a remarkable growth of OPPO and Huawei, the two Chinese Smartphones brands. This achievement overtook ASUS and Apple. Surprisingly, ASUS was the worst in 2016, although it succeeded to sell compelling phones at lower price. Despite the noticeable improvement of of ASUS ZenFone 3 over its predecessors, this model is mostly too ambitious in the Malaysian local market.

Table 2.1
Top 5 Smartphone Vendors, Malaysia Shipments, Market Share, and Year Over-Year Growth, 2016 (units in thousands)

Number	Vender	2016 Shipment Volume	2016 Market Share	2015 Shipment Volume	2015 Market Share	Year-Over-Year Change
1	Samsung	3,017	34.3%	2,574	27.6%	17.2%
2	Oppo	916	10.4%	549	5.9%	66.8%
3	Huawei	852	9.7%	799	8.6%	6.6%
4	Asus	842	9.6%	1,484	15.9%	-43.3%
5	Apple	715	8.1%	865	9.3%	-17.3%
6	Other	2,442	27.9%	3,065	32.7%	-20.3%
7	Total	8,784	100.0%	9,336	100%	-5.9%

Source: IDC Quarterly Mobile Phone Tracker, Feb 16, 2017

2.3 Features of most popular Smartphone brands in Malaysia

Based on the reports brought forward by the advertising marketing in (2017), it has mentioned the Highest 5 Smartphone Vendors, Malaysia Shipments, Market Share in 2016. Samsung has stood the first in terms of popularity and overall performance when it comes as a mobile phone brands in Malaysia as the high-end range. Therefore, Samsung makes several more models of smartphones at many price points, and offers more apps, large screen size, more flexibility and freedom. Samsung Smartphones have suitable design as reported in an International Data Corporation (IDC) Quarterly Mobile Phone Tracker report. In addition, Samsung has a larger memory size, battery capacity, camera quality, and some more wonderful features. Oppo was able to

maintain its growth in 2016 because it could build its customer base where Oppo mainly obtained bigger screen, lower price, and a much faster-charging battery. Huawei's series also remained their popularity, dual camera function which was described as one of the key drivers for its progress because it has been one of the rare Android devices with this feature in Malaysia local markets. Yet, it has been almost a year since it was released.

In addition to the presentation of several national competitors, Huawei's high-end smartphone has dual SIM card which enable users to switch between two SIM numbers. Meanwhile, in terms of marketing initiatives, Asus was found to be side-lined by louder brands such as Oppo and Vivo. IDC stated that Asus Zenfone 3 lacked flair compared with the Zenfone 2, which was released back in 2015. Last but not least, Apple caters to the high end of the market and has reached the second place which is the usual rank in the time of the seasonal release of two other models (new iPhone 7 and 7 Plus).

2.4   Purchase Intention

It is well-known in marketing that concept purchase intention refers to the willingness of a customer to buy a specific product or service. While Swan (1981) viewed intention as a person's anticipated or planned future behaviour, Oliver (1997, p. 28) defined this concept as "a stated likelihood to engage in a behavior". Previous studies have reported that intention has various implications and that it has a positive influence on the actions of persons (refer to Ajzen & Driver, 1992; Pierre et al., 2005; Schlosser et al., 2006). The intention to show a particular behaviour has been considered to be an antecedent of the actual behaviour. The Theory of Planned Behaviour (referred to as TPB) which

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was proposed by Ajzen (1991) has made this idea clear. The TPB suggests that stronger person' intention to conduct behaviour will lead to a greater level of actual behaviour. Meanwhile, the behavioural intention is suggested to be a key factor which correlates strongly with actual behaviour (Baloglu, 2000). Aizen and Fishbein (1975) in their theory of reasoned action (TRA) proposed single best predictor of a individual's attitude is a measure of the target to do that behaviour.

Purchase intention is the one of the most common concepts that has been studied by several marketing researches. Furthermore, this concept has various applications in wide range of goods and services. Shah et al. (2012) showed that behaviour intention of the customer to buy a specific brand can be formed through the attitude about the brand and through recognizing the steps of some extra brands. Crosno, Freling and Skinner (2009) reported that purchase intention is the effectiveness of buying a particular brand in a product category during the purchase process. Furthermore, some researchers have reported that studying some characteristics of a brand should be considered as a significant factor that has a great role in encouraging customers to remain loyal and in the success of firms and organizations (Vahdati & Nejad, 2016). Bertoncelj and Moisescu (2010) also reported that the best way to encourage customers to purchase is to create a powerful brand.

The purchase intention reflects the likelihood of consumers' planning or motives to buy a specific product or service in the future (Crosno, Freling, & Skinner, 2009) and a strong proxy of actual purchase (refer to Hong, & Cho, 2011). More recently, this term has been defined as consumers' willingness to buy specific products in their future time (Richard, Loury, & David, 2013). Among other stages of purchase,

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purchase intention is an essential stage as it is associated with consumers' behaviour that can lead to the actions of buying a particular brand. Furthermore, it may represent the intention of consumers that incites them to buy products of a certain brand. Shah et al. (2012) pointed out that two elements help in forming purchase intention: the attitude toward the brand and the recognition of a sequence of some more brands For example, when a consumer has a higher purchase intention, he/she is more likely to buy. Hence, purchase behaviour intention is viewed to be the most essential indicator of the behaviour of actual purchase (Long-Yi, & Jui-chi, 2012).

Previous related investigations have so far identified several factors that might affect purchase intention. Jing et al. (2015) have recently reported that branding equity, for example, is shown to be an important variable in the buying intention of consumers as it boost them to purchase further products. Consumers consider the brand of a product before making a decision concerning purchase (Schiffman & Kanuk, 2010). Additionally, previous research has shown that various factors can affect purchase intention towards smartphone brand.

 Furthermore, findings of previous investigations conducted by various researchers such as Lin and Lin (2007) and Ibrahim, Kassim, and Mohamood (2013) have reported positive significant connections between brand awareness, price, product characteristics, and the influence of peers on consumers' purchase intention. The available research reports so far have shown that the major generally known antecedents of purchase intention shown by buyers are brand image, brand loyalty, and the quality of the commodity or brand (Chu & Lu, 2007).

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Brand equity has been shown to be an efficient way to recognize past actions and predict future course of actions shown by marketers, who are energetic in constructing strategies for a particular brand. Four major elements constitute the consumer-based brand equity. They are brand association, brand loyalty, brand awareness, and perceived quality. In marketing, brand equity is one of the most fundamental components of brand loyalty. It has been defined by as Aaker (1999) as "a measure of the attachment that a customer has to a brand" (p. 39).

Taking into account the importance of purchase intention, Assael (2004) gave attention to purchase behaviour and defined it as the tendency to act on an object or to buy a product. Marketers usually focus on analysing patterns of consumers' purchase intention in order to properly determine the target market and to consider it as a reference to their decision-making process. Considering the focus of the current study which is Smartphones, previous studies have confirmed that several factors can most properly influence consumers' intention to buy branded smartphones.

Recent studies carried out by Ibrahim, Kassim, and Mohamood (2013) and Lin and Lin (2007) concluded that positive connections existed s among three variables: consumers' purchase intention, brand image price, product quality, and. For instance, in the existence of several smartphone brands, Apple brand possesses a good brand image in the thinking of its consumers. Consumers often associate Apple with several good features such as good quality, prestige, trustworthy, elegance, and stylishness. Salciuviene, Ghauri and De Mattos (2009) have argued that users of Apple brand always make connections between the brand and the top symbolic association. In practice, consumers who have Smartphones which were produced by Apple consider

themselves holders of higher value compared to the consumers of other brands of smartphones.

2.5   Brand Equity

The terminology of brand equity which was proposed and developed by Aaker (1991) and Keller (1993) has been defined by several scholars from various perspectives. Defining brand equity from a logical approach, Aaker (1991) described this concept as a group of four types of brand assets (brand loyalty, brand associations, brand awareness, and perceived quality). Furthermore, Aaker explained that brand equity includes responsibilities connected to two factors: the name and symbol of a brand. These two factors add to or subtract from the value brought by a product or service to a firm and/or to the firm's customers.

Furthermore, For Keller (1993) the term consumer-based brand equity is the completing impact of consumers' knowledge of a brand on consumers' reactions to the marketing activities that are done to promote a certain brand. In other words, Keller sees brand equity from the perspective of consumers' awareness of brand, brand's strength, favourability and unparalleled brand associations that consumers can keep for long time in their minds. Irrespective of how this concept is used and viewed, the brand value, and its inferred equity, eventually must be derived in the marketplace from the actions and interactions of consumers (Hoeffler & Keller, 2003). There are two important aspects of brand equity and its precursors, namely, functional and experiential (Keller, 2002). The functional aspect consists of the components of one's perception of both the quality of the brand and perceived quality (Keller, 2003).

Based on the studies by Jing et al., (2015) were discuss about branding where brand equity remains an essential aspect in the buyers' purchase intention rise and encourages buyers to purchase extra. One of the phases of purchase intention is to studies the actions of the buyers to buying a certain brand. Consumer's intention toward purchase a brand is designed not just through the attitude to the brand, it also in seeing a sequence of another brands (Shah et al., 2012).

Based on Cai et al., (2014), brand equity is one of the tool that influential to develop marketing efficiency. Brand equity talk about rational valuation of brand customers besides be able to determining instrument for purchasers' attitude to the brand (Lin, 2015). Aaker (1991) stated that consumers tend to purchase a particular product when a brand has a high brand equity with a higher cost or frequency. This fact reveals that brand equity and purchase behaviour intention have significant positive connections among them. Thus, firms should promote a brand and its equity through various marketing strategies (Vahdati & Nejad, 2016). The brand associations, perceived quality, brand awareness, and brand loyalty are categorized as dimensions of brand equity. Previous research has revealed that all these four dimensions have positive effects on purchase intentions of customers (Vahdati & Nejad, 2016).

It can be deduced from the discussion above that there has been a consensus among scholars on the four antecedents of brand equity based consumer. Empirically, this is supported by the findings reported by Pappu et al. (2006) who focused on the notion of these distinct antecedents. These antecedents and their linkages to brand equity have been widely studied in the last two decades (Aaker, 1991; Keller, 1993). These

antecedents and their relation to brand equity will be discussed in the following sub-sections and paragraphs.

According to Lin (2015), the brand equity is used to refer to the rational evaluation obtained from customers for the brand and can be measured based on the attitude of the consumer towards a particular brand. Most apps that belong to brands are launched to preserve or establish a stable linkage between the brand and customers (Peng & Wen, 2014). Thus, deciding the important element in the brand equity based on consumers' evaluation is an important step that is done to identify brand value and to create a purchase decision (Yoo & Donthu, 2001)

It has been pointed out that individuals create versified views based on their cultural background and their cultural context. Furthermore, they construct meanings of particular brands for the purpose of disseminating the brand widely through social structure. Thus, consumers' purchasing behaviour is most probably influenced by various factors such as social perceptions and values consumers generate about particular products and/or services that are associated with a brand (Peng & Wen, 2014).

Two reasons have been identified to show why brand equity has received a great attention from researchers. First, for the purpose of assessing a brand, especially to specify the value of the brand for economic goals or business arrangements such as merging or acquisitions. Second, researchers wanted to have the ability to promote and boost marketing outcome that are done through having deep understanding of

consumers' knowledge about a brand and to develop proper strategies that can be useful for the brand.

Regarding these issues, Peng and Wen (2014) reported significant positive connections between both brand equity and consumers' purchase intention Keller and Lehmann (2006) mentioned that brand equity can be described, understood and measured in terms of three distinct perspectives which are company-based, financial, and consumer-based. The value of a brand is ultimately deduced based on consumers' activities in the market (Buil et al., 2013). Thus, it can be concluded that understanding consumers' response to a brand is important.

Both Van Osselaer and Alba (2000) and Yoo et al.(2000). Brand equity has achieved the attention of consumers and researcher in the previous years. The importance of brand equity has yielded the publication of several studies and research articles that have explored the importance of brand equity in marketing (Aaker, 1991; Keller, 1993). Brand equity can be understood to refer to the added value that is linked to a specific product by the consumer's thoughts, words and actions (Leone et al., 2006). Researchers have also maintained that brands and their impacts on purchase decisions have not been addressed adequately (e.g. Edelman, 2010; Barwise & Meehan, 2010).

