Clarifying the Brand Personality Construct in Malaysia

Journal:	*Journal of Consumer Marketing*
Manuscript ID	JCM-03-2018-2617.R1
Manuscript Type:	Regular Paper
Keywords:	Brand personality, Scale development, Malaysia

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Abstract

The current study investigates the variations in brand personality trait items to describe both global and local brands in Malaysia. We adopted both factor analytic and experimental methods to investigate the internal and external validity of Malaysia brand personality (MBP) scale. We followed a stringent scale development process that ensure our scale conform to psychometric properties. In seven studies, our results show that the 22-item 4-factor Malaysian brand personality scale adheres to strong psychometric properties of scale development process. The findings further indicate that there are seven indigenous traits, while most traits emerge from factor analyses originate from studies of Aaker (1997) and colleagues (2001). This confirms universality of some brand personality traits and dimensions. The study is not without limitations. First, the study did not examine the facets of the brand personality constructs. However, few previous studies which did not necessitate facet identifications (e.g. Geuens et al. 2009). Second, a nationwide study should be followed to examine the generalizability of the scale. The MBP scale enables marketing managers in Malaysia to focus on brand personality dimensions that their customers can relate to. In other words, marketing communications can be more efficient when managers can identity brand personality traits that enhances customers behaviors and profitability. Malaysia is a multicultural and multiethnic country which is increasingly becoming the focus of international brand expansion. We view that the development of the MBP scale is timely and should provide managers further insights into the brand personality structure that is relevant in Malaysia.

Keywords: Brand personality; scale development; Malaysia

1. Introduction

Within the last decade, economic growth in the emerging markets has fueled international market expansion of global brands as millions of consumers in these markets experienced increase in their overall income (Atsmon, Kuentz, & Seong, 2012). As a consequence of such rise in income, they are prone to consume global brands as status symbols (Batra, Ramaswamy, Alden, Steenkamp, & Ramachandran, 2000). In Malaysia, even the opening of the first H&M store in 2012 received a very large crowd who lined up for hours before the official opening ("Swedish giant H&M opens in style in Malaysia," 2012). A major concern in the management of global brands is its ability to maintain global image across culturally heterogenous markets (see Batra, Zhang, Aydinoğlu, & Feinberg, 2017; Chang, 2008). Failure to do so may confuse consumers and deteriorate brand equity (Hsieh, 2002). To minimize such effect, global brands focus on developing strong brand personality, a brand image concept that facilitates the construction of a global brand image. It personifies a brand with human traits that consumers can easily relate to (Aaker, 1997).

There are many empirical studies that investigate the brand personality construct generalizability across multiple countries (e.g. France, Spain, Japan) (Aaker, Benet-Martínez, & Garolera, 2001; Valette-Florence & De Barnier, 2013), and industries (e.g. non-profit organization, university) (Rauschnabel, Krey, Babin, & Ivens, 2016; Venable, Rose, Bush, & Gilbert, 2005). Many studies remains contextually and culturally bounded within the Western perspective with some exceptions (e.g. China, Japan, Korea) (Aaker *et al*., 2001; Rojas-Méndez, Murphy, & Papadopoulos, 2013; Sung & Tinkham, 2005). Notably, such studies in the Southeast Asia region are especially limited (e.g. Ahmad, 2015). In general, all studies raise an important concern about the extraction of brand personality dimensions (i.e. factor), facets,

and trait items – a verbatim adoption of Aaker's dimensions and its traits may lead to incorrect personification of brands in markets that are culturally different from those in the US where it was originally developed. Specifically, studies have difficulty extracting a few of the original dimensions for example ruggedness dimension in other markets (see Leonard & Katsanis, 2013; Valette-Florence & De Barnier, 2013). Similar studies in the Southeast Asian markets are no exception (e.g. Anvari & Irum, 2015; Balakrishnan, Lee, Shuaib, & Marmaya, 2009; Hashim, Mohtar, Che-Ha, & Taha, 2008). Personality and cultural psychology has long recognized that personality scales (i.e. inventories) may not achieve one hundred per cent replication of their factors and items when examined in another culture (Heine & Buchtel, 2009). Thus, in a multi-cultural multi-ethnic nation such as Malaysia, culture-specific brand personality dimensions and traits may exist.[1] This is because salient differences in brand personality conceptualization is embedded in natural language (Aaker, 1997; Saucier & Goldberg, 1996). This heterogeneous demographic composition may also provide additional perspectives on brand personality construct with the caveat that methodological rigor in its investigation is maintained (Church, 2001).

