The hidden chain of branded telecommunication services delivery: Value, trust, brand, price tolerance and word of mouth communication chain

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Abstract

Due to high customer switching behaviour from one mobile service provider to another and high competition within the market, scholars and marketers are trying to find and formulate the most appropriate consumer-driven business strategy to stay competitive. Grounded in means-end, value, and brand equity theories, this study proposes an integrative model in the telecom context to establish value → trust→ brand → price tolerance→ word of mouth communication (WOMC) chain. As a primary approach, the survey method is used through which 437 online responses were collected. Applying Structural Equation Modelling (SEM), the findings of this study show that the empirical outcomes tally with the proposed relationships (the chain) and the importance-performance map analysis indicates that both perceived value and brand trust have the highest influence on price tolerance. Brand image and perceived value also demonstrate to be of highest importance in building positive WOMC in the context of the telecoms industry. In addition, this study found that brand equity components have strong mediating effects, while the moderating roles of gender and

age across groups varies. Overall, the present study contributes to the service marketing, branding, and consumer behaviour literature, particularly in the context of telecommunications.

Keywords: branded services; perceived value; price tolerance; word of mouth communication (WOMC)

Introduction

The rapid growth of information technology over the last decades and high consumer demand for telecommunication services have increased the petition for affordable and effective Internet packages from telecom service providers. Highlighted by past studies (Nikhashemi, Valaei, & Tarofder, 2017; Wong, 2010), the telecommunication industry suffers from subscriber churn as the result of intense competition and saturated market. Hence, using branding strategy as a differentiation approach and forming positive word of mouth communication (WOMC) to recruit new customers are critical parts of a business strategy (Vázquez-Casielles, Iglesias, & Varela-Neira, 2017; Wong, 2010). Branding is a unique approach through which firms can distinguish themselves from their competitors (Moradi & Zarei, 2012; Zhao, Sun, & Kakuda, 2017), increase their profitability (Liu, Wong, Tseng, Chang, & Phau, 2017; Nikhashemi et al., 2017), and provide a price premium (Madden, Fehle, & Fournier, 2006; Schiffman, O'Cass, Paladino, & Carlson, 2013). The role of brand equity in brand building is inevitable (Aaker, 2009). Brand equity is the value added to a product through the years (Keller, 1993). In the last ten years, the concept of brand equity has been the focal point for scholars and brand managers (Moradi & Zarei, 2012). The reason for the flourishing concept of brand equity is due to a number of reasons. First, it is because of the strategic role of brand equity, and the second is due to its role in gaining competitive

advantage which can stabilize the business and reduce the risk of marketing campaign and activities in a competitive market (De Chernatony, Cottam, & Segal-Horn, 2006). However, even though there are several studies measuring and evaluating brand equity tools with rather comprehensive findings (Chow, Ling, Yen, & Hwang, 2017; Hazée, Van Vaerenbergh, & Armirotto, 2017; Moradi & Zarei, 2012), research on the formation of brand equity by identifying and testing the antecedents is limited.

Furthermore, as widely accepted by scholars, positive WOMC is considered a customer's behavioural outcome which may result in the formation of customer's attitude and belief and at the same time influence and facilitate the consumer's decision-making process (Schiffman et al., 2013). By the same token, WOMC has been found to be more influential than any other forms of communication such as advertisement, newspaper, and media (Jalilvand, Salimipour, Elyasi, & Mohammadi, 2017); therefore, identifying the antecedents of positive WOMC is crucial (Vázquez-Casielles, Iglesias, & Varela-Neira, 2012). An earlier study found that 76% of consumer buying behaviour decisions were influenced by WOMC (Jalilvand et al., 2017). In addition, the study by Abubakar and Mavondo (2014) in tourism also found that WOMC influences traveller's destination choice. Furthermore, as stated by Andrei, Zait, Vătămănescu, and Pînzaru (2017), positive WOMC can be considered as one of the significant outcomes of customer-firm relationship.

Moreover, in developing countries, there are several economic issues such as inflation rate, currency fluctuation, and government tax which hampers the firms' revenues and forces them to raise prices (Temerak, 2016). Price tolerance is a boundary within which consumers do not change their buying behaviour. Due to the high switching behaviour in the telecom industry (Jiwat & Ming-Lu, 2016), the level of price tolerance becomes critical and there is a need for decision-makers to identify the applicable branding strategies through which consumers would show less resistance. Undoubtedly, businesses can benefit by engaging and

understanding the underlying factors of price tolerance in their pricing strategy. Empirical investigation of the association between dimensions of brand equity and price tolerance is scarce and this study can probably be considered the maiden research to address this overlooked gap in the telecom industry. It seems that there is a paucity of research that considered WOMC as an outcome of brand equity components (i.e., brand associations, brand image, and brand loyalty); hence, to fill this void in literature, this study endeavour to scrutinize the association between the aforementioned components of brand equity in relation to positive WOMC and price tolerance, in an integrated study.

Past literature (Das, 2014) has highlighted that gender plays a pivotal role in consumer buying behaviour and, to some extent, the degree of value perception, and that brand trust varies across gender. In other words, customers' appreciation of the symbolic values of the brand image and the perceived functional congruity of brand vary across genders (Das, 2014; Grohmann, 2009; Nikhashemi et al., 2017). In fact, the role of gender necessitates further investigation into its relationship to branded products. Therefore, this study attempts to investigate the impact of perceived value, which is a result of cost and benefit perception of customers after using the product (i.e., price, video and voice call quality, value added to service), and brand trust, which is a result of customer's experience (reliability and intentions) on the formation of brand equity, on positive WOMC, and price tolerance in the telecoms industry. Furthermore, this study examines whether gender and age groups moderate the impacts of perceived value and brand trust on each component of brand equity, positive WOMC, and price tolerance.

The results of this study shed more light on the links between perceived value and brand trust and the components of brand equity, and the relationship between the components of brand equity, positive WOMC, and price tolerance. Besides, the current study demonstrates the moderating role of gender and income in enhancing the associations of the

proposed hypothesized relationships which have been overlooked in previous studies. Overall, the present study contributes to service marketing, branding, and consumer behaviour literature, particularly in the telecom context. As stated by Warner (2014), South East Asian countries to a large extent share similar values and cultures and since the present study is conducted in Malaysia, which is regarded as a multi-cultural country, the outcomes of the present study could be applied to the other countries in the region.

A review of literature and hypotheses development

Perceived Value

The study of perceived consumer value and its effect on consumer behaviour has gathered great momentum in recent years as there is evidence that positive consumer attitudes and behaviours are the results of creating and promoting consumer perceived value (Gordon, Dibb, Magee, Cooper, & Waitt, 2018; Nikhashemi, Tarofder, Gaur, & Haque, 2016; Sayil, Akyol, & Golbasi Simsek, 2018). However, the value is bound to be subjective as the perceived value and its formation differ among individuals. From the perspective of value theory, value is defined "as the regard that something is held to deserve the importance, worth or usefulness of something" (Gordon et al., 2018; Janawade, Bertrand, Léo, & Philippe, 2015). Further, Zeithaml (1988), whose definition is well appreciated in the marketing literature, defined perceived value as the overall consumers' perception of what they have been given and what they have received. Even though the concept of perceived value has been investigated over the past two decades extensively, the growing body of knowledge on this concept is rather fragmented (Nikhashemi et al., 2016; Sánchez-Fernández & Iniesta-Bonillo, 2007). For instance, some researchers looked at perceived value as a unidimensional point of view where the utilitarian perspective of the product is highlighted (Chaudhuri & Ligas, 2009). On the other hand, some other scholars believed that the concept

of perceived value is complex and the multidimensional approach of perceived value should be considered (Sánchez-Fernández & Iniesta-Bonillo, 2007). For instance, in order to measure the perceived value, both hedonic and utilitarian values should be taken into consideration (Sánchez-Fernández & Iniesta-Bonillo, 2007). However, the multidimensional approach of perceived value compared to the unidimensional approach is less appreciated by scholars. According to the marketing literature, the concept of perceived value can also be viewed from both quality and price functions (Nikhashemi et al., 2016).

Zeithaml (1988) used the Means-end theory to demonstrate and conceptualize perceived value as a price and quality relationship, and according to her, perceived value can be considered from four different perspectives: the first is the value which is perceived as a low price, the second is the value that refers to whatever consumers want from the product they use, the third is the consumer's perception of the obtained quality and paid price, and finally, the value that is the process of what you give and what you will receive in return. Moreover, perceived quality can be defined as consumers' overall judgment regarding the product or service experience (Kevin Lane Keller, 1993). In addition, Moradi and Zarei (2012) suggested that perceived quality is an important component of value formation and it can result in consumers' positive evaluation of a product or service. For the current study, the concept of perceived value from quality and price relationship's perspective is used, since, in the telecom industry, quality and price can be considered as the main components of value creation.

As mentioned by Kevin Lane Keller (1993) and Moradi and Zarei (2012) brand associations occur when consumers retrieve the product attributes' information (i.e., quality and price) enabling them to predict the benefit of product consumption (perceived value). For instance, if the consumer considers the quality of the internet connections, they are receiving from the mobile service providers as being worth more than the amount of money they pay

(perceived value), chances are that it may result in greater brand associations. Therefore, based on the above argument, the following hypothesis is suggested:

H1: There is a positive relationship between perceived value and brand association in the telecom industry.

Brand image is built upon a consumer's emotional response or perception towards the brand (Keller, 2003; Rossolatos, 2018). As indicated by Balakrishnan and Griffiths (2018), creating positive brand image is the central focus of marketers and brand managers which can be expedited and facilitated by adding value to the product and services. When value perception is created in the consumers' minds due to the benefit, they are obtaining through product consumption and experience, it could correspond to positive brand image formation. Therefore, based on the above argument the following hypothesis is proposed:

H2: There is a positive relationship between perceived value and brand image in the telecom industry.

As the ultimate objective of most companies is to gain loyal customers, identifying what factors contribute to this objective is important. It is argued that higher customer value results in greater satisfaction with a brand and therefore improves brand loyalty (Lin & Wang, 2006; Luo, Zhang, & Liu, 2015). The positive relationship between perceived value and loyalty is supported in past studies (Floh, Zauner, Koller, & Rusch, 2014; Nikhashemi et al., 2016). Therefore, we propose that:

H3: There is a positive relationship between perceived value and brand loyalty in the telecom industry.