2.6   Brand Equity Dimensions

The four main elements of brand equity, which are brand awareness, perceived quality, brand associations and brand loyalty have been studied by several researchers (Aaker 1991, 1996; Yoo et al., 2000; Pappu et al., 2005; Built et al., 2013). Figure 2.1 below displays the four main elements of brand equity as proposed and presented by Aaker

(1991). The following four sub-sections describe the conceptualization of these four

elements.
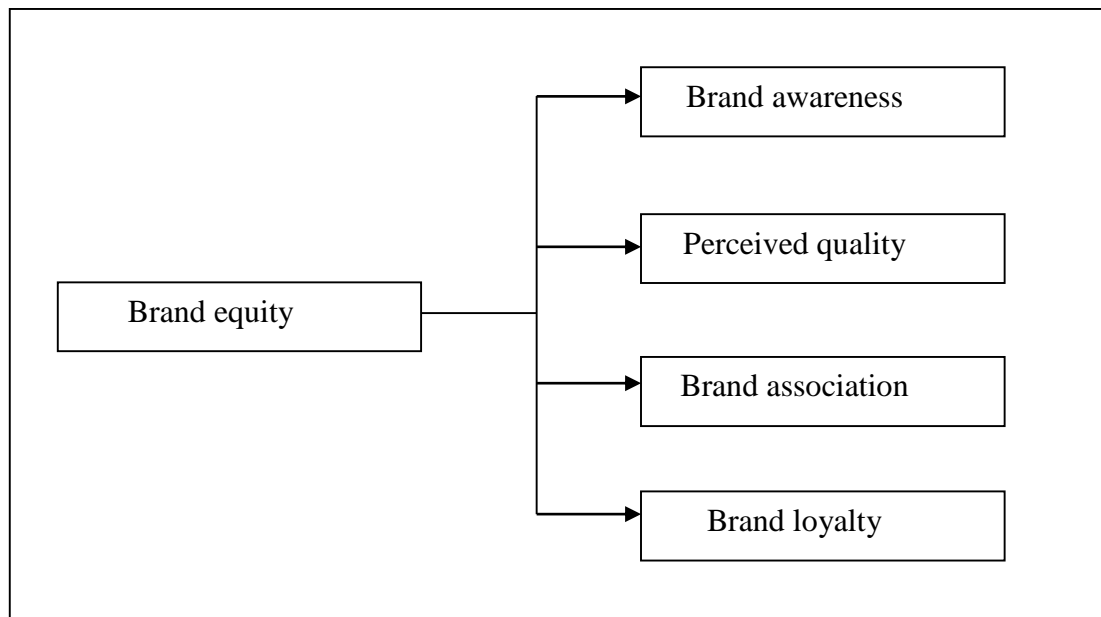
Figure 2.1
Four components of brand equity
Source: Aaker, 1991

2.7 Brand Awareness

Brand awareness is used to describe the situation when a specific product stimulates

the possibility of a consumer to recognize that a brand belongs to category of the

product (Aaker & Pappu et al., 2006). It is the strength the product in consumers; minds

(Pappuet al., 2005). Aaker (1991) outlined some levels of awareness of a particular

brand. These levels start with the recognition of the brand until it reach the dominance

of the brand which is the situation where a particular brand becomes the sole brand

that can be recalled by consumers. On the other hand, Keller (1993) described the

brand awareness as an element that involves both the recall and recognition of the

brand. Hakala et al. (2012) argued that there is a link between brand awareness and the

top of mind awareness (TOMA). Yet, differences should be made between Top-of-

mind awareness and the purchase intention, or of actual brand choice, which is referred

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to as the behavioural tendency (Hakala et al., 2012). The power of the brand to be retrieved in a consumer's memory is reflected by the customers' abilities to remember the brand under several situations and is characterized by brand awareness of the brand (Leone et al., 2006).

Additionally, Aaker (1996) posits that brand awareness is an important component but somewhat undervalued dimension of brand equity. Aaker also argued that awareness can influence consumers' perception and attitude. Brand awareness also reflects the pertinence of the brand in the mind of the consumer. Yasin et al. (2007) argued that the measurement of brand equity can be carried out through the awareness of the consumer about the brand. The part that brand awareness plays for the greater achievement of brand equity can be measured through identifying the levels of awareness.

Thus, when the level of awareness increases the dominance of the brand can increase. In this way, the tendency of the brand can be enhanced to be to be a major concern in various purchase situations. However, a recent study conducted by Huang and Sarigollu (2012) found that consumers' brand usage experience can be useful for brand awareness than the reverse. According to Huang and Sarigollu (2012), experience precedes awareness in some cases. When customers do not possess awareness of the brand, it reflects that the brand has gained little or no value or equity (Shimp, 2010). Brand equity can be known through impulsive brand awareness may mean the intensity of saliency or the level to which the customer's mind which occurs when it is evoked by the product, (Kapferer, 2005).

In a recent study, Zavattaro (2015) reported that customers' way of telling others about a brand itself represent customers' awareness of a brand. Brand awareness influences the purchase intention towards the promotion of that brand. More specifically, brand awareness takes place when the user possesses in his mind a profound and specific appearance of the goods or service (Zhuowei & Liping, 2015).

In examining the influence of mobile advertisement factors which do not exist in non-mobile advertisements, it was concluded that some of these factors are associated with context awareness during smartphone use. These factors are personalization (Al Khasawneh & Shuhaiber, 2013; Kim & Han, 2014; Lee, 2010; Xu, 2006), location (Lee, 2010; Xu et al., 2009), and timing (Drossos et al., 2007; Tsang et al., 2004). All of these factors have attracted researchers' attention. Much of the research that has focused on smartphone advertisements has addressed context awareness, the process of knowing smartphone users' information in advance, and the provision of expected services. Furthermore, previous studies in this area have indicated that the context awareness value of smartphones leads consumers to have a positive attitude toward mobile advertisements.

Consequently, purchase decision is highly affected by brand awareness can affect through brand association. Furthermore, in case a product achieves a positive brand image, it can enhance the brand when it comes to marketing activities (Keller, 1993). Brand awareness has also an essential role as it influence consumers' purchase intention which, in turn, encourage consumers to buy a familiar and well-known product (Keller, 1993; Macdonald & Sharp, 2000). Brand awareness can also help consumers to recognize a brand from a product category and assist them to make

proper decisions when they purchase (Percy & Rossiter, 1992). Brand awareness affects consumers' selections and, thus, it can be an important consideration that must be based on a product category (Hoyer & Brown, 1990). It also can be a critical factor that has a good place in the nature of consumers' purchase intention.

Regarding this, it has been mentioned that certain brands has the ability to accumulate strength that can influence consumers' purchase decision. Thus, Aaker and Keller (1990) mentioned that when a brand has high awareness and good image, brand loyalty can be easily promoted to consumers, and the higher the brand awareness is, the higher brand trust and consumers' purchase intention are. Nevertheless, Zavattaro (2015), the way customers talk about brands show brand awareness. Also Lo, Z. W. (2002), adds that consumer behavior affects brand awareness of marketing on a product.

2.8 Perceived Quality

When considering the quality of a product, it is necessary to make an important distinction between two important concepts: perceived quality and objective quality (Tsiotsou, 2005). Specifically, Keller (2003) showed that perceived quality describes the view of inclusive quality or excellence of a specific commodity comparatively

Hoeffler and Keller (2003) showed that preferential evaluations of features, greater perceived quality, and naturally high overall preference are attracted by strong brands. Perceived quality also represents the antecedent phase leading to brand loyalty (Keller & Lehmann, 2003). Although previous research has reported that perceived quality can have negative impacts on brand loyalty, positive effects of perceived quality on brand equity have been revealed (e.g. Bravo, Fraj & Martinez 2007; Buil et al., 2013).

Consequently, direct and indirect imapcts of perceived quality on brand equity have been frequently reported in the findings of previous research (Jahanzeb, Fatima, & Mohsin, 2013).

From customers' perspective, perceived quality affects the classification of the product and other aspects of the brand (Aaker, 2000). Purchase intention of private brands is positively influenced by price consciousness (Batra & Sinha, 2000). Since value conscious consumers have higher purchase intention, perception towards quality is one of the important factors that affect purchase intention which is determined by both consumer's intention and brand (Lin et al., 2009).

Another conceptualization of perceived quality is related to customers' decision of the quality of a particular product (Cheng et al., 2007). Thus, perceived quality determines purchase decisions, predicts purchase intention, and helps to achieve private brand success (Hansen & Singh, 2008).

Perceived value for money is defined as "the recognition of a product that affords savings from the last purchase" (Richardson, 1997). Further, it denotes evaluation of product quality relative to purchase price (Dick et al., 1995). Consumers with adequate shopping experience know that private labels are reliable and have good value for money (Nenycz-Thiel & Romaniuk, 2012).

Perceptual characteristics of consumers are perceived quality, smart shopper self-perception, and perceived risk (Jin & Suh, 2005). Perceptual factors across product

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categories include perceived risk, perceived value for money, and perceived quality variation (Batra & Sinha, 2000).

Furthermore, several researchers in previous empirical studies such as Baek et al. (2010), Hao et al. (2007), Tsiotsou(2006), Zeithaml et al. (1996) have concluded that positive effects of perceived quality on consumers' purchase intentions are widely reported. Additionally, Chang (2006) and Wu (2006) emphasized the positive connections between perceived quality and purchase intention.

It contains the decision related benefit, trustworthiness by purchasers' also the brand change against to further rivaling brands. Perceived quality has not affects not only features of the brand, but has effect on the arrangement of the goods since the buyer's view (Aaker,Joachimsthaler, 2000).

2.9   Brand Association

It has pointed out by Aaker (1991) that brand association which may refer to anything is saved memory regarding a particular brand and brand image can be understood as "a set of [brand] associations, usually in some meaningful way" (p. 109). Furthermore, Keller (1993) stated that brand association can be categorized into three common groups: benefits, attributes, and attitudes. Complex and linked to each other, brand associations are comprised of numerous concepts, occurrences, happenings and established facts that are all based on solid system of brand knowledge. A stronger association occurs when there are several experiences and exposures instead of few instances (Aaker 1991). Brand association and brand equity are positively interrelated as they can be an index of quality and promise and they can assist a buyer to consider

the brand when he or she purchases products of his favourable brand (Yoo et al., 2000). Attributes are those characteristics that describe the product or service in terms of how the consumer buys and consumes the product as well as those things that are involved in the process.

The values that consumers generally place on the product or service are the personal benefits that are attributed to them. It is what consumers believe regarding what a product or service can do. Depending on the primary motivations to which they relate, benefits can be sub-divided into three categories. One of these benefits is the functional benefits which are connected to the basic advantages of product or service consumption and normally they can be in consistent with the product-based attributes.

The associative network memory has been one of the widely-used models in the literature in conceptualizing brand association (Hoeffler & Keller, 2003). Based on this model, a nod in the memory of an individual can represent a brand and can be associated with other nodes that are several. After that, all kinds of brand nodes may be linked to the brand to build up its brand associations in memory. User or usage imagery and brand personalities are two elements that contribute to the establishment of Non-product associations. On the other hand, variations of brand associations are noticed in customers' level of perceptions. This variations can be placed on a continuum that starts with concrete and specific degrees to a more abstract and general.

Additionally, variations of brand associations can be related to the degree of strength of the connection between these association and the brand and its other associations. Furthermore, these association can be associated with how distinct or common these

associations and how these associations are favourably disposed to consumers. Favourable and strong brand association is in itself a good source of brand equity because of differential responses to marketing activities (Keller, 1993). Furthermore, brand association is a general mind thinking and key factors that can greatly influence intention to purchase the smartphone brand. Aaker and Joachimsthaler (2000) argued that powerful connections can be a fundamental element to extend the brand.

Concerning this, a study by Mulugeta, (2012) found that consumers from females have beliefs about a specific brand with its unique features which may include quality packaging, design, texture colour, and some more elements. The significance of a brand is regularly regarding on associations that it is related to brand associations, for examples is the label of Ronald McDonald can make a progressive behaviour or sense towards the brand that has been recognised .

2.10   Brand Loyalty

The loyalty of the brand simply means the link or deep belief in a brand (Aaker, 1991). Brand loyalty takes place when positive perception towards a brand are created and established by consumers (Buil et al., 2013). Based on what has been presented by Aaker (1991), brand loyalty is used to evaluate the dependence or faithfulness of consumers on brand. It also reveals customers' commitment to maintain their relationship with a particular brand.

For Oliver (1999), brand loyalty is the extreme commitment shown by consumers to rebuy or re-patronize a preferred product or service most likely in the future. This results in frequently repeated purchase of the same brand or, despite the existence of

occasional influences and marketing efforts that may potentially attract consumer to switch their behaviours, leading to buying another brand. Oliver (1999) argued that loyalty is the ultimate consequence of perceived product superiority, individual determination, and social attachment. However, offering the best choice alternative product by firms drives the consumer to brand loyalty. Yoo et al. (2000) argued that brand loyalty is one of the main driving force of brand equity and purchase intention. Thus, this results in an increase in the tendency of repeat purchase that can result in the development of brand loyalty.

Lin (2015) identified two dimensions of brand loyalty, which are emotional dimension and practical dimension. It has been pointed out that emotional loyalty shows the preference of the consumers towards a specific brand where the actual buying behaviour has not happen yet. On the other hands, practical loyalty refers to the actual buying behaviour of a particular brand. Pedeliento et al. (2015) showed in their study that brand loyalty generates a feeling of association between brand manufacturers and the customer. Lua et al. (2015) reported that brand loyalty is dependent on buyers' acknowledgment of the brand, brand image as well as brand awareness which themselves are significant factors in brand loyalty. Zavattaro et al. (2015) maintained that marketers' goals are the attraction of and retaining the current customers to be loyal to a particular brand and to secure the success of the product.

Loyalty of consumer is measured based on the number of consecutive visits made by a consumer to a store. Strong association between loyalty and purchase of goods promotes attraction and increase in sales (Veloutsou et al., 2004). Loyalty may be

either store loyalty or brand loyalty. Strong store brand loyalty leads to strong brand equity (De Wulf et al., 2005).

It has been proposed by Aaker (1991) that brand loyalty indicates that people continue to purchase the brand if the brand shows excellent features, comfortable prices than its competitors. According to Severi and Ling (2013), loyalty is described as a positive thinking toward a specific brand that persuades consumers to hold continuous buying of the brand. In a comparative study between consumers in Korea and America, Jung and Sung (2008) showed that brand loyalty is the most significant dimension of brand equity which has a positive link with purchase intention. Brand loyalty is shown by consumers toward a particular brand and it has a positive purchase intention over other another brands. O'Guinn et al. (2012) and Yeh and Yang (2008) proved that a strong relationship has been reported to exist between brand loyalty and consumers' purchase intention.

Brand loyalty refers to consumer's strong commitment towards a particular brand, so that individuals are motivated to obtain that brand repeatedly and encourage them to constantly look for marketing activities that are related to the brand (Rondán Cataluña et al., 2006). Brand loyalty also ensures positive attitude, re-purchase, and long-term relationship with consumers (Goldsmith et al., 2010). It has been also revealed that positive relation between action loyalty and affective loyalty on one hand and purchase intention on the other. Brand loyalty increases shopping frequency, discourages brand switching, and makes consumers choose familiar products frequently. Brand loyal shoppers are primary users of promotions, and this decreases the attitude towards private label brands (Manzur et al., 2011). Judith and Richard (2002) further reported

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the strong connection between both perceived quality and brand loyalty and they have positive influence on consumers' purchase intention. Chi, Yeh and Chiou (2009) provided evidence showing that both brand loyalty and customers' perceived quality have positive influence on brand trust.