Undoubtedly, brand personality occupies an important research domain in marketing. Studies strongly suggest that cultural context is pertinent to its applicability. Thus, the purpose of the current study is to further contribute to the brand personality literature. We adopted the cross-cultural scale development tradition, i.e. using combined emic-etic approach to brand personality scale (henceforth, BPS) development (Aaker *et al*., 2001; Cheung, van de Vijver, & Leong, 2011; Church *et al*., 2011). We followed a three-phase scale development process that fulfills psychometric requirements, well-adopted in top-tier marketing and management

[1] There are three main races in Malaysia (i.e. Malay, Chinese, and Indians) who majority practice Islam, Christianity, Buddhism, and Hinduism. Almost all ethnicities speak Malay and English while according to other ethnicities, Mandarin, Tamil and other indigenous languages are spoken interchangeably.

journals (e.g. Churchill Jr., 1979; DeVellis, 2011; Gerbing & Anderson, 1988; Hinkin, 1998). Our findings reveal that the occurrence of emic brand personality traits complement the universal BPS traits that were extracted from factor analytic methods. In seven successive studies, we prove that Malaysian BPS (henceforth, MBPS) is a second-order construct reflected by four first-order factors or dimensions (i.e. sophistication, competence, sincere, and youth). We then discuss the implications of MBPS in marketing literature.

2. Theoretical background

For the past decade, Malaysia has experienced high economic growth. By 2014, Malaysia Gross National Income (GNI) per capita peaked to USD 11,010 ("Malaysia," 2018). From socioeconomic perspective, Malaysia is a relatively collectivist nation in Southeast Asia (Swami *et al*., 2008), economic prosperities after independence may allow more Malaysians to focus on personal self-expression and self-actualization which have been argued to be universal or egalitarian in nature (Kuppens, Realo, & Diener, 2008; Ryan & Deci, 2001). Consumers who achieve higher economic status can afford more symbolic consumption (Emile & Zealand, 2012). This consumption serves the innate human motives for symbolic and hedonic needs, and later develops into a life-long consumer-brand relationship (Fournier & Alvarez, 2012). Imbuing brands with personality traits facilitate this process (Kim & Kramer, 2015). Brand personality refers to the "set of human characteristics associated with a brand" (Aaker 1997, p. 347). Consumer's appeal to brand personality signifies an outlet for self-expression, and symbolic consumption purposes (Freling, Crosno, & Henard, 2010; Grohmann, 2009). They strongly prefer brand personality trait(s) that distinguishes a brand from its competitors, and matches it with their self-concepts (Malär, Nyffenegger, Krohmer, & Hoyer, 2012; Swaminathan, Stilley, & Ahluwalia, 2009). Brands with distinctive and appealing personalities transfer their personalities onto the brand users, while significantly express, affirm, and enhance individuals' sense of self (Chernev, Hamilton, & Gal, 2011; Escalas & Bettman, 2003;

Park & John, 2010). Each dimension of the brand personality facilitates different type of consumer-brand relationship. For example, sincere brands form a strong and long-lasting consumer-brand relationship whereas exciting brands possess vitality and youth (Aaker, Fournier, & Brasel, 2004; Sundar & Noseworthy, 2016). A meta-analytic study further validates that brands that are perceived to be sincere and competent have the strongest influence on brand success variables such as brand attitude, image commitment and purchase intention (Eisend & Stokburger-Sauer, 2013). All studies in this meta-analysis adopted Aaker's (1997) BPS (however, cultural context was not indicated). So why do we need another BPS? We identify two main reasons.