Brand trust

The ultimate goal of firms is to build a strong tie between their consumers and their brand where brand trust is the main link in the chain (Barra, Pressgrove, & Torres, 2018; Chatzipanagiotou, Veloutsou, & Christodoulides, 2016; Karjaluoto, Munnukka, & Kiuru, 2016). The concept of trust has been a focal point in different disciplines such as psychology (Chari, Christodoulides, Presi, Wenhold, & Casaletto, 2016; Woolley & Fishbach, 2016), management (Sardana, Thatchenkery, & Laeequddin, 2010) and marketing (Laroche, Habibi, Richard, & Sankaranarayanan, 2012). By scrutinizing past literature, we found that most scholars believed that risk and confidence expectations are the two most important components of trust definition (Delgado-Ballester, Munuera-Aleman, & Yague-Guillen, 2003). For instance, Deutsch (1973) defined trust as "the confidence that one will find what is desired from another, rather than what is feared". Therefore, trusting a brand can establish positive behavioural outcome towards the brand for the consumers (Delgado-Ballester & Luis Munuera-Alemán, 2005; Schiffman et al., 2013).

The current study has adopted the brand trust model proposed by Delgado-Ballester and Luis Munuera-Alemán (2005) which puts forth the concept of brand trust as a combination of brand reliability and brand intentions. Brand reliability is regarded as a component of technical or competency-based nature which focuses more on keeping promises in order to satisfy consumers' needs. Brand intention is considered the attempts to highlight the attribution of good intentions of the brand in relation to their target consumers (Chernatony et al., 2006). For instance, how fast could the service provider address the problems that arise if there were issues related to internet service and connectivity. As a

result, we can consider a brand as a trustworthy brand if the brand keeps its promises regarding its product throughout the development, marketing campaign, and selling of the product. Based on the above brief literature, we define the term "brand trust" as a positive feeling which is established based on consumer's interaction with the brand, and therefore perceiving the brand as reliable and responsible.

Brand trust will be shaped through the process of consumer experience as well as interaction over a period of time (Molinillo, Japutra, Nguyen, & Chen, 2017). As a result, such experience and relationship with the brand will shape the consumer's knowledge of the brand. A consumer's experiences about a brand are affected by direct (i.e., trial usage, marketing campaign) and indirect (i.e., advertisement) evaluations (Moussa & de Barnier, 2017). Among the direct and indirect experiences, price and product quality which has been tested during the trial usage can generate greater brand trust (Delgado-Ballester & Luis Munuera-Alemán, 2005). For instance, telecoms by providing an opportunity for their consumers to use their internet package for one day by giving free trials or 1-day free passes can create and shape the behaviour of their consumers in such a way that they perceive value; therefore, if such experience meets their expectations, positive perceived value will be shaped and such strong perceived value which is a result of quality and price relationship during the consumption can generate greater brand trust. Therefore, the following hypothesis is suggested:

H4: There is a positive relationship between perceived value and brand trust in the telecom industry.

Furthermore, brand trust is referred as the core element of brand equity building because it is considered the cornerstone of successful long-term relationship building

between consumer and brand (Round & Roper, 2015). Sharma, Lassar, and Mittal (1995) regarded trust as a dimension of brand equity and at the same time, Ambler (1997) believed that trust can be both antecedent or consequence of brand equity. However, since both studies have failed to conceptualise brand trust from reliability and intention perspective, a clear picture of brand trust in the aforementioned studies seems to be missing.

The role of brand associations is very critical in the branding and marketing discipline. As mentioned earlier, brand associations are regarded as any related types of information which is well formed in the consumers' mind. In other words, brand association is defined as "the other informational nodes linked to the brand node in a person's memory and contain the meaning of the brand for consumers" (Kevin Lane Keller, 1993, p. 3). It is very critical for marketers and brand managers to ensure that their target market recall their brand as soon as the needs occur. Brand associations as stated by Chen (2017) fall into three categories: brand attributes, brand benefits, and brand attitude. Brand attributes refer to the overall impression of the consumers towards a product or service. Brand benefits is reflected at benefits that consumers obtain via product or service consumption, and finally, brand attitudes refer to the consumers' overall evaluation of a product or service. Therefore, marketers and brand managers, by implementing the appropriate strategy, should ensure that some of the above mentioned association categories are planted in the minds of their consumers as a source of information. Consequently, brand trust, which is built upon reliability and intention, would help the consumers generate positive attitude towards brand, product, or services (i.e., brand attribute), realise how they benefit from the purchased brand, product, and services (i.e., brand benefit), and finally evaluate the product and services positively (brand attitude). Therefore, on the basis of the above argument the following hypothesis is proposed:

H5: There is a positive relationship between brand trust and brand association in the telecom industry.

Several studies in branding and marketing literature supported the idea that the logic behind brand existence is to transmit trust within the company's target market where there is no direct contact between the firm and consumers (Rubio, Villaseñor, & Yagüe, 2017). Most companies considered the concept of brand trust as an inevitable driver of relationship building since, in consumer market, creating a personal relationship with consumers is quite challenging and in order to bypass this issue, creating a brand relationship is considered a great strategy to substitute for the human contact (Hur, Kim, & Kim, 2014). Past literature highlights that the behaviour of consumers is influenced by the level of trust they are developing in the exchange relationship with the brand (So, King, Sparks, & Wang, 2013). Therefore, brand trust could eliminate the perceived risk when consumers are involved in purchase decision and would result in behavioural (purchase intention and WOMC) and attitudinal outcomes (positive brand image and attitudinal loyalty). Therefore, based on the above argument, we propose that brand trust can create and establish a great brand image in the consumers' minds.

H6: There is a positive relationship between brand trust and brand image in the telecom industry.

Numerous studies (Delgado-Ballester & Luis Munuera-Alemán, 2005; Molinillo et al., 2017) supported the notion that brand trust is an important driver of brand loyalty since it establishes an exchange relationship between loyalty and trust which is highly valued. In the present study, brand loyalty is not only about repurchasing as it does not provide a true

meaning of loyalty (Huang, 2017), the attitudinal aspect of loyalty is also taken into consideration in order to avoid problems of spurious loyalty. Consequently, brand loyalty for firms is considered as a strategic weapon to maintain a good relationship with their consumers by creating brand trust (Zhao et al., 2017). Therefore, based of the above arguments the following hypothesis is suggested:

H7: There is a positive relationship between brand trust and brand loyalty in the telecom industry.

Brand equity

Although the concept of brand equity has been extensively investigated in the past decades, specifically in the area of brand management, the concept of brand equity has attracted tremendous interests among scholars and practitioners because it is considered a valuable intangible part of brand assets (Su & Tong, 2015). Brand equity can be defined as the additional value endowed to the product (Aaker, 2009; Kevin Lane Keller, 1993). The idea of brand equity building has been a central focus of many organizations and brand managers due to its interrelationship with company's success, sustainability in the competitive market, and profit outcome.

There are three approaches to assessing brand equity. The first approach evaluates brand equity from consumer perspective which mainly focuses on the associations and perceptions of consumers towards the product and service (K. L. Keller, 2003; Torres, Augusto, & Lisboa, 2015). The second school of thought focuses on the monetary value part of brand equity which is measurable via the brand's market share and the financial value of the brand (Aaker, 2009). The third approach incorporates both consumer and financial perspectives (Aaker, 2009; Su & Tong, 2015). This study focuses on the consumer-based

brand equity approach. If the brand is positioned in the mind of the consumers as a quality brand and they perceive that the benefit they are getting from the product is worth more than the cost they are bearing (perceived value), it could result in many positive behavioural (e.g., loyalty, WOMC) and attitudinal outcomes (e.g., commitment, positive brand image, perceived quality) which finally could lead to better financial performance for firms.

Based on the customer-based brand equity model proposed by Aaker (2009), brand awareness, brand associations, brand loyalty, perceived quality, and other proprietary assets are components of brand equity. The fifth component, proprietary assets, such as patents and intellectual property rights, are usually omitted in measurements because they are not relevant to consumer perceptions (De Chernatony et al., 2006; Erdem, Swait, & Valenzuela, 2006; Moradi & Zarei, 2012). Hence, this leaves brand awareness, brand associations, brand loyalty, and brand image as the four core dimensions of brand equity. Moreover, previous research had empirically demonstrated that brand awareness and brand associations can be combined and formed into a single component of brand equity which is called brand associations (Moradi & Zarei, 2012; Su & Tong, 2015).

The term "brand association" refers to anything in memory that individuals link to and associate with a brand (Aaker, 2009), for instance, something relating the product profile, quality, symbol, role models, and brand characteristics to specific brands. Brand associations function as the heart of brand equity (Huang & Sarigöllü, 2012). According to R. Huang and Sarigöllü (2012), even though brand awareness is an important dimension of brand equity, it is still not yet enough, as these authors believed that in order to create strong consumer-based brand equity, the uniqueness and the power of brand association need to be highlighted. The meaning of brand association will not be unique unless consumers are able to link the positive value, whether it is tangible or intangible, to the brand. For example, it will be very

useful if consumers associate the Mobile service providers with quality, very fast Internet service, and reasonable price package.

A review of past literature reveals that brand image is a result of consumer's positive brand associations which can be considered the antecedents of brand equity (Tsai, 2013). On the other hand, the brand image represents an overall feeling and perception of consumers towards the brand. Moreover, marketing literature also suggested that brand image could be regarded as an important factor which can form strong brand equity (S. R. Nikhashemi & Valaei, 2017). Brand image refers to the individuals' perceptions about a brand as it is reflected by the brand associations held in the consumer's memory (R. Huang & Sarigöllü, 2012). As mentioned earlier, any association which is favourable and desirable towards a brand might end up with positive brand image (Cho & Fiore, 2015; Faircloth, Capella, & Alford, 2001). Besides, having unique and favourable and positive brand image in the minds of the consumers can help differentiate the brand from its competitor thus creating competitive advantage that also contributes to the enhancement of brand equity (Godey et al., 2016).