2.11 Brand Trust

Trust is the belief that an individual, group, or organization can be relied on to fulfil their promise; it plays a key role in business and developing customer loyalty (Newell, Wu, Leingpibul & Jiang, 2016). The sustainability of the brand is difficult to grow if consumers do not have trust in the brand (Mudzakkir & Nurfarida, 2015). For consumers, trust in the brand gives the confidence to take the risk of errors in the purchase decision. For marketers, maintaining good relationships with customers can be measured in terms of the degree to which consumer trust in company's product brand.

In this study, it is proposed that students, as consumers of Smartphones, are supposed to buy electronic gadgets they trust. Additionally, research has emphasized the critical role of trust in identifying the purchase decisions of consumers (e.g. Wu, 2013). This is because when a consumer perceive the trustfulness of a particular product or item, this perception stays in the consumer's mind and can consequently results in the existence of the confidence of its effective performance. Then, this motivates and boost consumers to purchase the product or the item.

Researchers have pointed out that brand trust is an important variable that mediates the customer behaviours before and after the purchase of the product. Some earlier

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researchers viewed brand trust as the eagerness of the average consumer to depend on the power of the brand to carry out its described functions (Chaudhuri & Holbrook, 2001, p. 82). Furthermore, it has been shown that brand trust can yield long-term loyalty and it can likely enhance the relationship between the two parties (Liu et al., 2011).

Consumers' positive beliefs regarding the performance of a specific brand help them to create and develop brand trust which refers to a set of accumulated beliefs concerning the credibility, integrity, and benevolence attributed that are related to a brand (Calvo Porral & Levy-Mangin, 2016). Furthermore, trust extends to include the possession of positive influence on consumers' decisions on future purchases (Yee et al., 2005). Instead, Cho and Lee (2006) and Rousseau et al. (1998) explained that the terms trust and perceived risk are used to reflect psychological conditions of individuals or consumers. Furthermore, and these two concepts have been recognized as critical mediators that have their impact on intention of customers when they perform online purchase (e.g. Chau et al., 2007; Chen & Barnes, 2007; Lim, 2003; Lin, 2007; Mitchell, 1999; Wang & Emurian, 2005). Another example of these studies is Chang et al. (2006).

2.12 Underline Theory: Aaker's Brand Equity Model

Acker is the first researcher who has developed the concept of brand equity. Aaker (1991) viewed brand equity as a collection of assets and responsibilities that are connected to a brand, its name and symbol which add to or subtract from the value provided by a service or product to a firm and/or to the customers of the firm. Aaker (1992) also constructed and proposed the most comprehensive brand equity model

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(Figure 2.2). As suggested by Acker model, brand equity consists of four common dimensions which are brand awareness, brand loyalty, perceived quality, and brand association.
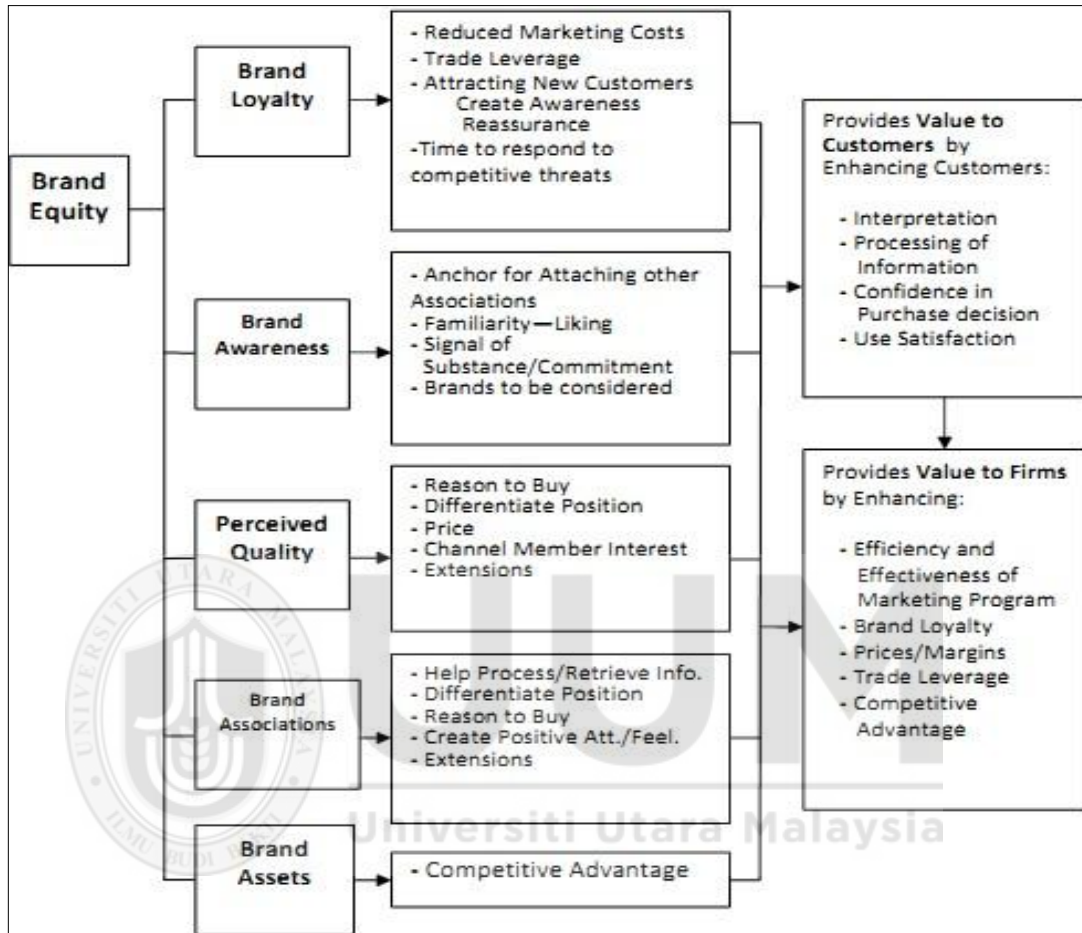
Figure 2.2
Aaker's Brand Equity Model
Source: Aaker, (1992, 1996)

Aaker (1996) explained that the model is comprised of five different assets that can develop and contribute to the creation of value. These assets are brand loyalty, brand awareness, perceived quality, brand associations and brand asset. Some other assets include patents, trademarks, and channel relationship, especially, from customer perspective. Several researchers have pointed out that his model has left its influence in various communities such business and academic ones. Other effective scales were also reported.

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2.13   Research Framework

Based on the reviewed literature and propositions by numerous studies, this research developed a framework to explore trust as a mediating variable in the relationship between brand awareness, perceived quality, brand associations, brand loyalty and purchase intention in Malaysia. The research framework was developed based on Aaker's model (1991) of brand equity-based customers, as shown in Figure 2.1. In while Aaker's, 1992, 1996 it have five brand equity precursors or antecedents include brand awareness, perceived quality, brand associations, and brand loyalty, brand assets which are independent variables. These antecedents have been comprehensively analyzed and proposed by several studies (Yoo et al., 2000; Pappu et al., 2005; Kim and Hyun, 2011; Built al., 2013). Thus, this research asserts that purchase intention is an outcome of brand equity. Furthermore, empirical studies have positively correlated the dimensions of brand equity and brand trust (Buil et al., 2013). Trust is hypothesized as a variable that mediates the effects of elements of brand equity and purchase intention towards smartphone in Malaysia (Figure 3.1).
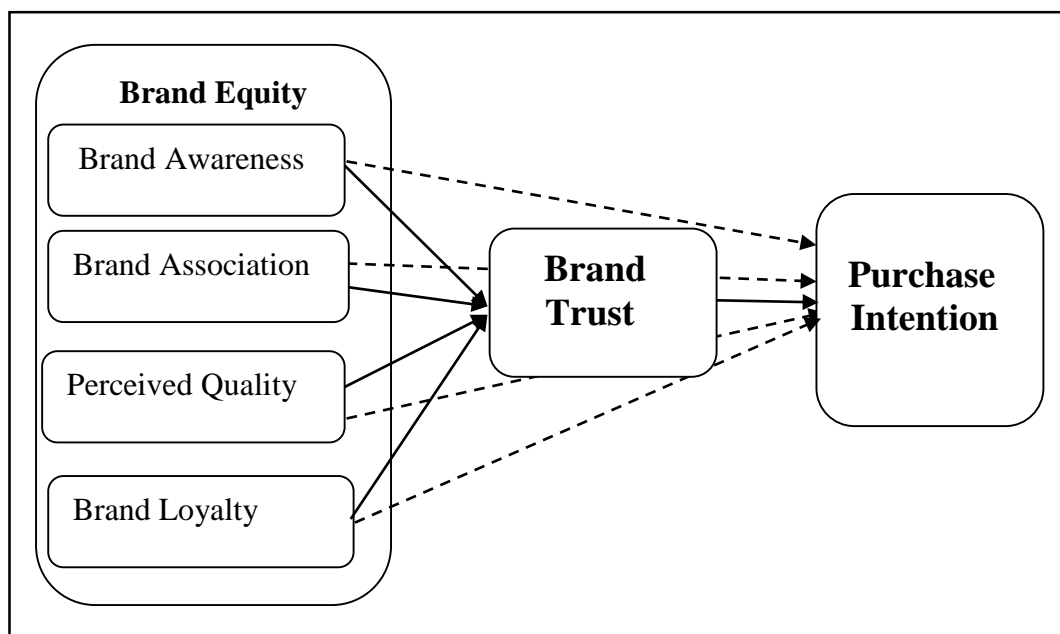
Figure 2.3
Research framework

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2.14   Hypotheses Development

2.14.1 The influence of brand awareness on intention to purchase smartphone

Brand awareness is the central and primary constraint in any brand related search and can be explained as the capacity of a consumer to identify a brand in different circumstances (Yasin et al., 2007)**.** Brand awareness can affect the decision making of a consumer regarding a product (Kapferer, 2008)**.** Brand awareness is a customer's approach to talking about a particular brand (Zeithaml, 1998, pp25). Akhtar & Latif (2016) reported that brand awareness is a vital tool that can influence purchase decisions because product brand image or brand name cognitively determines what customers want to buy. The following hypotheses are formulated:

H1: Brand awareness is positively related to purchase intention towards smartphone

2.14.2 The influence of brand perceived quality on intention to purchase smartphones

A strong brand with perceived quality motivates consumers to make a decision about purchasing a product. Perceived quality is explained as a biased assessment from a consumer's perspective because it is subject to their opinions and demands (Rehman, 2016). Perceived quality can be defined as the overall quality or dominance of a brand based on the insight of consumers (Aaker, 1991; Keller, 1998; Yasin et al., 2007). The subjective assessment of a brand by customers rather than its actual quality is what determines perceived quality (Zeithaml, 1988). Perceived quality has the ability to create value in several ways, and persuade customers to purchase a specific brand.

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Many researchers have proven perceived quality has a direct significant impact on the purchase decisions of customer (Garretson and Clow, 1999), whereas others reported a conflicting notion of an indirect impact through satisfaction (Cronin and Taylor, 1992; Sweeny et al., 1999). Monore (1990) asserted that perceived quality positively influences the purchase intentions of consumers via perceived value. Similarly, Chang (2006) and Wu (2006) deduced the correlation between perceived quality and purchase intention is positive. Based on the reviewed studies, the following hypothesis was developed.

H2: Perceived quality is positively related to purchase intention towards the smartphone.

2.14.3 The influence of brand association on intention to purchase smartphones

Brand association is described as the assets and liabilities of a brand that are connected to the minds of consumers (Aaker, 1991). This concept aids the decision making of consumers through processing, organizing and recovering information based on such association (Aaker, 1991). Brand association plays a significant part in improving the performance of a company or any business (Siddiqi, Ashraf, Latif, 2016). Brand association has considerably influenced the purchase decisions of consumers (Fadilah, Pang, Shakur, Aisyah, 2016). It was reported that relationship between brand association and brand recollected by consumers is highly significant and positive. This way, consumers repeatedly purchase and use the brand (Pouromid & Iranzadeh, 2012). Brand association affects customers' purchase disposition to a brand as it aids consumers to acquire information, differentiates the brand, initiates motives to purchase and generates positive value/attitudes to the firms and their associated

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consumers (Santoso & Cahyadi, 2014). The following hypotheses are formulated based on brand association:

H3: Brand association is positively related to purchase intention towards smartphone

2.14.4 The influence of brand loyalty on intention to purchase smartphone

Brand loyalty relates to a consumer's strong pledge to subscribe or buy the same brand repeatedly (Sadat, 2009). A consumer is regarded loyal to a brand when he/she finds it difficult to shift from one brand to another, even after the brand becomes unavailable (Jalilvand, Samiei & Mahdavinia, 2011). Brand loyalty is one of the elements of brand equity that influences the purchase intentions of consumers (Aaker, 2009; Shah& Khan, 2016). Brand loyalty gradually compels consumers to become committed to a particular brand.

Brand loyalty generates a relationship of emotional attachment between customers and brand manufacturers (Pedelieto et al., 2015).Brand loyalty rely on the purchaser. Brand loyalty reduces marketing cost and eventually enhances the trust customers have for a particular brand. Yoo and Donthun (2001) considered brand loyalty as the predisposition of customers to be dedicated to a brand, which is proven by the intention of a consumer to select the brand as a prime choice. In line with earlier studies, the underlying hypothesis (H4) was framed:

H4: Brand loyalty is positively related to purchase intention towards the smartphone.

2.14.5 The influence of brand awareness on brand trust

Brand awareness is explained as the level to which customers can either recollect or identify a brand, or if consumers are familiar with a specific brand, which significantly influences the purchase intention of consumers (Wang & Lee, 2016). Shimp (2007) posits that brand awareness is the ability of the brand to appear in the minds of consumers when they consider purchasing a particular product. Earlier research have shown that brand awareness significantly and positively impacts on brand trust (Dib & Alhaddad, 2014; Mudzakkir & Nurfarida, 2015). Based on the reviewed literature, the following hypothesis was developed.

H5: Brand awareness has a positive influence on brand trust towards the smartphone.