2.1 Cross-cultural perspective

Brands are symbols that carry cultural meaning, yet each culture may infer different meaning to the same brand experience (Batra & Homer, 2004; Hamzah, Syed Alwi, & Othman, 2014; McCracken, 1986; Richins, 1994). The conceptualization of brand personality is adopted from the psycholexical approach of human personality using single-word trait descriptors (Aaker, 1997). Cattell (1947) uses the natural language taxonomies as the foundation for personality trait theory primarily within the Western cultural context. Decades of research in trait theory reveal that traits are conceptually organized in hierarchical structure comprises dimensions, facets, and trait items (Soto & John, 2017). Widely accepted trait models (e.g. Five-Factor Model, Big Five Inventory, HEXACO) have been replicated across cultures (Costello, Wood, & Tov, 2018; McCrae & Terracciano, 2005b; Schmitt, Allik, Mccrae, & Benet-Martínez, 2007).[2] However, a few studies provide evidence of individual differences between Westerns and Eastern individuals for many social psychological constructs such as individualism-

[2] There is evidence that contest the universality of FFM (De Raad *et al*., 2010). Findings from a generalizability study of Big Five Inventory (BFI) reveal that the total congruence coefficient for Big Five Inventory (BFI) in Southeast countries are below .90 when rotated to the US' BFI factor structure (D. P. Schmitt *et al*., 2007).

collectivism (Kam, Zhou, Zhang, & Ho, 2012; Triandis, McCusker, & Hui, 1990), holistic-analytic cognition (Miyamoto, Nisbett, & Masuda, 2006; Nisbett, Peng, Choi, & Norenzayan, 2001), and self-construal (Ma, Yang, & Mourali, 2014; Markus & Kitayama, 1991). In such, cultural psychologists argue that culture imposes an influence of varying degrees over the structure, level and traits correlation, thus implying an inseparable role of culture in understanding brand personality (see Chen, Benet-Martínez, & Ng, 2014; Church, 2000, 2001; Saucier & Goldberg, 2001).

The goal of implementing the combined emic-etic approach in this current study is to achieve 'the methodological rigor of the etic approach and the cultural sensitivity of the emic approach' (Cheung *et al*. 2011, p. 593). This method complements the Western model of personality by which the emic (i.e. indigenous) trait items provides a comprehensive picture of the intraindividual aspect of personality (Cheung *et al*., 2011; Church, 2000). This approach integrates culture-specific attributes into the universal psychological construct to provide an unbiased perspective of the degree of cross-cultural overlap and specificity between constructs (Aaker et al., 2001; Cheung et al., 2011). When it comes to brands, the differences in consumers' brand personality perceptions may be due to intersubjectivity (i.e. agreement or disagreement of having shared definition of a psychological concept) (Gillespie & Cornish, 2010) and language differences (Richard & Toffoli, 2009). Most Malaysians speak a combination of these four languages – Malay, English, Mandarin, and Tamil. Generally, ingroup communications within individual subculture predominantly uses mother tongues (Malay, Mandarin, Tamil, and other Chinese dialects), while outgroup communications between cultures uses Malay and/or English which act as common languages in intercultural interactions. Studies in human personality agree that a second language may provide individuals with a new range of perceiving own personality on some personality dimensions

(Chen & Bond, 2010; Veltkamp, Recio, Jacobs, & Conrad, 2013). Therefore, we expect emic brand personality trait items to emerge in at least one of Aaker's personality dimensions.

Furthermore, given Malaysia's historical relation with Great Britain, a Western-centric perspective and the influence of a second language (i.e. English) may also influence the brand personality perception (Pekerti & Thomas, 2003). Ironically, some English trait names are still being adapted to the Malay vocabulary, for example competent trait is *kompeten* in Malay. This is probably because 1) the trait does not exist in Malay, or 2) the Malay descriptions of the English traits may require several words. Hence, the equivalent Malay trait have similar phonetic pronunciation as in English except for consonant replacement added by Malaysia's proximal and historical influence of China, India, Thailand, and Indonesia which may also influence trait salience. Considering the above arguments, certain human personality trait items may be insufficient to capture trait variations of people in this region. Thus, we imply similar implication to brand personality construct.

2.2 The brand personality construct replicability

Human personality inventories have undergone intense replications for decades, thus many brand personality studies adopted these inventories to conceptualized brand personality (Caprara, Barbaranelli, & Guido, 2001; Huang, Mitchell, & Rosenaum-Elliott, 2012; Milas & Mlačić, 2007).[3] However, they mainly suffer from construct reliability and validity issues. In contrast, Aaker's BPS has demonstrated construct reliability and validity within the U.S (e.g. Malär, Krohmer, Hoyer, & Nyffenegger, 2011; Mathur, Jain, & Maheswaran, 2012; Puzakova, Kwak, & Taylor, 2013; Yorkston, Nunes, & Matta, 2010). Yet, its factors and item replicability differs across cultures (e.g. Aaker *et al*., 2001; Geuens *et al*., 2009; Rojas-Méndez *et al*., 2013;

[3] One example, both practitioners and researchers have long adopted human personality inventories (e.g. California Personality Inventory) to measure brand personality (e.g. Huang *et al*., 2012; Kassarjian, 1971).