Brand loyalty is the ultimate goal of firms (Foroudi, Jin, Gupta, Foroudi, & Kitchen, 2018) through which both firms and consumers may possibly benefit. As stated by Foroudi et al. (2018) and Reichheld and Sasser (1990), loyalty is a determinant of customer retention whereby managing only five percent of consumer retention, the firm's profit can be appreciated from 25 to 85 percent. It should be noted that recruiting a new customer is anticipated to be more costly than retaining existing ones (Wills, 2009). Loyal customers can greatly contribute to the maximization of firms' profits due to a number of reasons. Firstly, loyal customers are more inclined to continuously purchase the product or services (Balakrishnan & Griffiths, 2018) and secondly, loyal customers tend to be more involved in spreading positive WOMC (Fung, King, Sparks, & Wang, 2013; Reichheld & Sasser, 1990).

Besides, the study carried out by Casidy and Wymer (2015) clearly shows that brand loyalty can play an indispensable role in positive WOMC. Therefore, brand loyalty is viewed as the cornerstone of a firm's success and prosperity and that its role should not be underestimated (Casidy & Wymer, 2015; Eakuru & Mat, 2008). In most circumstances, brand loyalty is considered a sample of brand equity since consumers with strong brand equity are also loyal to their favourite brand.

Customers can simply make assumptions about the quality of a product, brand, services, and stores based on the information obtained from mates, families, or work partners (Tuškej, Golob, & Podnar, 2013). As the earliest form of marketing communication, WOMC is regarded as an indicator of judgment and selection of a new product or service (Matos & Rossi, 2008; Vázquez-Casielles et al., 2017). Although most WOMC studies were conducted on its effects, limited studies focused on the determinants of WOMC, most of which tend to relate to the consumer's direct experience with a brand, product, or service (Chen, Luo, & Wang, 2017; Karjaluoto et al., 2016; Pongjit & Beise-Zee, 2015; Vázquez-Casielles et al., 2012). In line with brand equity, we believe that WOMC can be considered as an outcome of brand equity that has been established through the enforcement of perceived value and brand trust. Numerous studies suggested that by establishing a quality brand relationship, the consumers can engage with the brand (Foster, 2015) and their opinion can be shaped, which is a combination of belief, feelings, or emotion towards the brand (Popp & Woratschek, 2017; Schiffman et al., 2013) that would most likely form the appropriate behavioural outcome (Jalilvand et al., 2017). Therefore, we suggest that the brand equity which is built upon good brand image, association, and loyalty will definitely lead consumers to higher levels of behavioural engagement (e.g., WOMC). Therefore, the following hypotheses are suggested based on the above arguments:

There is a positive relationship between **H8a)** brand association, **H8b)** brand image, and **H8c)** brand loyalty and WOMC in the telecom industry

Brand equity and price tolerance

Research in brand measurement methods has mainly focused on non-financial measures and there is scant research on financial measures such as market share, willingness to pay a premium price, and price tolerance (Davcik, Vinhas, & Hair 2015). Elena and José (2001) found that the more committed consumers are towards brands, the higher their price tolerance will be. Further, the stronger the association consumers have with the brand, and when the brand reaches a certain level of familiarity, the less likely the consumers would react negatively when prices increase.

Studying 554 private mobile phone customers, Vázquez-Casielles, Suárez-Álvarez, and Del Río-Lanza (2009) found a direct link between positive switching barrier and price tolerance. Even though Vázquez-Casielles et al. (2009) found a positive relationship between cumulative customer satisfaction and price tolerance, the results of a study by He, Chan, and Tse (2008) in the service industry implied that even satisfied customers have low levels of price tolerance. Furthermore, the study by Delgado-Ballester and Luis Munuera-Alemán (2001) revealed that brand trust is a consequence of overall customer satisfaction and antecedent of commitment which leads to price tolerance. However, even though the findings of Delgado-Ballester and Luis Munuera-Alemán (2001) study is interesting, the antecedents of price tolerance have not been examined (i.e. establishing the link from each component of brand equity towards price tolerance). Therefore, there is a need for further empirical research examining the factors associated with price tolerance. When there is positive brand image referring to a product/service, the chances are that consumers are more willing to pay more, or they do not exhibit resistance to price changes. In addition, while consumers grow

fond of a brand, they establish a bond, and a level of attitudinal loyalty is formed. This triggers positive behavioural outcomes such as positive WOMC (H4a, b, and c), continuance intention, and price tolerance. Therefore, we propose that:

The higher the **H9a:** brand associations; **H9b:** brand image; **H9c:** brand loyalty, the higher the price tolerance in the telecom industry.

The heterogeneous impact of gender and age

The moderating role of gender has been investigated in numerous studies from mainly two different perspectives. The first perspective refers to the biological gender while the second school of thought refers to gender identities. Gender identity, which is composed of two dimensions of masculine and feminine aspects of personality traits, makes psychological sex (Kolyesnikova, Dodd, & Wilcox, 2009). Following most studies in marketing and brand relationship literature (Das, 2014), the current study has applied the concept of biological gender. As stated by Das (2014), since female and male consumers evaluate products, services, and brands differently, their buying behaviour and attitudes vary. For instance, female consumers are more willing to engage in personal interaction when it comes to purchasing as compared to males (Jin, Line, & Goh, 2013). It is also observed that male consumers spend less time during shopping, whilst females enjoy and spend a more significant amount of time on shopping activities (Das, 2014; Homburg & Giering, 2001). Homburg and Giering (2001) study confirmed that satisfied female consumers tend to repurchase products more frequently compared to their counterparts. According to Grohmann (2009), female consumers appreciate the symbolic values and attributes of products and brands better than males. The above comprehensive findings of prior literatures show that there is a substantial difference in terms of attitude and buying behaviour between gender

groups; therefore, it is noteworthy to incorporate the moderating role of gender in the proposed model of the present study. In addition, the attitude and behaviour of consumers vary across age groups (Yeh, Wang, & Yieh, 2016). Consumer evaluation of product and services is different across age groups as their attitude and behaviours are affected by their biophysical and biological changes throughout their age cycle (Deng, Mo, & Liu, 2014). Therefore, the following hypotheses are proposed:

H10: Gender moderates the proposed structural relationships in the telecom industry.

H11: Age moderates the proposed structural relationships in the telecom industry.

Figure 1: Theoretical Framework (Insert here)

Method and design

Sampling, data collection, and research constructs

Purposive (Judgmental) as a "Non-probability" approach of sampling is used in this study and 500 online questionnaires were collected from consumers with mobile internet package experiences. To ensure that the sample is representative, we ensure that participants have used the internet package for at least the past three years. The minimum 3-year frame has been considered for the survey of this study to make sure that all mobile internet subscribers have adequate experience with their internet packages which would enable them to appraise the product brand precisely. The number of usable responses obtained for this study is 437 after discarding incomplete questionnaires and non-engaged respondents. Table 1 demonstrates the demographic profile of the respondents in more details. In Malaysia, the switching behaviour among subscribers of mobile internet service is high because consumers can easily switch from one mobile internet package provider to another while still

maintaining the same contact number. As the Malaysian society is typified by three main ethnic communities, namely Malay, Indian, and Chinese, and the official language is Malay, the survey questionnaire was translated into the Malay language. Nevertheless, the participants were given the choice to answer the questions in either English or Malay. Previous studies (Hair, Hult, Ringle, & Sarstedt, 2016; Malhotra, Patil, & Kim, 2007) suggested that resource constraints play an important role on sample size consideration. Hair Hair et al. (2016) recommended the use of power analysis as the appropriate approach to identify a satisfactory sample size before using any variance based and covariance-based SEM analysis. This study employs Soper (2018) A-priori sample size calculator to identify the adequate sample size. Prior to applying the aforesaid calculator, the numbers of measurements' items, the number of exogenous, endogenous variables as well as preferred effect size need to be considered (Westland, 2010). All the required information such as numbers of measurement items =34, the total number of exogenous and endogenous variable= 7, preferred statistical power (i.e., 95%) at the probability level of 0.05 were entered. Based on the above provided information, the minimum proposed sample size for a structural model is 94 and the recommended level is 247. Since our sample size is larger than the proposed sample size (*N*=437), the justification of sampling meets the requirement of SEM approach.

As shown in Table 2, all 7 major constructs of the study (perceived value, brand trust, brand association, brand image, brand loyalty, positive WOMC, and price tolerance) are measured using the 7-point Likert scale ranging from 1 being associated with strongly disagree to 7 strongly agree. As tabulated in Table 2, perceived value with five items has been adopted from Petrick (2002), and brand trust with 7 items is adopted from Delgado-Ballester and Luis Munuera-Alemán (2005), brand associations with 6 items is adopted from Yoo and Donthu (2001), and brand image with 4 items is adopted accordingly (Cho & Fiore,

2015). Brand loyalty with 6 items has been adopted from Delgado-Ballester and Luis Munuera-Alemán (2005); Moradi and Zarei (2012), and positive WOMC with 5 items (Brown, Barry, Dacin, & Gunst, 2005) and price tolerance are adopted from a previous study (Vázquez-Casielles et al., 2009).

Common Method Variance

To avoid the method bias, the present study has used Bagozzi, Yi, and Phillips (1991) and Harman (1976) approaches. Harman (1976) suggested running the one-factor test when the use of the SPSS software is required. Based on this approach, the extraction method of the principal component of one fix factor with non-rotation is applied in factor analysis. The outcome reveals that only one factor has been extracted and it accounts for less than 50% of the variance (38.204%). Moreover, Bagozzi et al. (1991) suggested that to ensure the absence of CMV, the intercorrelations among the variables need to be examined to ensure the correlations are below 0.90. Referring to Table 3, it appears that there is no correlation more than within the suggested threshold; therefore, there is no CMV issue in the current study.

Descriptive and frequency analysis

Out of a total of 437 respondents, 239 are males which make up 54.7% of the sample, whereas 198 are females (45.3%). Moreover, the sample profile shows that the majority of respondents are Malays at 55.1%, followed by Indians 24.3%, and the minorities are from the Chinese community which forms 20.6% of the sample size. In terms of age, the majority of respondents' age falls within the ages of 18 to 28 years old (25.4%), followed by 21.74% for the age group between 29 and 39 years old, 16.25% aged between 39 and 49 years old, 19.45% are in the age range between 49 and 59, and 17.16% are 60 years old and above. The descriptive analysis indicates that 58.2% of respondents earn less than RM3000, followed by

30.6% earning between RM3001 and RM6000, and 11.2 % earning more than RM6000 per month.