2.14.6 The influence of perceived quality and brand trust

Perceived quality positively affects consumers' brand assessment of a product (Metcalf, Hess, Danes, and Signgh, 2012). Increasing perception of quality enhances consumers' perceived value and subsequently reinforces consumers' purchase intention (Zeithaml, 1988). Yee and San (2011) also corroborated the positive impact of perceived quality on purchase intention. The perceived quality of a brand also has a direct positive effect on the trust of foreign brands (Azizi, 2014). Perceived quality is based on a customer's perception of the value or exceptional properties of a merchandise or product in relation to alternatives (Dib & Alhaddad, 2014). Based on the reviewed studies, the following hypothesis was developed.

H6: Perceived quality is positively related to brand trust towards the smartphone.

2.14.7 The influence of brand association and brand Trust

Malik & Danish (2010) posited that brand association directly and positively influences brand trust. Thus, higher brand association ensures higher brand trust towards smartphones. Kim Ngoc (2013) reported that brand association is the most significant predictor of brand trust. According to the review, the following hypothesis was developed;

H7: Brand association is positively related to brand trust towards the smartphone.

2.14.8 The influence of brand loyalty and brand trust

A strong correlation exists between brand loyalty, brand trust, and commitment. However, only consumer's trust in a company and brand satisfaction significantly affect brand loyalty. Lau and Lee (2000) demonstrated that brand trust is a mediating variable that relates predictability, competency, reputation, satisfaction and experience of a brand, as well as strongly correlated with consumers' perceptions. Trust and commitment are mediating variables in the relationship between companies and their customers (Alam and Yasin, 2010). Several factors, such as brand, trust, commitment, and satisfaction affect the loyalty of customers (Lassonde and Hobbs, 2015; Joo, 2015). Sahin et al., (2011) discovered that trust significantly affects loyalty due to the experience garnered from using a particular brand. Therefore, brand trust is a vital element to contemplate when a business brand decides to build brand loyalty.

Contemporary research has demonstrated brand trust is crucial factor in developing enduring relations with customers, which in turn has a positive effect on brand loyalty (Matzleret al, 2008; Sung et al, 2010; Ming et al, 2011). In addition to brand loyalty,

brand trust has an important positive impact on brand equity (Dib, Alhaddad, 2014). Idrees & Nazeer, (2015) reported brand trust contributes positively toward brand loyalty with a beta (β) value of 0.747, which supports the role of brand trust in attaining brand loyalty. Previous studies confirmed that the effect of brand loyalty on brand trust is facilitated by a mediating variable (Baron & Kenny's Procedures for Mediational Hypotheses, 1986). Therefore, brand loyalty will significantly affect brand trust towards smartphone. Based on the literature, the following hypothesis was developed.

H8: Brand loyalty positively related to brand trust towards the smartphone.

2.14.9 The influence of brand trust on intention to purchase

The significant relationship between brand trust and brand loyalty to consumers increases their purchase decision making (Aker and Keller, 1990). Brand trust is the consumer's inclination to depend on a brand due to expectations that the brand will provide positive results (Lau and Lee, 2000; Chaudhuri & Holbrook, 2001), or sentiments of security assumed by consumers in their relations with the brand (Delgado-Ballester and Munuera-Aleman, 2002). Zbojaand Voorhees (2006) and Kuan & Bock (2007) also validated the notion that brand trust positively influences purchase intention. However, this positive influence of brand trust is comparably lower in the case of brand commitment (Aydin & Taskin, 2014). In accordance with the literature, the following hypothesis was developed.

H9: Brand Trust positively is related to purchase intention towards the smartphone.

2.14.10 Mediating effect of brand trust

From the abovementioned review and explanations, several hypotheses regarding the mediating effect of brand trust were formulated. Firstly, brand trust is hypothesized as a mediating variable in the relationship between brand awareness and purchase intention towards smartphone (*H10*). Based on the literature review, brand awareness directly and positively affects brand trust (Dib & Alhaddad, 2014). Therefore, higher brand association results in higher brand trust towards smartphones. Mudzakkir & Nurfarida (2015) posited that brand awareness affects trust, thereby influencing purchasing intention (Aydin & Taskin, 2014).

Secondly, earlier studies also analyzed the influence of brand trust on the relationship among perceived quality also purchase intention towards smartphones (Aydin & Taskin, 2014). Based on related literature, brand trust is hypothesized as a mediating variable in the relationship between perceived quality and purchase intention towards smartphones (*HI1*). Azizi (2014) stated that perceived quality directly and positively affect brand trust.

Furthermore, the brand trust is hypothesized as a mediating variable in the relationship between brand association and purchase intention towards smartphone (*HI2*). This hypothesis is supported by Malik & Danish (2010). Therefore, higher brand association indicates higher brand trust towards smartphones. Kim Ngoc (2013) also indicated that brand association is the most significant predictor of brand trust. It can be inferred from the studies that higher brand association leads to higher brand trust towards smartphones. In addition, brand trust is hypothesized as a mediating variable in the relationship between brand loyalty and purchase intention towards smartphone

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(*HI3*). The positive influence of brand loyalty on brand trust is further validatd by Lassonde and Hobbs (2015) and Joo (2015).

2.15   Chapter Summary

This chapter discussed Overview on Smartphone Industry in Malaysia, purchase Intention, brand Equity and brand trust as well as Underline Theory: Aaker's Brand Equity Model also research framework finally hypotheses development.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1   Introduction

This chapter elucidates the overall methodology of the study which the main purpose was to investigate the mediating effect of brand trust (BT) on the relationship between brand awareness (BAW), perceived quality (PQ), brand association (BAS), brand loyalty (BLO), and purchase intention (PI) of smartphone brands in Malaysia. The chapter will begin with a discussion of the research design, population and sample size, sampling method, Unit of Analysis, research Instruments, at the end collection Procedures as well data Analysis Techniques

3.2   Research Design

Research design entails several decision making processes and elements related to the study (Cavana, Delahaye, and Sekaran, 2001). This research employs a quantitative research technique to evaluate the structural relationships among six variables: brand awareness, perceived quality, brand associations, brand loyalty, brand trust, and purchase intention. This study utilized a survey research method to collect data via a self- administered survey. The survey method is a cross-sectional technique because the data collected covers the duration of the study.

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3.3 Population and Sample Size

According to the Registrar's office and Student Affairs department of Universiti Utara Malaysia (UUM), the total number of UUM students registered for 2017/2018 session is 25,477. This number constitutes the population of the study UUM students selected to investigate the influence of brand equity over the intention of students when purchasing smartphones. This research used the Table developed by Krejcie and Morgan (1970) which was determined to be 377 respondents out of the 440 questionnaires distributed.

Table 3.1
Stratified Random Table

	Stratified Random	Krejcie(1970)
Local	22,807	337
International	2,670	40
Total	**25,477**	**377**

3.4 Sampling Method

Researcher used probability sampling technique because the element in the population has some known chance or probability of being selected as sample subjects. Probability sampling is a statistical basis and most precise way for identifying whom to comprise as a part of sample. Under the probability sampling researcher used stratified random sampling. For the reason, data was collected from the each level of students that's include undergraduate level and post-graduate level. Based on the level, we divided our population in two strata where we have 19, 238 (75.51%)

undergraduate students and 6,237 (24.48%) post-graduate students. Total number of 440 questionnaire were distributed where 332 (75.51%) to the undergraduate level and 108 (24.48%) to the post-graduate level according to the proportion of our strata (undergraduate and post-graduate level). From each strata, the students were selected randomly. For the reason, 15 students from each undergraduate and postgraduate classes were selected randomly. 23 undergraduate classes and 8 post-graduate were targeted for data collected. Before going to data collection from each class, a formal request letter was submitted to class teacher. After getting permission, the list of all the students were generated according to their matric number. From the list, 15 students were selected randomly for data collection. Later, the questionnaire were distributed to the selected candidate.

3.5   Unit of Analysis

Contextually, the individuals are the unit of analysis. The UUM students are survey subjects that fill in the questionnaires, according to previous studies (e.g. Pappu *et al.,* 2005; Christodoulides, Cadogan, &Veloutsou, 2015).

3.6   Research Instruments

The study used the five-point Likert interval scale, where 1 is assigned to 'Strongly Disagree', and 5 to 'Strongly Agree', which is consistent with extensively utilized scales (Zickmund et al., 2012 p. 316; Builet al., 2013). Brand awareness was measured using four items adopted from earlier studies (Yoo et al., 2000; Builet al., 2013).

Table 3.2
Measurements items for brand awareness

Code	Items
AW1	I am aware of this smartphone brand
AW2	I can recognize my Smartphone brand among other competitors' brands.
AW3	When i think of a smartphone, my smartphone brand is one of the brands that come to my mind
AW4	I am familiar with my Smartphone brand

Source: (Yoo et al., 2000; Builet al., 2013).

Perceived quality was also measured using four items reported in previous works (Pappu et al. 2005; Builet al., 2013; Lee & Leh, 2011).

Table 3.3
Measurements items for perceived quality

Code	Items
PQ1	My smartphone brand is reliable brand
PQ2	My smartphone has excellent features
PQ3	My smartphone has good quality
PQ4	This smartphone brand is safe to use

Source: (Pappu et al. 2005; Builet al., 2013; Lee & Leh, 2011).

The measurement of brand equity precursors requires some latent constructs such as brand image (Yoo and Donthu, 2001) (Lee, Leh, 2011). Therefore, three types of associations extensively employed in the reviewed studies were utilized, and they

include: brand association, brand personality and perceived value (Aaker, 1996; Pappuet al., 2005; Builet al., 2013).

Table 3.4
Measurements items for brand association

Code	Items
ASS1	My smartphones brand is worthy for the price.
ASS2	My smartphone brand has same benefits compare the others brand.
ASS3	I believe that the company of this Smartphone is socially responsible

Source: (Aaker, 1996; Pappuet al., 2005; Builet al., 2013).

Lastly, the scale developed by Yoo et al. (2000) was used to functionalize brand loyalty.

Table 3.5
Measurements items for brand loyalty

Code	Items
LO1	I consider myself to be loyal to this smartphone brand
LO2	I will recommend my friend to buy this smartphone.
LO3	I will buy this Smartphone brand without doubt

Source: Yoo et al. (2000)

The measurement of purchase intention and brand trust required three items adopted from the study by Shah, Mohd (2010). Builet al., (2013).

Table 3.6
Measurements items for brand trust

Code	Items
BT1	I trust this smartphone brand.
BT2	I rely on this smartphone brand
BT3	This smartphone brand meets my expectations
BT4	I feel very comfortable purchasing this smartphone brand
BT5	This smartphone brand always delivers on what they promise.

Source: Shah, Mohd (2010). Builet al., (2013).

Table 3.7
Measurements items for purchase intention

Code	Items
PI1	Consider this Smartphone is my first choice if I buy same Smartphone product through online
PI2	I prefer to buy my smartphones brand
PI3	It is very likely that I will buy this smartphone brand

Source**:** Shah, Mohd (2010). Builet al., (2013).

3.7   Data Collection Procedures

Data were gathered via a self-administered survey using questionnaires. A minimum of 440 questionnaires were disseminated by the researcher. The study adapted the survey procedures developed by Pappu et al., (2005) and Builet al., (2013). The product category (smartphone) was selected, as explained in chapter one, due to its high consumer involvement, cost and the associated risks. The questionnaire consists of two sections: demographic section, dimensions of brand equity, purchase intention

and brand trust, which is consistent with data collection procedures developed in earlier studies (e.g. Pappu et al., 2005).

3.8   Data Analysis Techniques

The data collected were properly analyzed to determine whether the formulated hypotheses are valid. The techniques are also deployed to substantiate the objectives of the study. Statistical Package for the Social Sciences (SPSS) Vr 22 was utilized to evaluate the data by means of descriptive statistics, correlation, and regression analysis.

3.9   Chapter Summary

This chapter discusses the research design of the study which has been adopted extensively by several researchers, identifying the population and sample size, determining the sampling technique and unit of analysis as well as the data collection procedures finally technique of data analysis.

CHAPTER FOUR

ANALYSIS AND FINDINGS

4.1   Introduction

This chapter presents the results of data analyzed using SPSS software (version 22). The results comprise of different parts. The first part entails the result of response rate analysis. The initial data screening and preliminary analysis were then elaborated and discussed. Afterward, results of the descriptive statistics for all the variables, including the characteristics of the survey respondents and Cronbach's alpha for reliability measurements, were reported. Multiple regression analyses conducted to test the different hypotheses and to evaluate the influence of IVs (brand equity elements) on MV (brand trust) and DV (purchase intention), and MV on DV were presented. Finally, the results were summarized to conclude the chapter.

4.2   Response Rate

In this study, 440 questionnaires were individually given to students at UUM. In order to increase the rate of the response in line with previous studies (Sekaran & Bougie, 2010), several endeavors were undertaken such as personal visits to remind respondents. Due to these efforts, 385 questionnaires were returned out of 440 that were initially distributed to the target respondents. Thus, the response rate of the respondents is 87%. In addition, no questionnaires were found to be incorrectly filled. Based on the usable response rate of 87%, the 385 returned questionnaires were used for further analysis (Table 4.1).

Table 4.1
Response Rate

Questionnaire Response	Frequency/Rate
Number of distributed questionnaires	440
Number of returned questionnaires	385
Number of unreturned questionnaires	55
Number of usable and returned questionnaires	385
Returned and excluded questionnaires	0.00
Response rate	87%
Usable response rate	87%

4.3   Data Examination, Screening and Preparation

Hair et al. (2010) asserted that assumptions regarding multiple regression analysis should be satisfied prior to performing any statistical analysis. Therefore, the following preliminary data analyses were carried out: (1) assessment of outliers, (2) normality test, (3) Linearity and (4) multicollinearity (Hair et al., 2010). The data analysis results of regression assumptions are outlined in underlying subsections.