Valette-Florence & De Barnier, 2013). While few researchers argue for a new brand personality scale which addresses Aaker's scale limitations particularly on its dimensions and trait universality (e.g. Geuens *et al*., 2009), studies generally suggest that brand personality construct differs in terms of 1) number of dimensions, 2) dimension, and 3) trait composition (Rojas-Méndez *et al*., 2013; Valette-Florence & De Barnier, 2013; Willems *et al*., 2012).

Number of brand personality dimensions across cultures. Findings from various brand personality scale development studies reveal that the dimensions extracted from factor analytic methods range from three (Hosany, Ekinci, & Uysal, 2006) to eight dimensions (Sung & Tinkham, 2005)(**Table 1**). This is not surprising because various human personality inventories range from four to eight dimensions (e.g. Simms, 2007; Vries, 2013). Aaker identifies five dimensions to mirror the equivalent development in the personality literature. She labels them sincerity, excitement, competence, sophistication, and ruggedness. This should not however imply that one brand personality scale is better than its counterparts. It simply implies that that brand personality scale is much better in capturing the brand personality construct in that cultural context. Cultural psychologists argue that brands symbolizes consumption behaviors (Douglas & C. Isherwood, 1996; McCracken, 1986; Richins, 2009), thus the meaning that consumers derived from consuming brands differs across cultures. This may include brand personality trait representation and salience. In a culture which values interdependencies or interconnectedness (i.e. high level of interdependent self-construal), brands may become the representations of relationships with others (Markus & Kitayama, 1991; Sung, Choi, & Tinkham, 2012). In contrast to an independent culture (i.e. high level of independent self-construal) individuals strong brand attachment may represent the propensity to boost their actual or desired self-concept (Malär *et al*., 2011). Nevertheless, literature shows strong tendency for brand personality studies to replicate the five-factor structure of human personality models (Geuens *et al*., 2009; Huang *et al*., 2012; McCrae & Terracciano, 2005a).

[INSERT TABLE 1 HERE]

Brand personality dimensions. Various studies indicate that many BPSs tend to share similar hierarchical qualities (i.e. dimensions and traits) across cultures. **Table 1** shows that most brands can be described using sophistication, excitement, and competence dimensions. Yet, these findings also reveal that each culture has its own emic dimensions and trait items. A parallel development in human personality literature finds similar results. Only four of the FFM factors appear consistently in individualistic countries (see Triandis & Suh, 2002). De Raad and colleagues (2010) further reduce the dimensions to three – extraversion, agreeableness, and conscientiousness. Their findings are in line with those of Cheung and colleagues' (2011) who support the importance of extracting cultural-specific construct to provide a deeper understanding the universality of personality traits.

Trait composition. A deeper inspection of the brand personality dimensions from **Table 1** further reveals dissimilarity in trait composition. For example, Japanese sophistication dimension is reflected by one etic and six emic traits (see Aaker *et al*., 2001). The same observation is evident for excitement, and competence across different studies (e.g. Bosnjak, Bochmann, & Hufschmidt, 2007; Madrigal & Boush, 2008). Most studies empirically support that trait items in brand personality construct are culturally embedded (at least a few) and composed of both etic and emic items. One reason is brand personality operates at a highly abstraction level, thus traits that represent a dimension are interchangeable (Bao & Sweeney, 2009). Furthermore, any addition or subtraction of traits should have minimal effect on the meaning of the particular dimension and should improve its reliability (van de Vijver & Leung, 2000; Wherry, 1984). In essence, the formation of brand personality impression is derived from any direct and indirect contact that a consumer has with a brand (Aaker, 1997; Plummer, 1985). Thus, a brand focuses on a particular brand personality dimension should be able to

communicate it consistently across various cultures – implying construct stability (Malär *et al*., 2012).