Table 1: Sample profile (Insert here)

Measurement Model Validity

To confirm the validity of the measurement model, composite and reliability test should be applied (Hair Jr et al., 2016; Sekaran, 2006). As indicated in Table 2, composite reliability and Cronbach's Alpha values exceeded the suggested threshold of 0.70; as a result, the reliability of the instrument is met. However, three measurement items of brand trust (T1, T6, T7), one item from brand image (BI1), and one item from brand associations (BA1) have values less than the suggested threshold of 0.70; therefore, they are removed from the measurement models (Hair et al., 2016). Besides, no multi-collinearity has been found in the measurement models as the VIF values of all the indicators are less than the suggested cut-of-point of 5.

Table 2: Construct reliability and validity (Insert here)

As a final point, the performances of convergent validity via average variance extracted and discriminant validities through Fornell-Larcker criterion as well as Heterotrait-Monotrait ratio are assessed. The AVE of each individual latent construct is greater than the suggested cut of point of 0.50; therefore, the convergent validity is achieved (refer to Table 2). Table 3 also shows that Fornell-Larcker criterion is met, as the intercorrelations among the exogenous and endogenous variables are lesser than the off-diagonal values. Tabulated in Appendix A, the loadings of the items of each construct (bold values) are higher than the

loadings of the other constructs. Based on the arguments of Henseler, Ringle, and Sarstedt (2015), the Heterotrait-Monotrait ratio of correlations (HTMT) is the most valid criterion of discriminant validity. All HTMT values are below 0.90 (tabulated in Appendix B); hence, the necessary conditions for discriminant validity are achieved.

Table 3: Fornell-Larcker criterion (Insert here)

Structural model

It is believed that the satisfactory level of R^2 depends on the nature of the study. According to Cohen (1977), the expected R^2 in consumer behavioural research is within R^2 >0.02 <0.13, R^2 >0.13 <0.26, and R^2 >0.26 ranges which are considered weak, moderate, and strong, respectively (Cohen, 1977); however, greater values are preferred in exploratory studies (Hair Jr et al., 2016; Ringle, Sarstedt, & Straub, 2012). As portrayed in Figure 2, 35%, 39.7%, and 28.8% of variances in brand associations, brand image, and brand loyalty are explained by perceived value and brand trust. Moreover, 47.6% of brand trust is explained by perceived value and finally, high R^2 values are achieved for positive WOMC and price tolerance (0.46 and 0.47 respectively). To confirm the predictive accuracy of the proposed model, the predictive relevance value of Q^2 for brand trust (0.329), brand image (0.243), brand associations (0.162), brand loyalty (0.207), price tolerance (0.282), and positive WOMC (0.292) also show medium to high effect sizes. Further, the goodness of fit of SRMR shows a value of 0.087, which is lower than the threshold of 1 (Hair Jr et al., 2016); as a result, the structural model of the current study has a satisfactory model fit.

Figure 2: PLS-SEM results (Insert here)

The consequences of the direct hypotheses are provided in Table 4 and schematically depicted in Appendix C. All the direct effect hypotheses are supported. Hypotheses number 1, 2, and 3 (H1-3), which proposes positive relationships between perceived value and brand association (H1 with a pass coefficient of 0.190 and t-value of 4.182), brand image (H2 with a pass coefficient of 0.237 and t-value of 4.503), and brand loyalty (H3 with a pass coefficient of 0.160 and t-value of 2.695**)**, are supported. Hypothesis 4 (H4), which was formulated to examine the hypothesized relationship between perceived value and brand trust, is supported with t-value of 22.215 and path coefficient of 0.690, thus confirming the idea that perceived value can be considered a strong antecedent of brand trust. Hypotheses number 5 to 7 (H5, H6, H7) also confirm the significant bond between brand trust and brand association with path coefficient of 0.443 and t-value of 11.013 (H5), brand image (H6) with path coefficient of 0.443 and t-value of 8.704, and brand loyalty with path coefficient of 0.414 and t-value of 6.675 (H7), respectively, in telecoms' context.

Hypotheses 8a, 8b, and 8c proposing the positive relationships between brand associations, brand image, and loyalty with positive WOMC are also supported (t-values of 4.158, 9.231, 6.153, and with path coefficients of 0.170, 0.402, and 0.244, respectively). Furthermore, Hypotheses 9a, 9b, and 9c proposing the positive relationships between brand associations, brand image, and loyalty with price tolerance generate values above 1.96 (t-values of 3.091, 4.824, 7.080, and path coefficient of 0.163, 0.253, 0.413, respectively); therefore, all proposed hypotheses are supported. However, among these hypotheses, brand loyalty has a stronger effect compared to brand associations and image. This finding is consistent with prior studies (R. Huang & Sarigöllü, 2012; Moradi & Zarei, 2012).

Table 4: Hypothesis testing (Insert here)

Moderation analysis

To examine the hypotheses on the moderating variables (H10 and H11), PLS-Multi Group Analysis (MGA) (Hair Jr & Hult, 2017) is employed. Following the recommendations of Sarstedt, Henseler, and Ringle (2011), in PLS-Multi Group, P-values greater than 0.95 and lower than 0.05 indicate a significant difference across groups. As highlighted in Table 5, the path coefficient of brand trust towards brand associations (p-value of 0.950), as well as brand loyalty and price tolerance (p-value of 0.998) in the female group is significantly higher than in the male group; therefore, H10 is supported and two of the proposed structural relationships are more significant for females.

Examining H11, the results shown in Table 6 prove that the structural relationships vary across age groups and thus this hypothesis is also supported. For instance, comparing the structural relationships between 18-28 year olds and other age groups, the relationship between brand associations and price tolerance is stronger for the 29-39 years age group, as well as 49 years and above. The results also indicate that the relationship between brand association and positive WOMC is stronger for the 18-28 years old group. Surprisingly, the relationship between brand image and price tolerance is stronger for 29-year-olds and above. The relationship between brand loyalty and price tolerance is stronger for 18-28 year olds. The brand trust → brand associations, and brand trust → brand loyalty relationships are also stronger for 29-39 and 49-59 year olds. The relationship between perceived value and brand image is stronger for 29-39 year olds and the perceived value → brand associations, and perceived value → brand trust relationships are stronger for 18-28 year olds.

Table 5: PLS-MGA moderation effect of gender (Insert here)

Table 6: PLS-MGA the moderation effect of age (Insert here)

Importance-Performance Map analyses

The results of Importance-Performance Map Analyses (IPMA) extend the findings of PLS-SEM which help to facilitate and prioritize the decision makers' action plan (Hair Jr et al., 2016; Valaei, Nikhashemi, & Javan, 2017). In other words, IPMA enables decision-makers and managers to identify the area on which they need to give special attention. For instance, in the current study, our interest is to extend the findings of PLS-SEM to explore whether perceived value and brand trust are the main determinants of brand equity building in the telecom context and whether brand equity which has been established via perceived value and brand trust is considered the main determinant of positive WOMC and price tolerance. To do so, by selecting positive WOMC as the targeting construct (endogenous), IPMA is able to calculate the total effect of the structural model (importance) as well as the average values of the latent construct (performance) to indicate the significant areas that need to be taken into consideration. To be more precise, the outcome of IPMA enables us to identify the determinants with high performance and low importance; these major areas of improvement can be addressed by marketing managers during their marketing activities.

As shown in table 7, the IPMA demonstrates the results of two main endogenous constructs of the study, namely price tolerance and positive WOMC. The results clearly show that perceived value (0.395) and brand trust (0.394) have the highest importance in price tolerance in the telecoms industry (refer to Appendix D). However, its performance is considered somehow low compared to brand associations. Consequently, it is noteworthy to focus on marketing activities which can establish perceived value and brand trust in the minds of the customers throughout brand positioning. Considering positive WOMC as a second target endogenous construct, brand image (0.422) and perceived value (0.415) have the highest importance and brand associations (69.368) followed by perceived value (61.689) exhibit greater performance (refer to Appendix E). Finally, it might be a good idea for

marketing managers to emphasize on enhancing the performance of perceived value and brand associations in customer's mind.

Table 7: IPMA results (Insert here)

Conclusion and discussion

The support for developing and exploiting marketing resources is considered a substantial subject in the branding and marketing literature. Firms can stay competitive and strongly position themselves within the market if they utilize their marketing resources appropriately (Hazée et al., 2017). Brand equity, which is considered a relational market-based asset, is one of the identified marketing and branding resources in this study. The main objective of this study was to investigate the roles of perceived value (built upon quality and price relationship) and brand trust (constructed from reliability and intentions perspective) in enhancing components of brand equity in the context of telecom and to examine the links between brand equity (which has been reinforced by perceived value and brand trust), price tolerance, and positive WOMC. Furthermore, this study attempted to examine whether the impact of perceived value and brand trust vary across gender and age groups. Lastly, the factors that have higher importance and performance in building positive WOMC and price tolerance are identified.

The results reveal that perceived value, consistent with Means-end theory (Gutman, 1982; Zeithaml, 1988), directly and indirectly via brand trust has impact on the process of consumer-based brand equity. Consumers will perceive value if they feel that the benefit they are receiving from the product is more than the cost they are bearing (Schiffman et al., 2013). For example, mobile internet users will perceive value if they find that the online call quality is great, and added value to the internet service such as free internet rewards and free calls to

those using the same Mobile service provider's brand would establish good value perception in the customer's mind. Therefore, such positive value perception results in greater brand associations, brand image, and brand loyalty. Moreover, such perceived value can create very strong brand trust, as the study has shown that perceived value has a very strong impact on brand trust. The present study confirms the impact of brand trust on the components of brand equity since trust is considered a core part of brand equity building (Chow et al., 2017). The brand trust which has already been established based on reliability and good intentions can form the attitudes and behaviour of the consumers positively and even lead to better customer brand evaluations (Moussa & de Barnier, 2017; Tuškej et al., 2013). Compared to perceived value, brand trust performs as a stronger predictor in the process of consumer-based brand equity building. The reason might be due to the value perception which has already been established with the product that resulted in greater brand trust that led to a higher impact on the components of brand equity. Not surprisingly, the important role of perceived value and brand trust in building brand equity is also confirmed via IPMA (Refer to Appendix D and Table 7).