4.3.1   Analysis of Outliers

Hair Jr. et al. (2010) reported that the analysis of outliers is a significant approach because omitting the preliminary examination of outliers can result in the misrepresentation of statistical results particularly if the outlier is problematic. Outliers distort statistics and may lead to results that cannot be generalized or applied to certain samples except one with similar outliers (Tabachnick & Fidell, 2013).

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Based on the study by Tabachnick and Fidell (2013), Mahalanobis D2 measure was used to identify multivariate outliers. The Mahalanobis D2 was determined using linear regression methods contained in SPSS v22, followed by the computation of Chi-square value. Since 22 items were used, 24 denotes the level of freedom in the Chi-square table to be 51.18 (p < 0.001). Mahalanobis values that surpassed this threshold were removed. Based on this criterion, no multivariate outlier was identified. Hence, the final dataset in this study is 385.

4.3.2 Normality Test

Normality was calculated in this study by means of two methods (Hair et al., 2010), i.e., the normal distribution histogram of the regression-standardized residuals (Tabachnick & Fidell, 2007), as illustrated in Figure 4.1, and the kurtosis and skewness statistics of all variables (Table 4.2). As demonstrated in Figure 4.1, the data collected for this study follow the normal pattern as all the bars in the histogram are proximate to a normal curve.
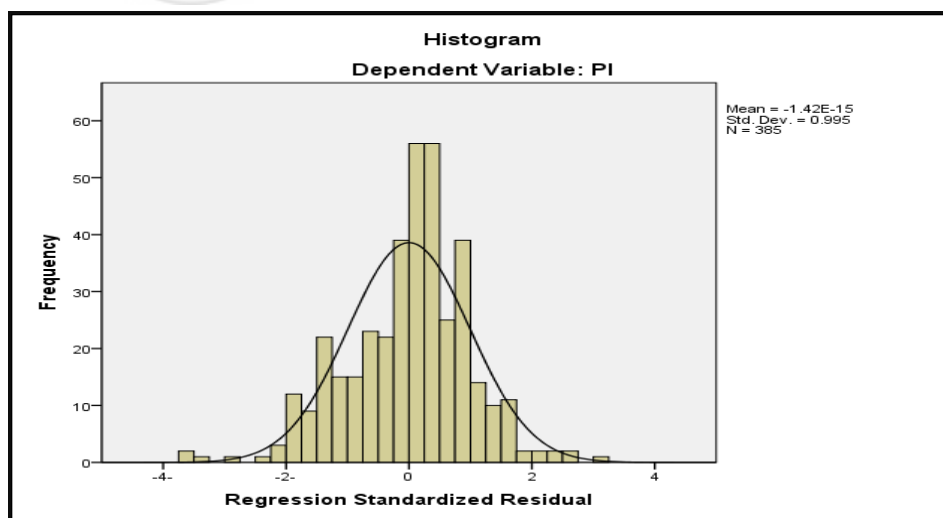
Figure 4.1 *Normality Test Histogram of Standardized residuals*

Secondly, the skewness and kurtosis statistics of all variables range between the normal distribution and two SDs (Hair et al., 2010). Table 4.2 shows that all variables employed in this study have normal distributions because their skewness and kurtosis values are below one (Morgan et al., 2011), which suggests that data is well-modeled by a normal distribution. Therefore, the normality results provide additional validation of the data for regression analysis.

Table 4.2
Statistic Values of Skewness and Kurtosis (n =385)

Variable	Skewness		Kurtosis	
	Statistic	Std.Error	Statistic	Std.Error
BAW	-.255-	.124	-.587	.248
PQ	-.243-	.124	-.804	. 248
BAS	-.056-	.124	-.453	. 248
BLO	-.331-	.124	-.276	. 248
BT	-.043-	.124	-.491	. 248
PT	-.345-	.124	-.465	. 248

Note: BAW=Brand awareness; PQ= Perceived Quality= ; BAS=Brand Association BLO= Brand Loyalty; BT= Brand Trust; PI= Purchase Intention

4.3.3   Linearity

The linearity of this study was evaluated using the regression-standardized residual diagram (normal plot - P–P) (Hair et al., 2006). The linearity analysis (Normal Probability P- Plot Regression) of the relationship between the independent variables and dependent variables is shown in Figure 4.2.
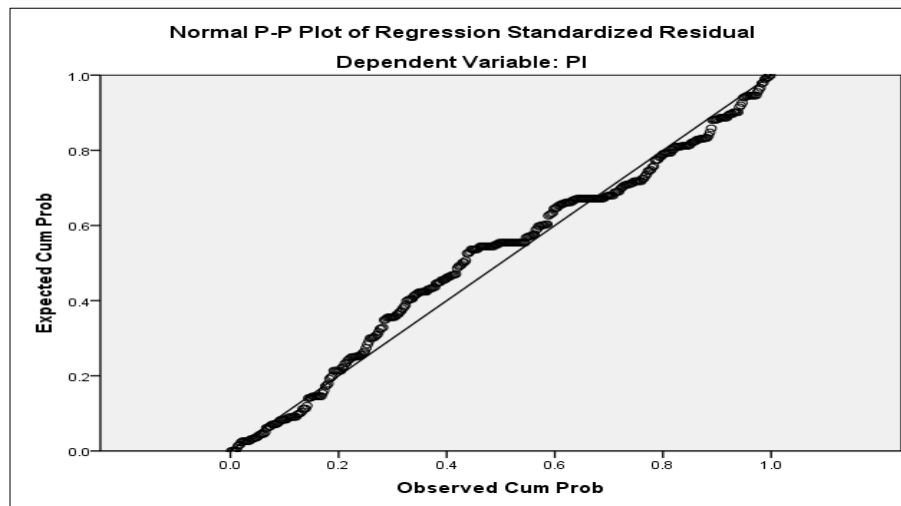
Figure 4.2
Normal Probability P- Plot Regression of Standardized residuals

As indicated in the normal (P–P) plot (Figure 4.2), there are no cases below or above the diagonal line. All values did not exhibit any significant deviations. Thus, the obtained residuals are classified as normal. The linearity of the data is an indication that the data can undergo further analysis.

4.3.4 Multicollinearity

The multicollinearity problem stems from the high correlation between independent variables (Hair et al., 2010). In simpler terms, when two or more variables are highly correlated, it indicates they contain redundant information. Hair Jr et al. (2010) and Pallant (2010) reported that multicollinearity arises when the correlation between independent variables is ≥ 0.9. To identify multicollinearity problems among the variables, collinearity statistics (in regression) was first performed. The most dependable statistical examination of multicollinearity is the test of tolerance and Variance Inflation Factor (VIF) (Hair et al., 2010). Multicollinearity occurs in cases where the VIF value exceeds 5 (Hair, Ringle, and Sarstedt, 2011). A second test of

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multicollinearity is examination of the correlation matrix of the independent variables

(Table 4.3).

Table 4.3
Correlations matrix and the Variance Inflation Factor (VIF) test

	1	2	3	4	VIF
(1) BAW	1				1.985
(2) PQ	.664**	1			2.243
(3) BAS	.464**	.528**	1		1.445
(4) BLO	.578**	.616**	.482**	1	1.825

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

As shown in Table 4.3, the VIFs are below 5, indicating the independent variables are

not highly correlated, i.e. multicollinearity does not exist in the data (Hair et al., 2011).

The correlation values were lower than the threshold value of 0.90 (Hair et al., 2010).

Thus, the obtained data can be analyzed using regression analysis.

4.4   Sample Characteristics

The gender, ethnic group, education level, marital status, college, and current phone

brand used by the respondents were collated (see Table 4.4). As shown in Table 4.4,

the majority of respondents are females (66.2%), while the remaining 33.8% are male.

58.2 % of the participants are Malays, followed by the Chinese (21.0%), and others

(20.8.%). 81.8% of the respondents are undergraduates, 15.1% are postgraduates,

while the remaining are foundation students. 86.8% of the participants are single,

10.4% are married, and 2.9% are in other forms of relationships. Table 4.4 shows that

approximately 55.58% of the respondents are students of College of Business (COB),

UUM, 22.3% attended College of Science (CAS), 11.2% studied at College of Law,

Government and International Studies (COLGIS), while the other students of

Foundation, AGSGS, OYAGSB and GSGS Schools account for 3.6%, 2.6%. 2.1%,

and 2.6% of respondents, respectively. Finally, Table 4.4, shows that Samsung, Apple, Oppo, Huawei and Asus brands of phones are used by 27.5%, 15.3% 10.9%, 6.8% and 8.8% of respondents, respectively, while a high proportion of the respondents (30.6%) use other brands.

Table 4.4
Demographic variable

Demographic	variable	Frequency	Percent (%)
Gender	Male	130	33.8
	Female	255	66.2
Ethnic group	Malay	224	58.2
	Chinese	81	21.0
	Indians	30	7.8
	Others	50	13.0
The	Foundation	12	3.1
Education	Undergraduate	315	81.8
Level	Postgraduate	58	15.1
Marital	Married	40	10.4
status	Single	334	86.8
	Others	11	2.9
College	UUM Foundation	14	3.6
	UUM CAS	86	22.3
	UUM COB	214	55.58
	UUM COLGIS	43	11.2
	UUM AGSGS	10	2.6
	UUM OYAGSB	8	2.1
	UUM GSGS	19	2.6
Brand	Samsung	106	27.5
	Oppo	42	10.9
	Huawei	26	6.8
	Asus	34	8.8
	Apple	59	15.3
	Others	118	30.6

4.5   Descriptive Analysis of the Variables

Descriptive statistics were employed in this study to describe the constructs utilized in the research. Statistical values of mean, standard deviation, minimum and maximum were determined for all variables (independent, mediating and dependent), as shown

in Table 4.5. All the variables of this study were measured on a five-point scale ranging among 1 = strongly disagree and 5= strongly agree.

Table 4.5
Descriptive Statistics for Variables

Variables	Minimum	Maximum	Mean	Std. Deviation
BAW	2.50	5.00	4.218	.5785
PQ	2.75	5.00	4.200	.5945
BAS	2.33	5.00	4.114	.5904
BLO	1.67	5.00	3.936	.7346
BT	2.40	5.00	3.948	.6332
PI	2.00	5.00	3.945	.7462

Tables 4.5 shows that the overall mean for the variables range between 3.936 and 4.218. A high mean score of 4.218 was obtained for BAW with a low SD of 0.5785. A low mean score of 3.936 and high SD of 0.7346 was obtained for PI.

4.6   Reliability analysis

Cronbach's alpha coefficient is the most utilized parameter for estimating the reliability of internal consistency for a research instrument. In this study, Cronbach's alpha was used to test the internal consistency and reliability of variables listed in Table 4.6. Cronbach's alpha values around the range of 0.70 are measured suitable while values less than 0.60 are considered poor (Sekaran, 2003). The Cronbach's alpha values obtained in the reliability analysis surpass the standard threshold value of 0.70 (Table 4.6).

Table 4.6
Reliability Analysis for the Study Variables

Variable	Total Items	Ratability
BAW	4	0.74
PQ	4	0.86
BAS	3	0.70
BLO	3	0.82
BT	5	0.86
PI	3	0.83

As shown in Table 4.6 above, the calculated alpha values range from 0.700 to 0.86, which is considered as acceptable (Hair et al. 2013).

4.7   Regression Analysis

Multiple regressions were executed to find solutions to the research questions (Q1, Q2, Q3, and Q4) and to test the hypotheses (H1 – H13). Multiple regressions were also carried out to assessment the fundamental relationship among IVs of the four dimensions of brand equity, BT (MV), and PI (DV), which were formulized into four questions.

4.7.1   Answering Research Question 1 and Testing Hypotheses

Research question one (1) intends to resolve the relationship between BAW, PQ, BAS, BLO, and PI of the smartphone. The objective for this question is to examine the effect of four independent variables (IVs) on PI (DV). Multiple regression analysis through SPSS v22 was performed to examine which elements of BAW, PQ, BAS, and BLO significantly affect PI and to test hypotheses (Table 4.7)

Table 4.7
Regression results of BAW, PQ, BAS, BLO and PI

R^2= .718 Ad. R^2= .516 Standard Error = .52202 F = 101.192 Sig.(p)=0.000					
Variable	**B**	**SE**	**Beta**	***T***	**Sig.(p)**
BAW	.049	.065	**0.038**	0.762	.446
PQ	.225	.067	0.179	3.361	.001
BAS	-.021-	0.055	**-0.017-**	-0.382-	.703
BLO	.586	0.049	0.577	11.961	.000

As observed in the results of ANOVA F-test (Table 4.7), the determinants of brand equity (PQ, BLO) significantly predicted (F = 101.192, p < 0.005), and explained 71.8 % of the variance in PI (Table 4.5). The results also indicated a insignificantly positive relationship between BAW and PI (β = 0.038, t = .762, p > 0.05); PQ and PI (β = .179, t = 3.361, p < 0.05); BAS and PI (β =-0.017-, t = -0.382-, p > 0.05), and BLO and PI (β = 0.577, t = 11.961, p < 0.05). Therefore, H2-H4 are supported. The results of the hypotheses testing for BAW, PQ, BAS, and BLO (IVs) and PI (DV) are summarized in Table 4.8.

Table 4.8
Summary of Hypotheses testing of IVs with DV

Hypothesis	**Statement**	**Findings**
H1	Brand awareness has a positive effect on purchase intention	No Supported
H2	Perceived Quality has a positive effect on purchase intention	Supported
H3	Brand Association has a positive effect on purchase intention	No Supported
H4	Brand loyalty has a positive effect on purchase intention	Supported

4.7.2 Answering Research Question2 and Testing Hypotheses

This research question resolves the possible influence of BAW, PQ, BAS and BLO

BT. Multiple regression analysis was performed to determine which IVs (BAW, PQ,

BAS, and BLO) significantly affects BT and to test hypotheses (Table 4.9).