3. Scale development

The scale development process is essentially a meticulous one. We reviewed steps taken by studies in brand personality and followed recommendations from scale development authors (e.g. Aaker *et al*., 2001; Churchill Jr., 1979; Geuens *et al*., 2009; Grohmann, 2009; Hinkin, 1998; DeVellis, 2011; Slaughter, Zickar, Highhouse, & Mohr, 2004). We used factor analytic method to achieve scale convergent, discriminant and nomological validity. We then employed experimental method to achieve predictive validity. There are three phases in scale development process; 1) item generation, 2) scale development, and 3) scale validation.

3.1 Phase 1 – Item generation

Initial trait item pool. We identified thirteen previous peer-reviewed studies. However, three studies were excluded because content analysis, and the initial exploratory factor analysis (EFA) requirements (minimum item-to-response ratio of 5:1) were not sufficiently met (Hinkin, 1998)(**Table 1** lists the ten studies). Selecting Aaker's (1997) seminal study as the starting item pool base, we select unique items of subsequent newer studies to create a total of 188 unique items to be cross-referenced with emic items generated in following study 1.

Study 1 – Top-of-mind brand elicitation task. A total of 47 (96% aged between 18 and 24; Female = 62%) of top Malaysian public university business undergrads in Kuala Lumpur participated voluntarily. Product and service categories were taken from Readers' Digest Trusted Brand 2011 award for both Asia and Malaysia. They comprised fast-moving consumer goods (e.g. bread, toothpaste, and carbonated drinks), electronics (e.g. smartphone, laptop), services (e.g. airlines, bank, and hotels), health and beauty (e.g. fragrances, cosmetics), households (e.g. mattress), restaurants, automobiles, sportswear, and ladies' undergarments.

Top-of-mind awareness and recall were greater than 50% for AirAsia (70.2%), Colgate toothpaste (80.9%), Panadol (74.5%), Gardenia bread (68.1%), Apple (51.1%), and Nike (51.1%). Eleven brands were identified to be used in the following study 2.

Study 2 – Item generation. A different set of 65 (97% aged between 18 and 24; Female = 69%) undergrads of the same public university participated voluntarily. The objective was for the participants to generate as many trait adjectives using the 11 brands categorized according to the symbolic- utilitarian framework (Aaker *et al*., 2001; Katz, 1960). Utilitarian products were represented by Colgate, Gardenia, and Dell while symbolic brands chosen were Calvin Klein, Apple, Triumph and Nike. Both utilitarian/symbolic brands included Berjaya Hotel, AirAsia, and Perodua (local car brand). Coke was included as a control brand (Aaker *et al*., 2001). Participants read the definition of brand personality, 'Brands personality refers to the set of personality traits that are both applicable to and relevant for brands' (Azoulay & Kapferer, 2003). Then, we asked participants to think about the brands as if they were a person and described them with personality attributes or traits. Participants then wrote as many traits possible that they could think of for all 11 brands in 20 minutes. The task generated 169 traits. We reduced the traits to 94 by removing traits that were redundant, ambiguous, and irrelevant traits including those describing demographics (Geuens *et al*., 2009). These items were cross-referenced with the 188 traits from the past 10 studies of which 42 items were duplicates, thus removed. The remaining 52 emic traits were then added to the pool of traits of previous 10 studies adding to a total number of 240 items.

Study 3 – Content validity. Another different set of 89 (97% aged between 18 and 24; Female = 90%) undergrads of the same public university participated voluntarily. The 240 trait pool was split into 3 sets of questionnaire of 80 items to reduce participants' fatigue and boredom (Adigüzel & Wedel, 2008; Batra, Lenk, & Wedel, 2010). Traits were first alphabetized then

were randomly distributed using random sequence generator from random.org website (http://www.random.org/sequences/). Participants read the definition of brand personality and were instructed to assign personality attributes or traits to brands as if they were a person on a 7-point Likert scale (1 = *not at all relevant*; 7 = *extremely relevant*). Participants were asked to think about their favorite brands that they wish to purchase in near future for various product/service categories. Finally, they filled up their demographic profiles. We calculated the mean scores for each 240 traits and removed all traits of mean scores below 5.00 (Aaker *et al*., 2001). Overall, this reduced the trait pool to a manageable 96 traits. In the following phase, we explored the latent structure of these remaining traits.