The study also confirmed that brand associations, brand image, and brand loyalty are positively related to price tolerance. Among the components of brand equity, brand loyalty has the strongest impact on price tolerance. These findings are consistent with previous studies as well (Chow et al., 2017; Moradi & Zarei, 2012). Even though some studies considered the positive WOMC as an antecedent of the brand equity, the current study proposes that positive WOMC is a unique outcome of brand equity. Numerous studies suggested that establishing good and quality brand relationship can get consumers to engage with the brand (Foster, 2015) and shape their opinions. Surprisingly, upon further investigation of the mediating role of brand associations, brand image, and brand loyalty (shown in Appendix F), we find that all components of brand equity mediated the

relationship between perceived value, WOMC, and price tolerance, as well as the relationship between brand trust, WOMC, and price tolerance, thus highlighting the importance of brand equity in service delivery. This indicates that as the perceived value and brand trust increase, so does the WOMC and price tolerance, but the primary reason for such relationship is because of the mediating role of brand equity.

Furthermore, the findings of PLS-Multi Group analysis also reveal that there is heterogeneity in gender and age groups. The results of PLS-MGA reveal that the influence of brand trust on brand associations is higher for females. Therefore, it will be noteworthy for marketing and brand managers, during their marketing campaign, to position their brand as more reliable and try to provide a trial use of their mobile internet package in order to portray good intention and the reliability of their brand towards their customers to ensure that the brand trust is well established in the customer's mind. The findings also indicate that the loyal female customers have higher price tolerance. Loyalty programs would be an effective strategy to maintain loyalty such as by providing awards and free internet redemption to customers who continue to purchase the mobile internet package, and appreciating the customers on their birthdays, for example, might enhance the level of brand loyalty (Chiou, 2004).

Interestingly, the PLS-Multi Group analysis shows that those who fall into the 18-29 years old age group have higher price tolerance and are more actively engaged in spreading positive WOMC when the brand is positively positioned in their minds or when they have a positive brand image (for 29 years old and above). It is suggested that marketing managers should consider co-creation branding as a branding strategy by engaging more customers in building a brand to create stronger customer-brand relationship which finally could result in better brand image building (Hajli, Shanmugam, Papagiannidis, Zahay, & Richard, 2017; Kaufmann, Loureiro, & Manarioti, 2016). Surprisingly, the younger customers (18-28 years

old) are more eager to talk or write about the service to others. Marketers can also improve customer brand evaluation and shape the opinions and feelings of their customers through advertisements, as an approach of integrated marketing communication, through which product added values are highlighted to differentiate themselves from their competitors which could result in positive attitude and brand image (Hartnett, Romaniuk, & Kennedy, 2016).

The findings of this study would enrich the marketing and branding literature via the integration of firm's resource-based view. For example, the findings demonstrate that brand equity can be explained better when both perceived value and brand trust have been taken into consideration and therefore underpinning the view that the concept of brand equity is the firms' relational market-based assets. As suggested by Chow et al. (2017), resources such as loyalty, brand image, and brand associations are immobile, and hence cannot be purchased or even replicated by competitors. Consequently, these resources can be combined to establish higher-order resources such as brand equity within which sustainable competitive advantage can be obtained. Unlike previous studies that were conducted in other contexts (Chow et al., 2017; Hazée et al., 2017; Moradi & Zarei, 2012; Torres et al., 2015), this research focused on the outcome of brand equity by examining both perceived value (formed based on the quality and price relationship) as well as brand trust (formed based on reliability and intentions) as two main resources which can enrich higher order model (brand equity) and its effectiveness in creating positive WOMC and price tolerance in the telecom context.

Implications

This study contributes to the body of knowledge theoretically and practically. Unlike previous literature in branding, service marketing, and consumer behaviour, this is a maiden study which applies the value and means-end theory to propose a comprehensive theoretical model which introduces the relationships between perceived value and brand trust and the

components of brand equity as well as extend the relationships between brand equity's components and its promising outcomes such as price tolerance and positive WOMC in an integrated model, particularly in the telecom industry. This study also incorporates the moderating roles of age and gender in the proposed theoretical framework using which service marketing managers will be able to design unique marketing strategies in order to meet the expectation of their target market across the age and gender groups.

This study makes practical contributions in several ways. First, in order for the telecoms to enjoy substantial competitive advantage within the market that is built upon brand equity, firms ought to design their products based on quality and price relationship to ensure that perceived value is established in the minds of the consumers. The benefit that mobile internet subscribers gain should be greater than the cost they are bearing. Building perceived value would be crucial, as brand trust will be formed as results of perceived value. This study shows that perceived value and brand trust are the main players in the telecom industry (highest importance) that can reinforce the effectiveness of brand equity's components in creating overall brand equity through which positive WOMC can be established.

As trust towards brands is constructed via experience and value perception, the more pleasant the experience shared by consumers with the brand, the deeper the trust towards the brand that can be established. Therefore, investments in programs such as satisfaction, which mostly deals with the handling of customer's complaints, in the design of the company's communication strategies, can portray the brand in such a way that it has very responsive behaviour and attitudes. Consequently, as soon as consumers feel that the brand has very responsive behaviour and attitude, they associate the brand as being reliable and having good intention towards its consumers, and therefore brand trust can be established; such trust can enhance greater brand associations, brand image, loyalty, and brand equity which results in

positive WOMC and price tolerance. History has also shown that if the consumers perceive that the benefit they are receiving from the product is worth paying for (perceived value) and find the brand very responsive and trustable, in cases where they identify some flaws with the products, they will give it a second chance (Delgado-Ballester & Luis Munuera-Alemán, 2005); the Toyota car acceleration issue in 2010 is one such example. Due to the strength of value perception and brand trust, the consumers continued their patronage and support to enjoy the product in spite of the unexpected product-harm crises.

Subsequently, marketing and branding literature has always suggested that perceived value is the essential part of the trust that a strong brand provides for consumers, so, paying close attention to how much trust consumers put in a brand might be considered a tool to manage brand equity and positive WOMC. This is predominantly imperative in the durable products and services industry (i.e., telecoms). The findings of the present study can also be extended to other South-East Asian countries where values and cultures are similar.

Limitation and future research recommendations

This study contributes to the existing literature theoretically and practically. However, there are several limitations which should be highlighted. Firstly, this study's focus was on the impact of perceived value and brand trust and it will be very interesting to examine the impact of co-creation branding and brand love on brand equity building. Secondly, since the sample population was not well defined in the current study, a non-probability sampling technique was applied. Therefore, to authenticate the findings of the current study, future study is suggested to test the proposed model in different cultural and industrial settings. Thirdly, it will be useful if other aspects of value and brand trust are also considered.

Appendix A: Loadings and cross-loadings (Insert here)

Appendix B: Heterotrait-monotrait (HTMT) ratio (Insert here)

Appendix C: Bootstrapping results (Insert here)

Appendix D: IPMA for price tolerance (Insert here)

Appendix E: IPMA for positive WOMC (Insert here)

Appendix F: Multiple mediation analysis for dimensions of brand equity (Insert here)

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Figure 3: Theoretical Framework