Table 4.9
Regression results of BAW, PQ, BAS, BLO and PI

R^2= .792 Ad. R^2= .627 Standard Error =. 38880F F = 159.658 Sig.(p)=0.000					
Variable	**B**	**SE**	**Beta**	**T**	**Sig.(p)**
BAW	-0.041-	.048	**-0.037**-	-0.845-	.399
PQ	0.294	.050	0.276	5.895	.000
BAS	0.178	.041	0.166	4.348	.000
BLO	0.439	.036	0.510	12.036	.000

The results of ANOVA F-test (Table 4.9) show that determinants of brand equity,

comprising PQ, BAS and BLO significantly predicted (F = **159.658**, p < 0.005), and

explained **.792** % of the variance in BT (Table 4.8). The results indicate a significantly

positive relationship between PQ and BT (β = 0.276, t = 5.895, p < 0.05); BAS and

BT (β = 0.166, t = 4.348 p < 0.05), and BLO and BT (β = 0.510, t = 12.036, p < 0.05)

for H6, H7 and H8, respectively. However, the relationship between BAW and BT

was insignificant (β = **-0.037**-, t = -0.845-, p > 0.05). Thus, H6 - H8 are supported by

the results, whereas H5 is not. Table 10 shows the results of the hypotheses testing for

PQ, BAS, BLO (IVs) and BT (MV).

Table 4.10 *Summary of Hypotheses testing of IVs and MV*

Hypothesis	Statement	Findings
H5	Brand awareness has a positive effect on brand trust	No Supported
H6	Perceived Quality has a positive effect on brand trust	Supported
H7	Brand Association has a positive effect on brand trust	Supported
H8	Brand loyalty has a positive effect on brand trust	Supported

4.7.3 Answering Research Question 3 and Testing Hypotheses

Research Question 3 determines whether BT has a relationship with purchase intention of smartphones in Malaysia. This question attempts to examine the direct effect of BT on PI. Multiple regression analysis was carried out to test the effect of BT on PI and to evaluate related hypotheses (Table 4.11).

Table 4.11
Regression results of BT and PI

R^2= 0. 766 Ad. R^2= 0.587 Standard Error = .48011 F = 544.777 Sig.(p)=0.000					
Variable	**B**	**SE**	**B**	**T**	**Sig.(p)**
BT	0.903	0.039	0.766	23.340	0.000

As shown in the results of ANOVA F-test (Table 4.9), BT significantly predicted (F = **544.777**, p < 0.005) and explained **766**% of the variance in PI (Table 4.9). The results also proved the existence of a significant positive relationship between BT and PI (β =.0.766 , t = 23.340, p < 0.05). Thus, H9 is supported (Table 4.12).

Table 4.12
Summary of Hypotheses testing of MV with DV

Hypothesis	Statement	Findings
H9	Brand trust has a positive effect on purchase intention	Supported

4.7.4 Answering Research Question 4 and Testing Hypotheses

The aim of research question 4 is to determine the mediating effect of BT in the relationship between dimensions of brand equity (BAW, PQ, BAS, BLO) and PI of the smartphone in Malaysia. To achieve this aim, a hierarchical regression based on SPSS v22 analysis was conducted to test the four mediating hypotheses. The result of the hierarchical regression analysis is outlined in Table 4.13.

Table 4.13
Mediating effect of BT on BAW, PQ, BAS and BLO and PI

Dependent Variable	Variables	Std. Beta Step 1	Std. Beta Step 2
	Independent		
	BAW	0.038	.059
Purchase Intention	PQ	0.179*	.022
	BAS	-.017-	-.111-*
	BLO	0.577*	0.287*
	Mediating		
	Brand Trust		0.570*
	R^2	0.718	0.798
	Adjusted R^2	0.516	0.637
	R^2 Change	0.718	0.08

 *Note: Significant at the 0.05 level

As observed in Step 1 (Table 4.13), PQ and BLO significantly contributed to PI (R^2 = 0.718, F = 101.192, p < 0.05) (Table 4.15). Step 1 showed that PQ (β = = 0.179*, t = 3.361) and BLO (β =0.577*, t = 11.96) are positively related to PI at p < 0.05. In Step 2, BT was included in the regression Model (R^2 = 0.798), which showed a significant change with F = 132.913at p < 0.05. giving an R^2 change of 8%.Step 2 also showed that BAS (β = -0.111*, t = -2.876) and BLO (β = 0.287*, t = 0.287*) are significant (p

< 0.05), but with decreased mediating effect on PI. This is consistent with the study by Rucker et al. (2011), who highlighted the significance of change in the direct relationship after incorporating the mediator variable and the use of terms, such as full versus partial mediation. Furthermore, the results showed that BAW (β =0.059, t = 1.365 and PQ (β = .022, t = 0.456) are not significant as level of $p < 0.05$. Thus, the results showed that among the IVs, only the relationship between BAW and BLO, and PI (DV) is partially mediated by BT.

Table 4.14
Summary of Hypotheses testing of MV of BT

Hypothesis	Statement	Findings
H10	Brand trust mediates the relationship between brand awareness and purchase intention	No Supported
H11	Brand trust mediates the relationship between perceived quality and purchase intention	Not Supported
H12	Brand trust mediates the relationship between brand association and purchase intention	Supported
H13	Brand trust mediates the relationship between brand loyalty and purchase intention	Supported

4.8 Chapter summary

This chapter stress on many point such as the response Rate, data Examination, screening and prepare analysis of outliers, normality test and descriptive analysis of the variables reliability analysis and last but not lease is regression analysis.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

5.1   Introduction

This current chapter discusses the results of the study taking into account the research questions and objectives, hypotheses as well as the literature review. Furthermore, this chapter presents the practical and theoretical contributions of this study. To the end of this chapter, the limitations of the study, suggestions for future studies, and the conclusions of the study are dealt with in detail.

5.2   Executive Summary

In this section, a brief summary of the major findings of the study is presented. In fact, the major concern of this study is to examine the mediating effect of BT of the relationship between BAW, PQ, BAS, BLO, and consumers' intention of purchasing a smartphone. In particular, in this study it was hypothesised that four variables, namely BAW, PQ, BAS and BLO as independent variables have a positive influence on consumers' intention to buy. Additionally, in this study this relationship between the four independent variables and consumers' purchase intention was hypothesized to be mediated by BT.

Based on the four main objectives of the research, a total of number of four research questions were presented and formulated. Moreover, the construction of the research questions were generated based on the statement of the problem that was presented in Chapter One. Examining these relationships among variables can most probably

provide insights to understand consumers' purchase intention. It is important to mention that the research framework of this study is supported by Aaker's Model (1991) which proposed that through the mediating effect of brand trust on the relationship between the dimensions of brand equity and purchase intention toward smartphone can give good value to a product. In this study, thirteen hypotheses are stated in Chapter Three. These hypotheses were tested through the employment of SPSS v22. The empirical findings reported in this study provided support for eight hypotheses out of which five are direct and two are mediating hypotheses.

5.3   Discussion

This main section discusses the results of the study. Specifically, the following sub-sections present and discuss the results of the current study based on the research objectives.

5.3.1   Influence of BAW, PQ, BAS, BLO on Intention to Purchase Smartphone

The main purpose of this study is to investigate the positive relationship between BAW, PQ, BAS, and BLO and intention to purchase of a smartphone. Thus, the four hypotheses, were formulated to reflect the positive relationship between dimensions of brand equity and purchase intention via a brand trust.

The first hypothesis stated that BAW positively influences IP. The results related to this hypothesis did not support this hypothesis. In the fact, this result is contrary to expectations as well the literature. For example, Akhtar and Latif (2016) and Fadilah, Pang, Shakur, Aisyah (2016) found that BAW is an important factor that influences consumers' decision to purchase. However, this result is consistent with the results

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reported by previous studies such as those that have argued that BAW does not influence consumers' intention to buy (Shimp, 2010; Norjaya, Mohd, & Osman, 2007). A possible explanation for this result may be related to the sample of this research. Since only students in a Malaysian university were selected, they could be contextually sensitive to strategies of brand awareness provided by the firms of a smartphone to purchase. Furthermore, these strategies may not be considered important for the students who mainly focused on the product and quality.

Another reason for this result may be related to lack information that are related to details and explanations about the brand provided by the firms. In the fact, when customers do not have enough information about the brand, they will have no intention to purchase products of this brand (Grewal, Monroe, & Krishnan, 1998). Brand awareness occurs when consumers have a profound and particular image of the product in their minds (Zhuowei & Liping, 2015). Generally, consumers achieve brand knowledge over two types of experience: direct and indirect. While the direct experiences include the consume of the product or service, the indirect experiences can encompass advertising and marketing (Lua et al., 2015). As proposed by researchers, consumers' lack of knowledge on a brand may not help them to assess the quality of the brand, and they, in turn, may not have the intention to purchase, and they cannot develop loyalty to the brand (Aydın & Ulengin, 2015).

H2 showed that PQ positively influences consumers' intention to purchase the smartphone. Based on the multiple regression analysis, the findings show that there is a positive relationship. This shows that H2 is supported. In other words, PQ is necessary for the purchase of smartphones of a particular brand; PQ induces consumers

to buy products of a particular brand of smartphones. The findings observed in the research concur of the findings of previous theory which proposed that PQ is an aspect of brand equity that encourages consumers to buy certain products and influences their purchase decision (Zeithaml, 1988). The result is in a good link with some recent studies that have argued that PQ significantly affects consumers' intention to purchase (Aberdeen, Syamsun, & Najib, 2016). In addition, this result supports the conceptual explanations of purchase intention based on consumers' perception of brand quality of smartphone resources as postulated by the theory of the brand equity (Aaker, 1991).

H3 states that BAS has a positive influence on IP. The finding related to this hypothesis shows that there is an insignificant relationship between BAS and IP. Here brand awareness is important because Ekhveh and Darvishi (2015) have pointed out that brand awareness is associated with the information node in the memory. In other words, the ability of customers to recognize a brand under a various types of conditions can obviously show their awareness of the brand. Therefore, contrary to the expectations, the findings reported in this current study do not support H3.

Furthermore, it should be noted that being BAS oriented entails name, feelings, colours, music, images, designs, experiences, attitudes, and beliefs. All these aspects may not boost the intention of the students to purchase. A possible explanation of this result is that most of the respondents are undergraduate students whose ages ranged between 20 and 25. Thus, these students most likely forget their trust in a particular brand during a short time. Furthermore, they keep changing their minds as they believe that they should be open to the world through social media. They are also prefer to change new brands and follow their needs and interest. This is in consistent with the

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perceptions that reflect that BAS can be anything related to what is kept in users' memory regarding the products of a particular brand (Aaker, 1991).

H4 states that BLO has a positive influence on IP of brand Smartphone. The multiple regression analysis was run to obtain results related to this hypothesis. The result suggests that there is a positive relationship between BLO and IP. This result provides support for H4. Consumers' commitment to consume and use products of a specific brand is positively related to their intention to purchase it. This finding further provides evidence that BLO repurchases intention of customers by assessing their preferences and attraction toward a specific brand (Russell-Bennett, et al., 2007). This result is in line with those reported by Aaker (2009) and Aydin et al. (2016) who found that BOL influences the intention of the consumer to purchase.

5.3.2   Influence of BAW ,PQ, BAS, BLO on BT

H5 stated that BAW positively influenced BT. The result did not support this hypothesis because the study failed to provide enough evidence to support the claim that BAW is related to BT. In the fact, this result is contrary to the researcher' expectations as well the literature. For example, Liao (2015) has recently found that the brand-related BAW has significant influences on the trust of the customer towards the brand. Furthermore, Hou and Wonglorsaichon (2014) and Mourad et al. (2011) reported similar results as they found that BAW is positively related to trust of the brand. However, this result is consistent with the results reported by some previous studies. For example, Chiou and Droge (2006) showed that awareness about the brand does not influence the trustworthiness of customers. A possible explanation for this result may be that the students do not have confidence and they always care to take the

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risk. In this case, a student needs to find information about the attributes and quality of smartphone. Delgado-Ballester and Munuera-Aleman (2001) indicated that brand trust is a feeling of security that is related to the brand. It means that consumers are not safe to trust the brand. Thus, the fifth hypothesis was insignificant and was not supported by the findings of this study.

H6 states that PQ positively influences BT. The relationship reflected in this hypothesis is supported through the results of the research. In other words, an increase in the quality of the brand can yield an increase in the level of students' trust in the brand of smartphone. The result supports the findings supported by Azizi (2014) who found that the perceived quality of the brand significantly influences customers' trust in the brand. The theory adopted this study suggests that high PQ provides customers with a genuine reason that encourages them to purchase the product, allows the brand to differentiate itself from its competitors, and help them to create a good basis for the trust in the brand (Aaker, 1991). Hou and Wonglorsaichon (2014) emphasised that perceived quality and brand trust are important factors for the improvement of brand equity.

H7 states that BAS has a positive influence on BT of brand Smartphone. Based on the results obtained through the employment of the multiple regression, the result in this study reveal that there is a significant positive relationship between BAS and BT. Thus, this particular result provides support for H7. Regarding this, previous studies have revealed that there is a significant correlation between trusts with the overall brand equity (Kumar & Purwar, 2013; Yoon, 2002). Ming Ismail and Rasiah (2011) also found that brand image has a positive effect on brand trust. This finding is

compatible with the argument in the theory which proposes that high image of the brand promotes trust, and loyalty to the brand among consumers, which in turn increases consumers' intention to purchase (Aker & Keller, 1990).

H8 states that BLO has a positive influence on BT of brand Smartphone. Based on results obtained through the employment of multiple regression, the result suggests that there is a positive relationship between BLO and BT. This finding of the study provides support for H8. Perhaps positive results are only obtained when students have trust in the brand, they remain positive loyal towards the firm of smartphones. This is the line with what was reported by of Lau and Lee (2000) who argued that when consumers have trust in a product, they are likely to be satisfied and loyal to the brand. In addition, Chiou and Droge (2006) and Floh and Treiblmaier (2006) found that trust in the brand had a direct effect and significant influence on brand loyalty. The results also support those reported by Rios and Riquelme (2008) who showed that trust is positively related to brand loyalty. Furthermore, brand trust in recent studies has been recognized as a key variable in long-term relationships with customers, which in turn positively affects brand loyalty (Matzler et al., 2008; Sung et al., 2010; Ming et al., 2011).