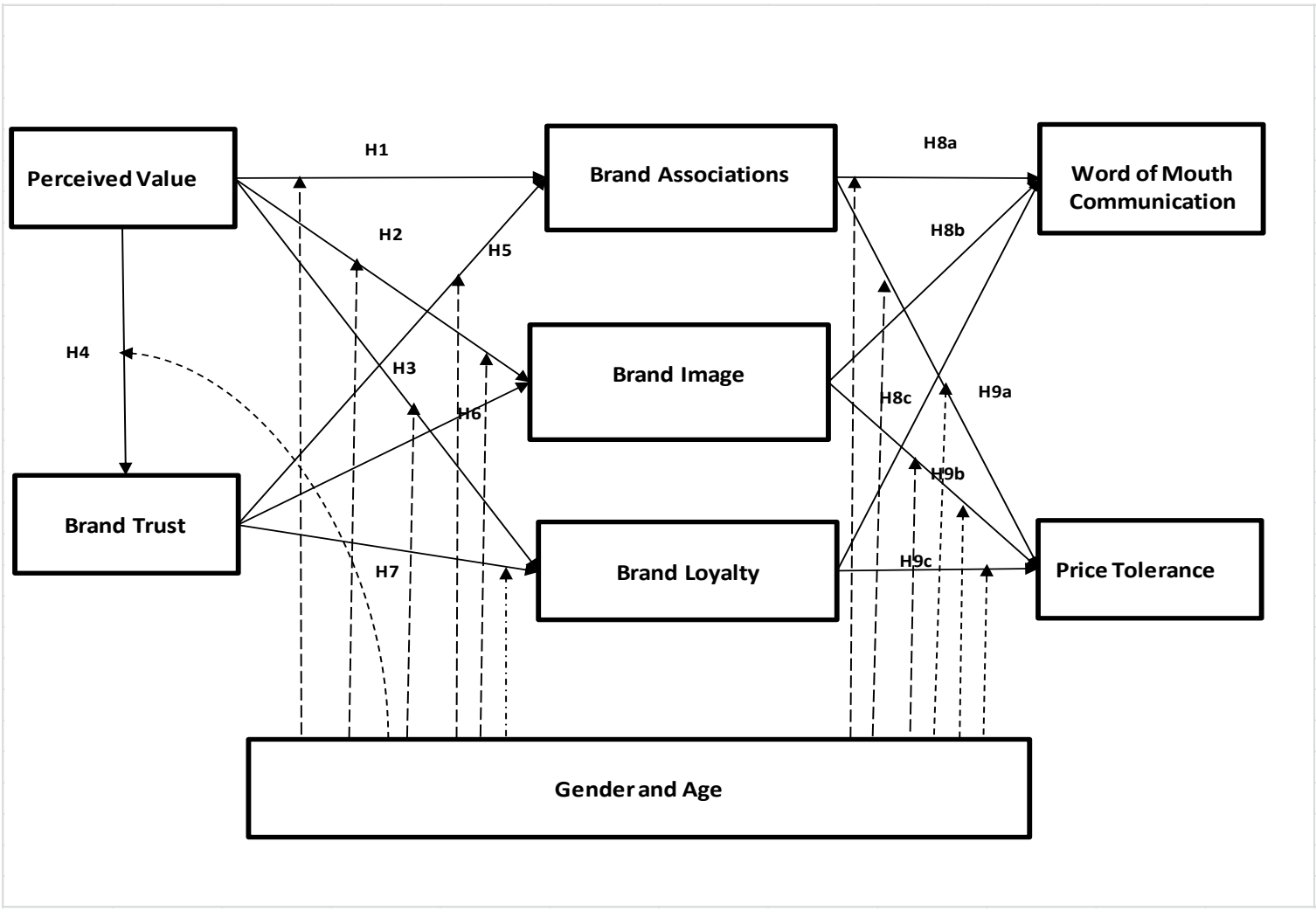
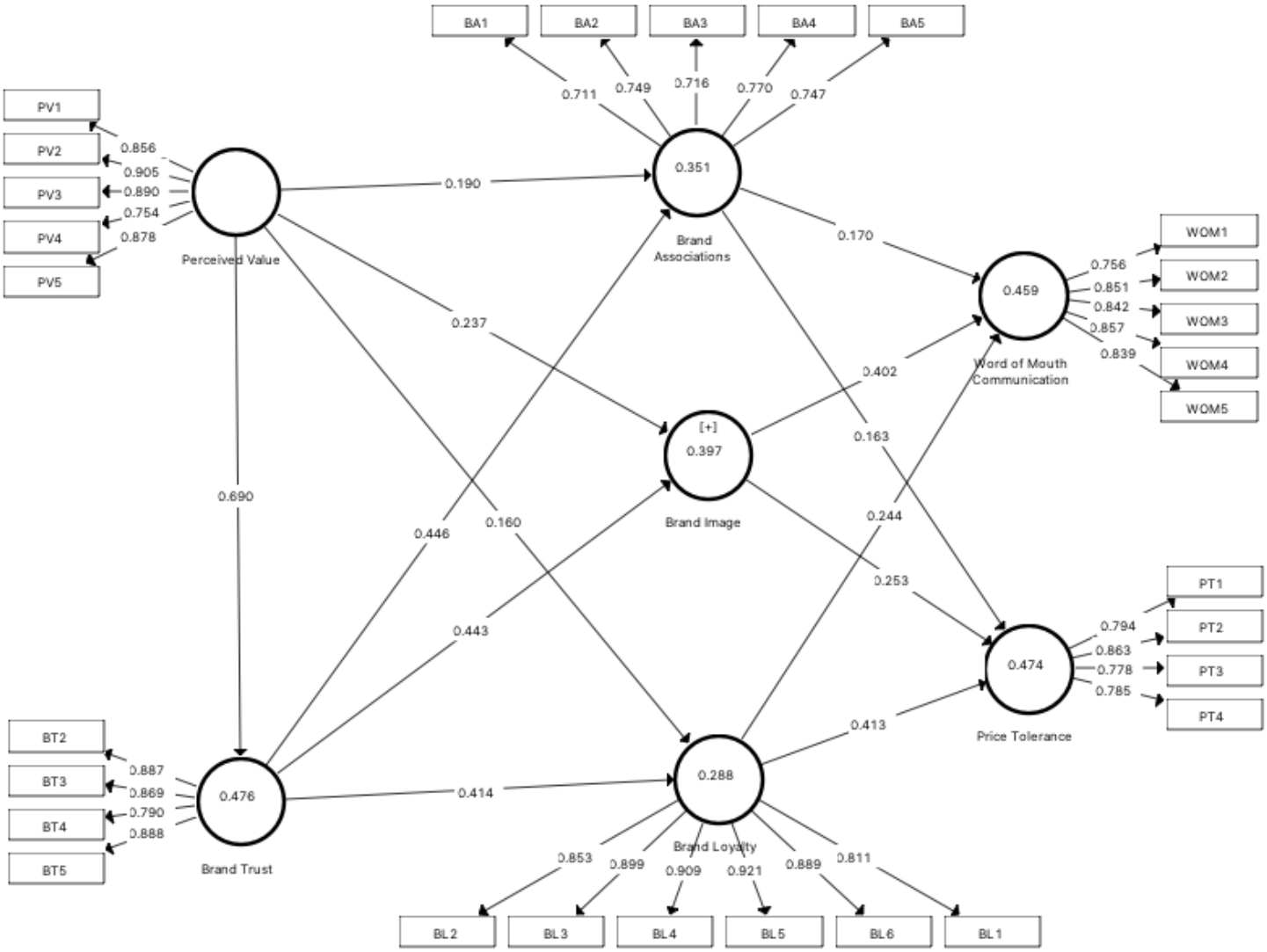
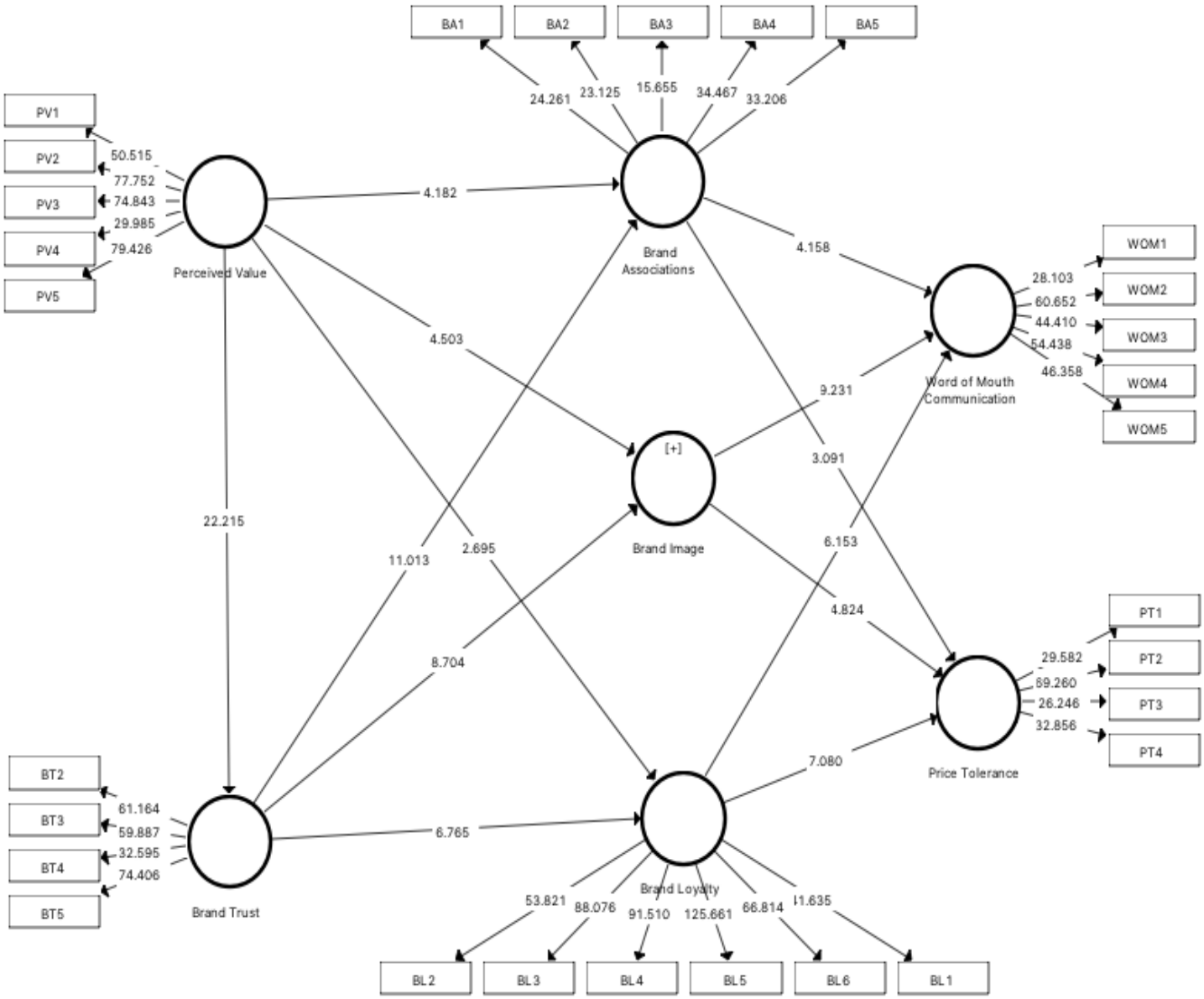