5.3.3   Influence of BT on IP

The relationship reflected in H9, which states that BT positively influences PI, was supported. This result means that brand of the smartphone which has a higher level of trust can result in higher purchase. This results is consistent with the view of Thorbjornsen and Supphellen (2014). According to Geçti and Zengin (2013), brand trust is an important mediator factor on the customer behaviors before and after the

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purchase of the product. In other words, in the present research, the relationship between BT and PI indicates that smartphone with a higher level of trust will have higher purchase compared to other brands of smartphone that do not enjoy trust among students. Furthermore, the result is in agreement with the Kuan and Bock (2007) who confirmed that the positive relationship between brand trust and PI. Similarly, Chaudhuri and Holbrook (2001) noted that the effect of BT on consumers' intention to purchase is higher. It was also revealed that BT shown by consumers increases their intention to purchase smartphones of a particular brand (Aker & Keller, 1990). The finding related to the ninth hypothesis also agrees with those reported by recent studies. For example, Wang and Lee (2016) has recently reported that brand trust has a significant effect on the PI. To this end, a firm of a particular brand of smartphones shoud recognize the importance of building trust because higher purchase depends on the ability of a smartphone brand to have a good trust among customers.

5.3.4 The Mediating Effect of BT

The fourth aim of the current research is to examine the mediating role of BT on the relationship between BAW, PQ, BAS, BLO, and intention to purchase a particular brand of smartphone. In line with this objective, four mediating hypotheses were examined and tested through hierarchical regression. The results of the regression analysis that focused of the mediation for BT revealed that only two hypotheses (i.e H10 and H11) indicated significant mediating effect of BT on the relationship between BAW and BLO and PI. However, this study failed to find evidence to support the mediating effect of BT on the relationship between PQ, BAS and PI. Thus, H12 and H13 were not supported.

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H10, which states that BT mediates the relationship between BAW, PQ, and PI of smartphone brand, was tested in this study. The result showed that BT does not mediate the relationship between BAW, PQ, and PI. However, this result cannot be surprising due to the fact that the relationship between BAW and BT was insignificant as reported in earlier studies. Thus, H10 is not supported by the findings of the present study. A logical explanation of this result is that when a student perceives a high risk of the smart brand, he/she will have low trust in it leading to low purchase intention. In other words, the lack of awareness about the brand reflects less trust. This fact requires significant of regret rather than generating the purchase. Thus, the role of BT explaining the relationship may not be important.

H11 states that BT mediates the relationship between PQ and PI. Based on the results reported in this study, the relationship expressed in H11 was not supported. A better explanation of this result is that some brands of smartphones have higher quality, such as Samsung. That is why most of the respondents do not have time and they are m mostly familiar with how to use Samsung Smartphones since long time. Several studies strongly have emphasized the brand equity is not just achieved by the product, however too by communications between buyers and sellers (Ballantyne, Varey, 2006; Grönroos, 2011; Payne et al., 2008; Jing et al., 2015). Yet, some other brands show less than expected quality. He and Wang (2014) argued that this issue reflects that the students have not established trust in such brands; students still do not have time.

In other words, when purchaser create trust in a particular brand, they prefer that specific brand and selects it between a wide ranges of products, even if the price is greater than competitors' products. For example, some brands are still new in the

market such Oppo, Asus, and Hawaii. Another reason that can explain this phenomena is related to technology because smartphones are a part of recent technology revolution that keeps changing with the emergent of many new brands of smartphones in the market. This revolution increases competitions in recent times, forcing consumers to pay more attention to the brand quality so that can purchase smartphones rationally. All these issues may make them lose their trust and may take longer time to create trust.

 H12 states that BT mediates the relationship between BAS and PI. The results of this study supported this hypothesis. This result has consistency with results reported by recent research carried out by Fianto Hadiwidjojo, Aisjah, and Solimun (2014) who believe that the brand image influences the purchasing behavior mediated by BT. Moreover, Romaniuk and Nenycz-Thiel (2013) argued that the current propensity to give brand association has a positive relationship with behavioral loyalty. This argument is based on the assumption that brand associations are formed from past brand interactions (Krishnan, 1996). Furthermore, a fundamental difference exists in the response level. In another study in the same context, Thaichon, Quach and Lobo (2013) indicated that BAS or brand image has an indirect effect on loyalty through brand trust.

The relationship expressed in H13, which states that BT mediates the relationship between BLO and PI, was supported by the results of this study. This result indicates that that brands with higher level of trust can lead to loyalty towards Smartphone, and consequently higher purchase. This seems to show that the intention to purchase depends on loyalty when brands have higher trust among consumers. Trust is a

motivator element in consumer intentions to purchase (Agustin & Singh, 2005). Brand trust leads to higher levels of loyalty as trust creates exchange relationships that are highly valued (Morgan & Hunt, 1994). Chaudhuri and Holbrook (2001) argued that brand trust strongly influences customer's attitudes and repurchase loyalty. Some researchers have suggested that brand trust can contribute to both purchase loyalty and attitudinal loyalty. Equally important, several previous studies have indicated that brand trust contributes to brand loyalty and purchase intention (refer to Lau & Lee, 1999; Chaudhuri & Holbrook, 2001; Agustin & Singh, 2005). To this end, this finding supports the model of brand equity that suggests purchase intention is achieved as a result of loyalty to brand. To this end, the finding also suggests that a firms' smartphone should focus on building trust for their brands. This is because any achievement related to building trust will most probably increases the purchase.

5.4   Implications of the Study

The purpose of this study was to examine the effect BAW, PQ, BAS and BLO on the PI of smartphone brands in Malaysia. Having presented and discussed the findings of the formulated hypotheses, it is imperative to highlight the implication of the study from theoretical point of view. The implications of this study have their contribution towards a more holistic and inclusive brand equity theory building. This can be accomplished by using a model that incorporates four antecedents of brand equity as well as different outcomes of brand equity that is related to intention to purchase smartphones. The results also provide additional empirical support for the research framework. Thus, this study contributes to the theory of brand equity by providing empirical evidence that obviously support the principles of the theory.

This study also has a number of marketing implications. Firstly, the study found that a causal relationship among dimensions of brand equity and purchase intention, in particular PQ ,BAS and BLO, can assist marketing managers of firm smartphone to create strong a pre-condition to building brand image (BAS) and to focus more on PQ of smartphone. Second, the results of this stud do not support the relationship between BAW and PI. Based on this finding, marketers of smartphone should give great attention to these efforts in order to establish awareness and to stimulate brand recall PI. Here, recognition should form an essential part of the marketing's priority.

Third, for a brand to be successful it needs to create trust toward the smartphone brands for consumers. It also needs to be first be part of consideration set in consumers' memory (Hakala et al., 2012). The results confirmed the significant roles of PQ, BAS and BLO to build customers' trust in the brand. As per the result of this study, firms of smartphone should ensure that consumers of the firms' brands should encounter brand attributes and benefits they prefer to have.

Forth, as pointed out earlier, as brand loyalty is the dominant influencer of overall BT, marketing managers should pay great effort towards marketing activities that will build brand loyalty and, at the same time, create strong relationship with customers and promote their trust with their consumer. All these, turn in, can enhance the purchase of their brands.

Finally, marketing managers of companies must focus on increasing the BLO and PQ of the smartphone products. Further, they should focus on creating trust and genuine image in consumers' minds. In practical, improving the quality of brand combined

with a focus on technological superiority, apparently supports trust of the customers and in turn improves intentions to purchase the brand. Therefore, in firms of smartphone marketers should focus on improving the technological level of the brand to ensure trust of their brand and then purchase it

5.5   Limitation of the Study and Future Research direction

Similar to any study, this study has some limitations. First, the study focused only on four factors, namely BAW, PQ, BAS and BLO to PI. Thus, the future research may build on the findings of this study and include other variables such as purchase knowledge and attitude. Secondly, the data collected for this the study were obtained from a sample of student in UUM. Thus, generalization of findings cannot be possible to other respondents from other universities in other regions in the country. Furthermore, the findings cannot be generalized to respondents in other countries. For example, consumers' perception of awareness and quality may rank lower on intention to purchase and trust in some countries, contrary to the findings of this study.

Regarding this, Chritodoulides et al. (2015) observed that some brand equity dimensions may be inconsistent across countries. Future studies should consider investigating intention behaviours in other parts of the country and different customers, which may provide more good results. However, the results of this study failed to find evidence to support the relationship between BAW, intention and trust. This issues is worthy to be studied in future research. Fourthly, the study used cross-sectional method to collect the survey data in which the opinions of students was captured at one specific point in time. Thus, due to the nature of cross-sectional study, it is

restricted to explain only the causal relationships. Thus, longitudinal studies are recommended for future research.

5.6   Conclusions

The purpose of this research was to investigate the effects mediating of BT on the relationship between BAW, PQ, BAS, BLO and PI of smartphone brands in Malaysia. In particular, thirteen hypotheses were postulated to test the proposed model, as well to achieve the research objectives. The first research objective of this study was to investigate the relationship between BAW, PQ, BAS, BLO and PI of smartphone brands in Malaysia. Based on this research objective, four direct relationship hypotheses were formulated and tested. Although the revealed significant and positive relationship between PQ, BLO and PI; BAW and BAS have insignificant influence. For the second research objective, the research aimed to test the relationship between BAW, PQ, BAS,BLO and trust of smartphone brands in Malaysia. Four hypotheses were formulated and tested to achieve this research objective.

Although empirical evidence presents that PQ, BAS, BLO have positive effect on PI, it was revealed that BAW has insignificant influence. The third research objective of the current research was constructed to examine the relationship between BT and PI. The results of this study supported this relationship. The fourth research objective aimed to examine the mediating role of BT on the relationship between PQ, BAS, BLO and PI of smartphone brands in Malaysia. Likewise, this was achieved by testing the fourth mediation hypotheses. The results show that BT plays a mediational role between BAS and BLO and PI of smartphone brands in Malaysia. Yet, the results show no mediator role is played on BAW, PQ and PI.

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Appendix A

Research Questionnaire

College of Business
School of Business Management
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman, Malaysia
Tel: (+604) 928 3930 | Fax: (+604) 928 5220
Email: sbm@uum.edu.my

Dear Student,

I am a student of School of Business Management at the above-named university currently working on my research in partial fulfillment for the award of MSc Management title"**The mediating effect of brand trust on the relationship between dimension of brand equity and purchase intention toward Smartphone**". Thank you in advance for taking your valuable time to fill in this questionnaire. Please be assured that your responses will only be used for academic purpose. Hence, your identity will never be known throughout any part of the research process.

Thank you very much in anticipation of your responses.

Your sincerely,

Ibraheem Saleh
MSc Management Candidate
School of Business Management, UUM College of Business
06010 Sintok, Kedah, Malaysia
Phone: +6 01137177203
Email: ibrahimalkoliby@gmail.com

Section A. Demographic Information

Please put a tick mark (√) in front of the appropriate answer.

1. **Gender**

Male ☐

Female ☐

2. **Level of education**

Foundation ☐

Undergraduates ☐

Postgraduates ☐

3. **Marital Status**

Married ☐

Single ☐

Others ☐

4. Which of the following Collage do you study? (mark the suitable box) ☐

UUM Foundation Center ☐

College of Art & sciences (UUM CAS) ☐

College of Business (UUM COB) ☐

College of Law, Government & International Studies (UUM COLGIS) ☐

Awang Had Salleh Graduate School of Arts and Sciences　(AHSGS) ☐

Othman Yeop Abdullah Graduate School of Business (OYAGSB) ☐

Ghazali Shafie Graduate School of Government (GSGSG) ☐

5. **Ethnic Group**

Malay ☐

Chinese ☐

Indian ☐

Others ……………………………….

6. The smartphone brand you are CURRENTLY using.

☐ Samsung ☐ Oppo ☐ Huawei ☐ Asus ☐ Apple ☐ Others

please (mention) …..

Section B:

The following statements are designed to evaluate your perception of brand dimensions of smartphone. Please refer to the Smartphone brand that you are currently using .

Kindly tick (/) the degree to which you Strongly agree or Strongly Disagree with the statements using the likert scale of 1-5 with 1 being SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree and SA=Strongly Agree.

Note: This questionnaires contain two languages, English and Malay. You are required to mark ONLY ONE LANGUAGE.

Nota: Soal Selidik ini mengandungi dua bahasa, Bahasa Inggeris dan Bahasa Melayu. Anda diminta untuk menandakan hanya dalam SATU BAHASA SAHAJA.

Code	Items	(SD)	(D)	(N)	(A)	(SA)
AW1	I am aware of this smartphone brand					
	Saya mengetahui jenama telefon pintar ini					
AW2	I can recognize my Smartphone brand among other competitors' brands.					
	Saya dapat mengenali jenama telefon pintar saya berbanding jenama pesaing lain.					
AW3	When i think of a smartphone, my smartphone brand is one of the brands that come to my mind					
	Apabila saya memikirkan telefon pintar, jenama telefon pintar saya adalah satu jenama yang masuk ke dalam fikiran saya.					
AW4	I am familiar with my Smartphone brand					
	Saya sudah biasa dengan jenama telefon pintar saya					
PQ1	My smartphone brand is reliable brand					
	Jenama telefon pintar saya adalah jenama yang boleh dipercayai					
PQ2	My smartphone has excellent features					
	Telefon pintar saya mempunyai ciri-ciri yang sangat baik					
PQ3	My smartphone has good quality					
	Telefon pintar saya mempunyai kualiti yang baik					
PQ4	This smartphone brand is safe to use					
	Jenama telefon pintar ini selamat untuk digunakan					
ASS1	My smartphones brand is worthy for the price.					
	Jenama telefon pintar saya berpatutan untuk harga.					
ASS2	My smartphone brand has same benefits compare the others brand.					
	Jenama telefon pintar ini mempunyai faedah yang sama berbanding dengan jenama yang lain.					
ASS3	I believe that the company of this Smartphone is socially responsible					
	Saya percaya bahawa syarikat telefon pintar ini bertanggungjawab secara social					
LO1	I consider myself to be loyal to this smartphone brand					

	Saya setia kepada jenama telefon pintar ini					
LO2	I will recommend my friend to buy this smartphone.					
	Saya akan mengesyorkan kepada rakan saya untuk membeli telefon pintar ini.					
LO3	I will buy this Smartphone brand without doubt					
	Saya akan membeli jenama telefon pintar ini tanpa ragu					
BT1	I trust this smartphone brand.					
	Saya mempercayai jenama telefon pintar ini.					
BT2	I rely on this smartphone brand					
	Saya bergantung pada jenama telefon pintar ini					
BT3	This smartphone brand meets my expectations					
	Jenama telefon pintar ini memenuhi jangkaan saya					
BT4	I feel very comfortable purchasing this smartphone brand					
	Saya merasa sangat selesa untuk membeli jenama telefon pintar ini					
BT5	This smartphone brand always delivers on what they promise.					
	Jenama telefon pintar ini sentiasa menyampaikan apa yang mereka janjikan.					
PI1	Consider this Smartphone is my first choice if I buy same Smartphone product through online					
	Mempertimbangkan telefon pintar ini sebagai pilihan pertama saya, jika saya membeli produk telefon pintar yang sama melalui internet					
PI2	I prefer to buy my smartphones brand					
	Saya lebih suka membeli jenama telefon pintar saya					
PI3	It is very likely that I will buy this smartphone brand					
	Kemungkinan besar saya akan membeli jenama telefon pintar ini					

Thank you very much for your cooperation.