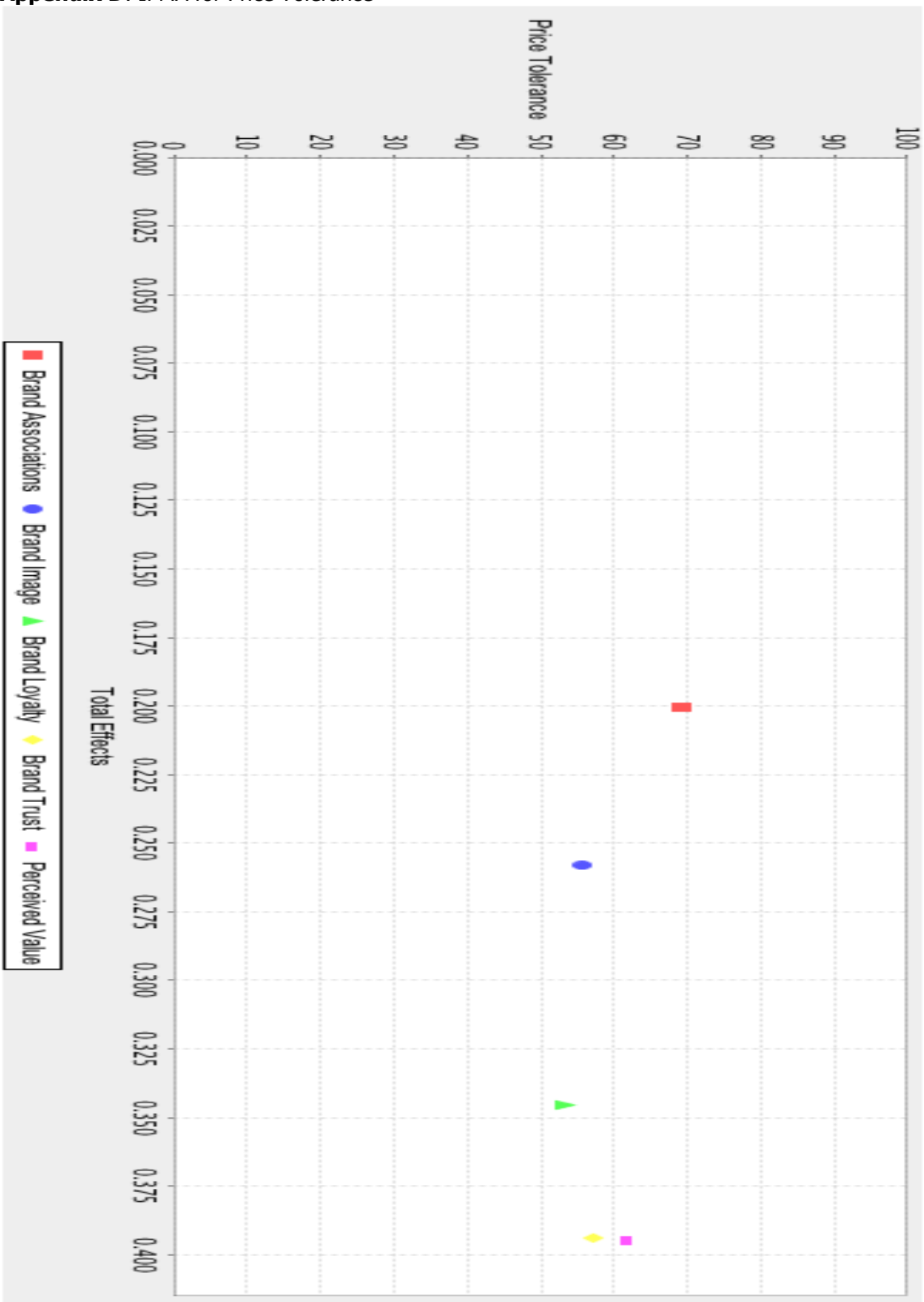
Figure 4: PLS-SEM results



Appendix C: Bootstrapping Results



Appendix D: IPMA for Price Tolerance



Appendix E: IPMA for Positive WOMC

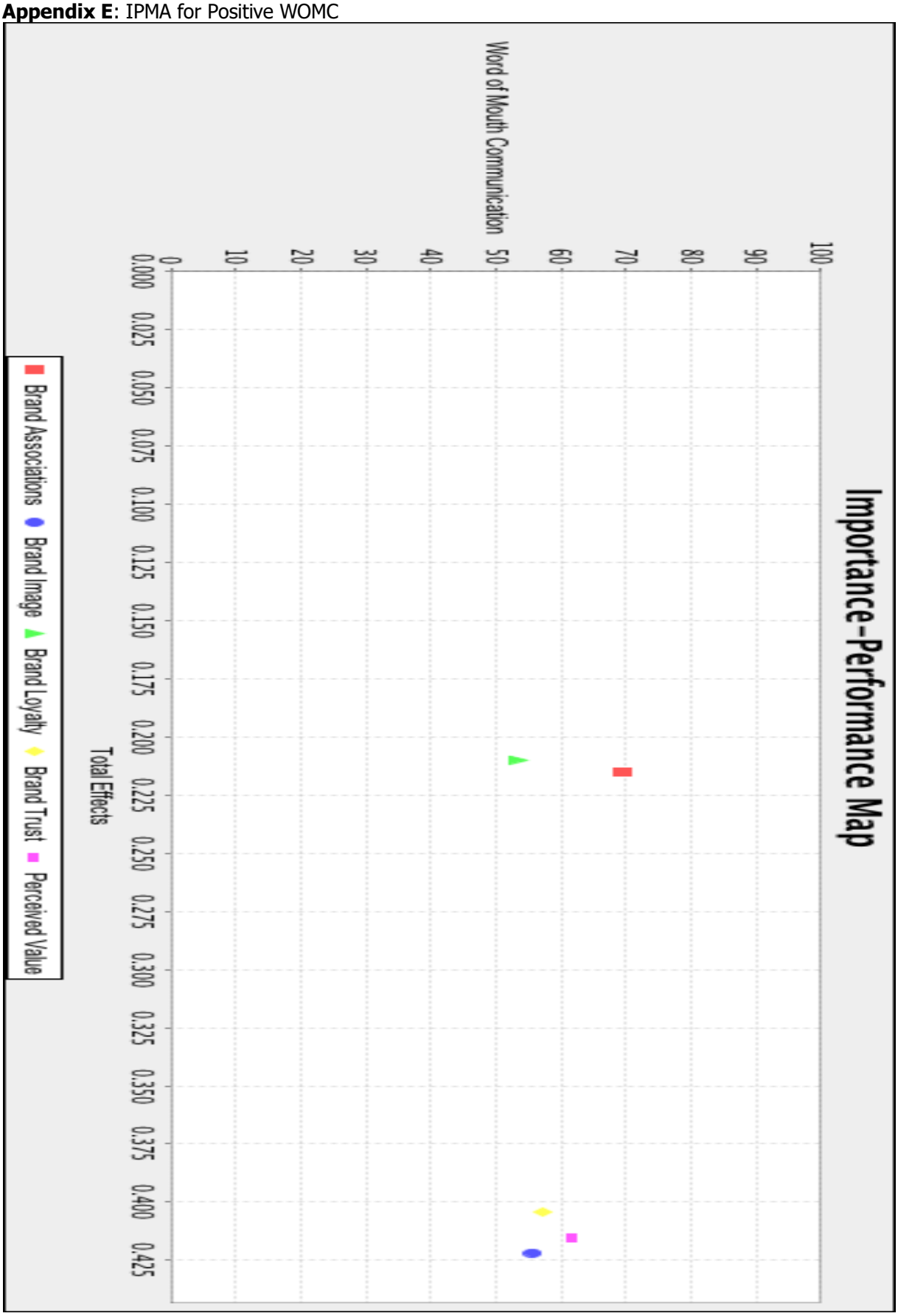


Table 3: Sample profile

Characteristics	*N*	Percentage %
Gender		
Male	239	54.7
Female	198	45.3
Age		
18-28	111	25.4
29-39	95	21.7
39-49	71	16.2
49-59	85	19.4
60 and above	75	17.1
Ethnic Group		
Malay	241	55.1
Malaysian Chinese	90	20.6
Indian Malaysia	106	24.3
Others	0	0.0
Income Level RM		
<3000	254	58.2
3001-6000	134	30.6
6000>	49	11.2

Source: Prepared by the authors

Table 4: Construct validity and reliability

Construct	Measurement items sources	Loading	VIF	AVE	CR	α
Perceived Value (PV)	Adopted from Petrick (2002); Kim, Park, and Jeong (2004)			0.736	0.933	0.910
	I get good value for money spent on my subscription to brand X	0.856	4.055			
	Reasonability of price with brand X	0.905	4.204			
	Variety of value-added services provided by X brand	0.890	3.916			
	Call clarity of X brand is perfect	0.754	1.886			
	The costs of subscribing to X are a bargain	0.878	2.675			
Brand Trust (T)	Adopted from Delgado-Ballester and Luis Munuera-Alemán (2005)			0.738	0.918	0.881
	I feel confidence in X internet service provider brand name	0.887	2.648			
	X is a brand name that never disappoints me	0.869	2.427			
	X brand name would make any effort to satisfy me in case of a problem	0.790	1.765			
	X brand name would compensate me in some way for the problem with the [product]	0.888	2.644			
Brand Associations	Adopted from Yoo and Donthu (2001)			0.546	0.857	0.800
	I am aware of brand X	0.711	1.506			
	I can quickly recall the logo or symbol of brand X	0.749	2.179			
	When I am thinking about my mobile internet plan, X comes to my mind immediately	0.716	2.189			
	I respect and admire people who use brand X	0.770	1.507			
	Strong characteristics of brand X come to my mind quickly	0.747	1.397			
Brand Image (BI)	Adopted from Cho and Fiore (2015)			0.665	0.888	0.834
	Brand X offers deals that I really can relate to	0.787	1.916			
	There is seldom net disconnection with brand X	0.793	1.961			
	Positive memories from past Experiences with brand X	0.809	1.848			
	X brand has a great net speed	0.871	2.141			
Brand Loyalty (BL)	Adopted from Delgado-Ballester and Luis Munuera-Alemán (2005)			0.776	0.954	0.942
	Even when another brand is on sale, I would prefer the brand X	0.811	3.094			
	X would be my first choice.	0.853	3.932			
	I consider myself to be loyal to X	0.899	4.634			
	I feel more attached to X than to other brands	0.909	4.146			
	I am more interested in X brand than other brands	0.921	3.849			
	I like X more than other brands	0.889	3.094			
Price Tolerance	Adopted from (Vázquez-Casielles, Suárez-Álvarez, and Del Río-Lanza 2009)			0.667	0.909	0.876
	Even if another brand has the same features as X, I would prefer to buy X.	0794	1.646			
	If there is another brand as good as X, I prefer to buy X.	0.863	2.572			
	If another brand is not different from X in any way, it seems smarter to purchase X.	0.778	1.975			

	It makes sense to buy X instead of any other brand, even if they are the same.	0.785	2.245			
	I am proud to be a subscriber of X	0.859	3.012			
Word of Mouth Communication	Adopted from Brown et al. (2005); Karjaluoto, Munnukka, and Kiuru (2016)			0.689	0.917	0.886
	I have recommended X brand to lots of people	0.756	1.808			
	I "talk up" X brand to my friends	0.851	2.483			
	I try to spread the good-word about X brand	0.842	2.190			
	I am proud to tell others that I am subscribed to X brand	0.857	4.014			
	I seldom miss an opportunity to tell others about X brand	0.839	3.923			

Notes: CR (Composite Reliability); AVE (Average Variance Extracted), **α (**Cronbach's Alpha), VIF (Variance Inflation Factor)

Source: Prepared by the authors

Table 5: Fornell-Larcker criterion - discriminant validity

	Brand Associations	Brand Image	Brand Loyalty	Brand Trust	Perceived Value	Price Tolerance	Word of Mouth Communication
Brand Associations	**0.739**						
Brand Image	0.532	**0.816**					
Brand Loyalty	0.497	0.487	**0.881**				
Brand Trust	0.577	0.607	0.524	**0.859**			
Perceived Value	0.497	0.543	0.446	0.690	**0.858**		
Price Tolerance	0.503	0.541	0.617	0.590	0.520	**0.817**	
Word of Mouth Communication	0.504	0.611	0.524	0.720	0.682	0.554	**0.830**

Note: The off-diagonal values are the square roots of AVEs.

Table 6: Structural model and moderation test outcomes

Hypothesized Path	Path Coefficient Model (Without Moderations)	t- Value	Decision
Perceived Value -> Brand Associations	0.190	4.182***	Supported
Perceived Value-> Brand Image	0.237	4.503***	Supported
Perceived value -> Brand Loyalty	0.160	2.695***	Supported
Perceived value -> Brand Trust	0.690	22.215***	Supported
Brand Trust -> Brand Associations	0.446	11.013***	Supported
Brand Trust -> Brand Image	0.443	8.704***	Supported
Brand Trust -> Brand Loyalty	0.414	6.765***	Supported
Brand Associations -> Price Tolerance	0.163	3.091***	Supported
Brand Image -> Price Tolerance	0.253	4.824***	Supported
Brand Loyalty -> Price Tolerance	0.413	7.080***	Supported
Brand Associations -> Word of Mouth Communication	0.170	4.158***	Supported
Brand Image -> Word of Mouth Communication	0.402	9.231***	Supported
Brand Loyalty -> Word of Mouth Communication	0.244	6.153***	Supported

**t*-values : 1.65 (10%) ; ***t*-values: 1.96 (5%); ****t*-values: 2.58 (1%)

Table 5: PLS-MGA- moderation effect of gender (H6)

Moderation Paths	Path coefficients-differences (male vs. female)	p-Value (male vs. female)
Brand Associations -> Price Tolerance	0.094	0.170
Brand Associations -> WOMC	0.095	0.850
Brand Image -> Price Tolerance	0.160	0.053
Brand Image -> WOMC	0.047	0.305
Brand Loyalty -> Price Tolerance	0.343	0.998
Brand Loyalty -> WOMC	0.052	0.248
Brand Trust -> Brand Associations	0.144	0.950
Brand Trust -> Brand Image	0.056	0.680
Brand Trust -> Brand Loyalty	0.067	0.685
Perceived Value -> Brand Associations	0.059	0.731
Perceived Value -> Brand Image	0.036	0.394
Perceived Value -> Brand Loyalty	0.028	0.419
Perceived Value -> Brand Trust	0.074	0.900

* : Bold values show significant differences

Source: Prepared by the authors

Table 6: PLS-MGA- moderation effect of age (H7)

Moderation Paths	p-Value(18-28 vs 29-39)	p-Value(18-28 vs 39-49)	p-Value(18-28 vs 49-59)	p-Value(18-28 vs 60 and above)	p-Value (29-39 vs 39-49)	p-Value (39-49 vs 49-59)	p-Value (39-49 vs 60 and above)	p-Value (49-59 vs 60 and above)
Brand Associations -> Price Tolerance	**0.997**	0.916	0.938	**0.998**	**0.035**	0.561	**0.999**	**0.997**
Brand Associations -> Word of Mouth Communication	**0.014**	0.056	0.192	**0.040**	0.567	0.707	0.513	0.302
Brand Image -> Price Tolerance	**0.960**	**0.957**	**0.958**	**0.983**	0.516	0.542	0.666	0.626
Brand Image -> Word of Mouth Communication	0.936	0.806	0.530	0.743	0.308	0.273	0.400	0.658
Brand Loyalty -> Price Tolerance	**0.001**	**0.020**	**0.013**	**0.000**	0.879	0.444	**0.005**	**0.011**
Brand Loyalty -> Word of Mouth Communication	0.702	0.564	0.316	0.739	0.408	0.309	0.644	0.819
Brand Trust -> Brand Associations	**0.999**	0.445	**0.985**	0.555	**0.010**	**0.974**	0.592	**0.047**
Brand Trust -> Brand Image	0.141	0.358	0.578	0.189	0.663	0.681	0.362	0.166
Brand Trust -> Brand Loyalty	**0.951**	0.743	**0.991**	0.666	0.283	0.883	0.388	**0.038**
Perceived Value -> Brand Associations	0.075	0.746	0.028	0.435	**0.967**	**0.015**	0.219	0.916
Perceived Value -> Brand Image	**0.973**	0.662	0.441	0.700	0.248	0.313	0.514	0.732
Perceived Value -> Brand Loyalty	0.163	0.638	0.138	0.627	0.848	0.133	0.469	0.912
Perceived Value -> Brand Trust	**0.003**	0.716	0.108	0.382	**0.998**	**0.030**	0.166	0.876

* : Bold values show significant differences

Table 7: IPMA Results

Construct	Price Tolerance		Positive word of mouth communication	
	Importance	Performance	Importance	Performance
Brand Associations	0.200	69.368	0.215	69.368
Brand Image	0.258	55.696	0.422	55.696
Brand Loyalty	0.346	53.447	0.210	53.447
Brand Trust	0.394	57.217	0.404	57.217
Perceived Value	0.395	61.689	0.415	61.689
Price Tolerance	N/A	N/A	N/A	N/A

Note: Importance = total effects of structural model, Performance = average values of latent variable scores (Hair Jr et al. 2016)

Source: Prepared by the authors

Appendix A: Loading and cross loadings

Items	Brand Associations	Brand Image	Brand Loyalty	Brand Trust	Perceived Value	Price Tolerance	Word of Mouth Communication
BA1	**0.711**	0.405	0.311	0.285	0.248	0.397	0.308
BA2	**0.749**	0.343	0.305	0.333	0.323	0.312	0.332
BA3	**0.716**	0.237	0.181	0.262	0.277	0.252	0.211
BA4	**0.770**	0.431	0.453	0.482	0.435	0.432	0.427
BA5	**0.747**	0.468	0.466	0.618	0.465	0.405	0.480
BI2	0.464	**0.787**	0.409	0.470	0.367	0.399	0.479
BI3	0.434	**0.793**	0.288	0.404	0.354	0.345	0.381
BI4	0.391	**0.809**	0.433	0.500	0.484	0.499	0.502
BI5	0.454	**0.871**	0.434	0.578	0.531	0.494	0.597
BL1	0.343	0.369	**0.811**	0.392	0.242	0.418	0.398
BL2	0.498	0.430	**0.853**	0.442	0.358	0.540	0.439
BL3	0.476	0.496	**0.899**	0.516	0.439	0.567	0.514
BL4	0.416	0.443	**0.909**	0.487	0.442	0.576	0.506
BL5	0.464	0.425	**0.921**	0.480	0.419	0.589	0.462
BL6	0.418	0.400	**0.889**	0.441	0.422	0.552	0.437
BT2	0.571	0.544	0.469	**0.887**	0.652	0.567	0.658
BT3	0.473	0.490	0.488	**0.869**	0.530	0.551	0.596
BT4	0.409	0.466	0.395	**0.790**	0.547	0.310	0.594
BT5	0.515	0.577	0.448	**0.888**	0.632	0.575	0.624
PT1	0.491	0.529	0.647	0.602	0.578	**0.794**	0.669
PT2	0.386	0.439	0.560	0.441	0.309	**0.863**	0.318
PT3	0.289	0.360	0.439	0.444	0.379	**0.778**	0.431
PT4	0.442	0.402	0.356	0.465	0.405	**0.785**	0.360
PT5	0.412	0.438	0.442	0.418	0.408	**0.859**	0.416
PV1	0.406	0.402	0.307	0.551	**0.856**	0.343	0.559
PV2	0.406	0.458	0.321	0.580	**0.905**	0.361	0.585
PV3	0.328	0.432	0.355	0.540	**0.890**	0.369	0.581
PV4	0.396	0.484	0.371	0.575	**0.754**	0.508	0.514
PV5	0.553	0.526	0.514	0.681	**0.878**	0.592	0.563
WOM1	0.382	0.497	0.496	0.688	0.553	0.440	**0.756**
WOM2	0.383	0.523	0.378	0.581	0.525	0.414	**0.851**
WOM3	0.463	0.522	0.512	0.585	0.547	0.588	**0.842**
WOM4	0.481	0.527	0.400	0.586	0.644	0.435	**0.857**
WOM5	0.370	0.457	0.370	0.536	0.556	0.400	**0.839**

Appendix B: Heterotrait-monotrait ratio (HTMT)

Construct	Brand Associations	Brand Image	Brand Loyalty	Brand Trust	Perceived Value	Price Tolerance
Brand Image	0.621					
Brand Loyalty	0.529	0.538				
Brand Trust	0.629	0.695	0.572			
Perceived Value	0.538	0.604	0.464	0.760		
Price Tolerance	0.567	0.610	0.654	0.652	0.556	
WOMC	0.556	0.695	0.566	0.812	0.753	0.604

Notes: WOMC: word of mouth communication. The threshold value for HTMT ration is 0.9 (Teo, Srivastava, and Jiang 2008).

Appendix F: Multiple mediation analysis for dimensions of brand equity

Relationship	**Path coefficient**	**T-value**		**P-value**
PV → WOMC	0.435	10.525		0.000
	Indirect effect	**T-value**	**SE**	**Decision**
PV → BA → WOMC	0.033	1.908*	0.017	Mediation
PV → BI → WOMC	0.139	5.761**	0.024	Mediation
PV → BL → WOMC	0.076	4.071	0.019	Mediation
Relationship	**Path coefficient**	**T-value**		**P-value**
BT → WOMC	0.497	12.874		0.000
	Indirect effect	**T-value**	**SE**	**Decision**
BT → BA → WOMC	0.099	3.799	0.026	Mediation
BT → BI → WOMC	0.138	4.597	0.030	Mediation
BT → BL → WOMC	0.074	3.541	0.021	Mediation
Relationship	**Path coefficient**	**T-value**		**P-value**
PV → PT	0.196	4.623		0.000
	Indirect effect	**T-value**	**SE**	**Decision**
PV → BA → PT	0.059	2.187	0.027	Mediation
PV → BI → PT	0.103	3.686	0.028	Mediation
PV → BL → PT	0.171	5.845	0.029	Mediation
Relationship	**Path coefficient**	**T-value**		**P-value**
BT → PT	0.259	6.360		0.000
	Indirect effect	**T-value**	**SE**	**Decision**
BT → BA → PT	0.052	1.746	0.081	Mediation

BT → BI → PT	0.098	3.144	0.031	Mediation
BT → BL → PT	0.187	5.400	0.035	Mediation

Notes: PV: perceived value; BA: brand associations; WOMC: word of mouth communication; BI: brand image; BL: brand loyalty; PT: price tolerance; BT: brand trust; SE: standard error; *p< 0.10; **p< 0.01