Appendix B

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
BAW	385	2.50	5.00	4.2182	.57858	-.255-	.124	-.576-	.248
PQ	385	2.75	5.00	4.2000	.59452	-.243-	.124	-.804-	.248
BAS	385	2.33	5.00	4.1143	.59042	-.079-	.124	-.472-	.248
BLO	385	1.67	5.00	3.9368	.73463	-.331-	.124	-.276-	.248
BT	385	2.40	5.00	3.9486	.63324	-.043-	.124	-.491-	.248
PI	385	2.00	5.00	3.9455	.74627	-.345-	.124	-.465-	.248
Valid N (listwise)	385								

Correlations

		BAW	PQ	BAS	BLO
BAW	Pearson Correlation	1	.664**	.464**	.578**
	Sig. (2-tailed)		.000	.000	.000
	N	385	385	385	385
PQ	Pearson Correlation	.664**	1	.528**	.616**
	Sig. (2-tailed)	.000		.000	.000
	N	385	385	385	385
BAS	Pearson Correlation	.464**	.528**	1	.482**
	Sig. (2-tailed)	.000	.000		.000
	N	385	385	385	385
BLO	Pearson Correlation	.578**	.616**	.482**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	385	385	385	385

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

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1.IV- DV

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	BLO, BAS, BAW, PQ	.	Enter

a. All requested variables entered.

b. Dependent Variable: PI

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.718ᵃ	.516	.511	.52202	1.764

a. Predictors: (Constant), BLO, BAS, BAW, PQ

b. Dependent Variable: PI

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	110.302	4	27.576	101.192	.000ᵇ
	Residual	103.552	380	.273		
	Total	213.855	384			

a. Dependent Variable: PI

b. Predictors: (Constant), BAW, BAS, BLO, PQ

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.572	.229		2.501	.013		
	BAW	.049	.065	.038	.762	.446	.506	1.978
	PQ	.225	.067	.179	3.361	.001	.448	2.232
	BAS	-.021-	.055	-.017-	-.382-	.703	.672	1.489
	BLO	.586	.049	.577	11.961	.000	.548	1.825

a. Dependent Variable: PI

Histogram

Dependent Variable: PI

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Normal P-P Plot of Regression Standardized Residual
Dependent Variable: PI
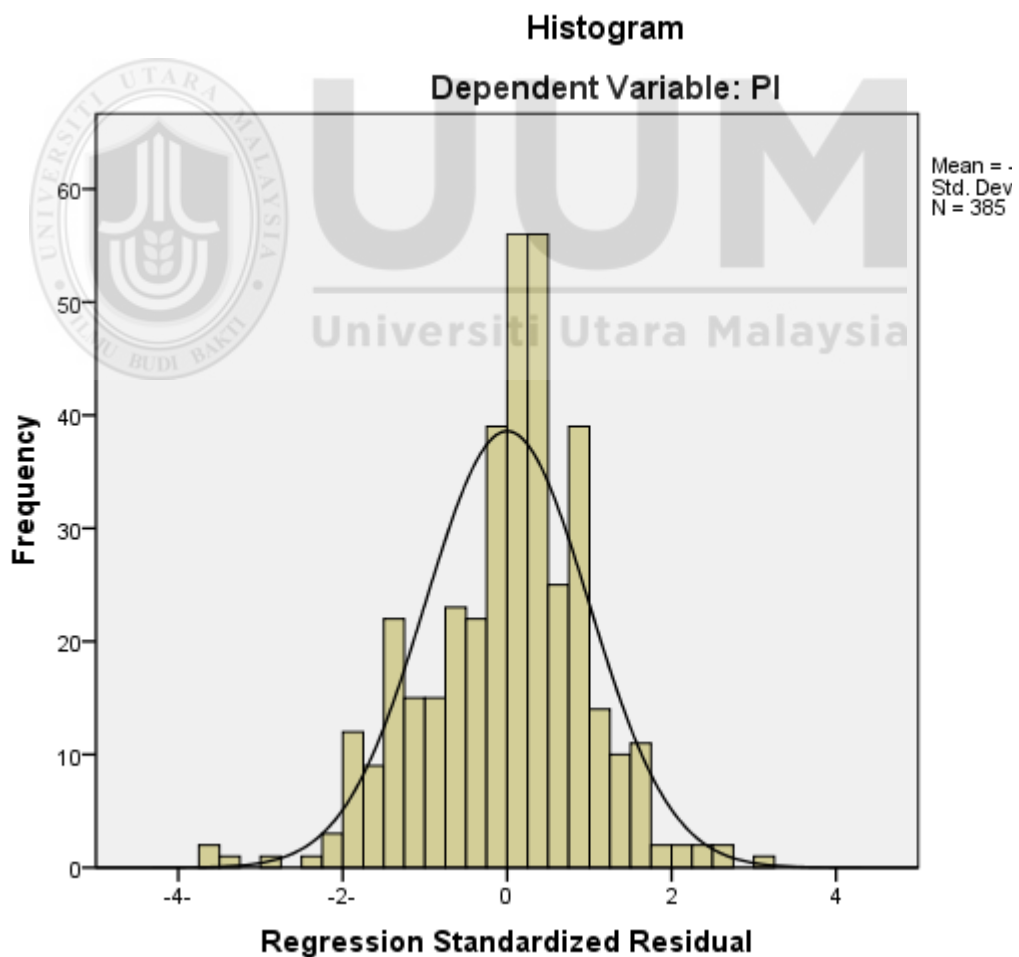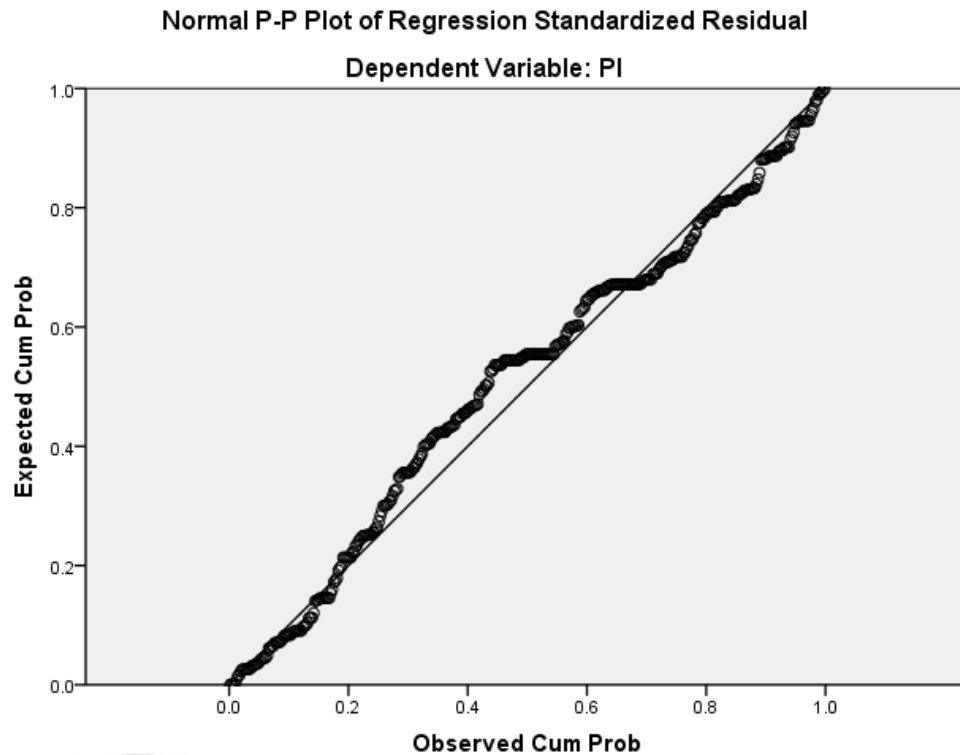
2. iv-mv

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	BLO, BAS, BAW, PQ	.	Enter

a. All requested variables entered.

b. Dependent Variable: BT

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.792[a]	.627	.623	.38880

a. Predictors: (Constant), BLO, BAS, BAW, PQ

b. Dependent Variable: BT

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	96.539	4	24.135	159.658	.000[a]
	Residual	57.443	380	.151		
	Total	153.982	384			

a. Predictors: (Constant), BLO, BAS, BAW, PQ

b. Dependent Variable: BT

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.423	.170		2.487	.013
	BAW	-.041-	.048	-.037-	-.845-	.399
	PQ	.294	.050	.276	5.895	.000
	BAS	.178	.041	.166	4.348	.000
	BLO	.439	.036	.510	12.036	.000

a. Dependent Variable: BT

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3. mv-dv

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	BT[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: PI

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.766[a]	.587	.586	.48011

a. Predictors: (Constant), BT

b. Dependent Variable: PI

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	125.572	1	125.572	544.777	.000[a]
	Residual	88.282	383	.231		
	Total	213.855	384			

a. Predictors: (Constant), BT

b. Dependent Variable: PI

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Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.380	.155		2.454	.015
	BT	.903	.039	.766	23.340	.000

a. Dependent Variable: PI

4. Mediating

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	BLO, BAS, BAW, PQ	.	Enter
2	BT^a	.	Enter

a. All requested variables entered.

b. Dependent Variable: PI

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.718^a	.516	.511	.52202
2	.798^b	.637	.632	.45269

a. Predictors: (Constant), BLO, BAS, BAW, PQ

b. Predictors: (Constant), BLO, BAS, BAW, PQ, BT

c. Dependent Variable: PI

ANOVA[c]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	110.302	4	27.576	101.192	.000[a]
	Residual	103.552	380	.273		
	Total	213.855	384			
2	Regression	136.187	5	27.237	132.913	.000[b]
	Residual	77.667	379	.205		
	Total	213.855	384			

a. Predictors: (Constant), BLO, BAS, BAW, PQ

b. Predictors: (Constant), BLO, BAS, BAW, PQ, BT

c. Dependent Variable: PI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.572	.229		2.501	.013
	BAW	.049	.065	.038	.762	.446
	PQ	.225	.067	.179	3.361	.001
	BAS	-.021-	.055	-.017-	-.382-	.703
	BLO	.586	.049	.577	11.961	.000
2	(Constant)	.287	.200		1.438	.151
	BAW	.077	.056	.059	1.365	.173
	PQ	.028	.061	.022	.456	.648
	BAS	-.141-	.049	-.111-	-2.876-	.004
	BLO	.291	.050	.287	5.832	.000
	BT	.671	.060	.570	11.239	.000

a. Dependent Variable: PI

5. Frequency Table

Gender of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	130	33.8	33.8	33.8
	Female	255	66.2	66.2	100.0
	Total	385	100.0	100.0	

Education of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Foundation	12	3.1	3.1	3.1
	Undergraduates	315	81.8	81.8	84.9
	Postgraduates	58	15.1	15.1	100.0
	Total	385	100.0	100.0	

Marital Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	"Married"	40	10.4	10.4	10.4
	"Single"	334	86.8	86.8	97.1
	Others	11	2.9	2.9	100.0
	Total	385	100.0	100.0	

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Which of the following colleges do you study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	"Foundation Center"	14	3.6	3.6	3.6
	"UUM CAS"	86	22.3	22.3	26.0
	"UUM COB"	214	55.6	55.6	81.6
	UUM AHSGS	43	11.2	11.2	92.7
	"UUM AHSGS"	10	2.6	2.6	95.3
	"UUM OYAGSB"	8	2.1	2.1	97.4
	"UUM GSGSG"	10	2.6	2.6	100.0
	Total	385	100.0	100.0	

Ethnic Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	224	58.2	58.2	58.2
	Chinese	81	21.0	21.0	79.2
	Indian	30	7.8	7.8	87.0
	Others	50	13.0	13.0	100.0
	Total	385	100.0	100.0	

The smartphone brand you are currently using

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Samsung	106	27.5	27.5	27.5
	Oppo	42	10.9	10.9	38.4
	Huawei	26	6.8	6.8	45.2
	Asus	34	8.8	8.8	54.0
	Apple	59	15.3	15.3	69.4
	Others	118	30.6	30.6	100.0
	Total	385	100.0	100.0	

6. Reliability

BAS:

Reliability Statistics

Cronbach's Alpha	N of Items
.744	4

PQ

Reliability Statistics

Cronbach's Alpha	N of Items
.862	4

BAS

Reliability Statistics

Cronbach's Alpha	N of Items
.704	3

BLO

Reliability Statistics

Cronbach's Alpha	N of Items
.825	3

BT

Reliability Statistics

Cronbach's Alpha	N of Items
.869	5

PI

Reliability Statistics

Cronbach's Alpha	N of Items
.832	3