3.2 Phase 2 – Scale development

Study 4 – Scale development. Next, we examined the factor structure of the remaining 96 items using EFA (Geuens *et al*., 2009) and parallel analysis (PA) (Hayton, Allen, & Scarpello, 2004). A total of 520 different set of students (96% aged between 18 and 24; Female = 90%) from top public university in Kuala Lumpur participated voluntarily. Their ethnicities were 51.1% Malay, 38.4% Chinese, 2.7% Indians, and 7.8% other natives. Twelve sets of questionnaires were distributed randomly in which each participant received only one set. Each set contained 1 of 12 local and global brands chosen from the study 1 categorized according to symbolic-utilitarian framework (Katz, 1960). Symbolic brands were represented by Apple, Nike, Hilton, and BMW. Utilitarian brands were Colgate, KFC, AirAsia and Panadol, whereas utilitarian/symbolic brands were CIMB, MAS, Maybank and Dell. Participants read a short statement describing brand personality and imagined the brand in the questionnaire set as having human personality traits. They then rated all 96 traits on a 7-point Likert scale (1 = *not at all descriptive*; 7 = *very descriptive*).

Exploratory factor analysis. Thirty five cases were rejected because they were 50 percent incomplete (Hair Jr., Black, Babin, & Anderson, 2014). The remaining 485 cases were transformed to z-scores to check for outliers, and none indicated having values exceeding ±3.0 (Puligadda, Ross, & Grewal, 2012). Mardia (1970) multivariate test indicated that skewness and kurtosis were significant ($p < .001$), however EFA does not require normality assumptions (Field, 2013). Principal axis factoring (PAF) method of extraction with direct oblimin rotation (Conway & Huffcutt, 2003; Fabrigar, Wegener, Maccallum, & Strahan, 1999; Ford, Maccallum, & Tait, 1986) resulted in 14 factors (KMO = .91) with eigenvalues greater than 1 explaining 74% of the variance. The scree plot showed a sharp break at 7 factors. Next, we ran Horn (1965) parallel analysis (PA) to assist with the decision of number of factors to retain (Hayton *et al*., 2004). PA-PAF is argued to perform better when one of more factors are present (Crawford *et al*., 2010). We ran PA-PAF in Stata 11 to draw the 95th percentile eigenvalues from default random iteration of 2880 (30 times of each 96 items). Six factors emerged, thus we reassessed EFA restraining extracted to 6. The results showed improvement in KMO value (.95). We then referred to widely accepted conventions to delete poor performing traits - item loadings (> .50), cross loadings (> .40), communalities (> .50), inter-item correlations (> .30), item-to-total correlations (> .30), and Cronbach's α (> .70) (Hair Jr. *et al*., 2014; Nunnally & Bernstein, 1994). Ninety items remained in 6 factors (Cronbach's αs between .95 to .97).

3.3 Phase 3 – Scale evaluation

Study 5 – Scale refinement and validation. The stability and robustness of the factor structure were evaluated using another 457 non-student samples of working adults who participated voluntarily in Kuala Lumpur (91.9% aged between 18 and 50; Females = 58.2 %; Working = 71%). Their ethnicities were 47.5% Malay, 34% Chinese, 7.3% Indians, and 11.2% other natives. We administered the same questionnaire from the scale development phase using

similar brands in study 4 and added several other measurements. Participants assessed 5-item brand self-brand connection (SBC) adopted from (Park, MacInnis, Priester, Eisingerich, & Iacobucci, 2010), 'To what extent is (brand name) part of you and who you are?', 'To what extent do you feel personality connected to (brand name)', 'To what extent do you feel emotionally bonded to (brand name)?', 'To what extent is (brand name) part of you?', and 'To what extent does (brand name) say something to other people about who you are?' on a 11-point Likert scale (0 = *not at all*, 11 = *completely*). Next, participants assessed their purchase intention measured by 4-item 7-point scale, '*unlikely* / *likely*', '*impossible* / *possible*', '*improbable* / *probable*', and '*undesirable* / *desirable*' adopted from Lei, de Ruyter and Wetzels, (2008), and Yi (1990). Finally, participants filled up their demographic profiles.

Exploratory factor analysis. A total of 19 cases were removed because they were 50% incomplete (Hair Jr. *et al*., 2014). The remaining 438 cases were transformed to z-scores to examine values exceeding ±3.0 (Puligadda *et al*., 2012). Outliers were not detected. However, the data did not meet multivariate normality assumption (Mardia, 1970). We ran EFA as a precursor to CFA to examine the latent structure of the remaining 90 items (Gerbing & Hamilton, 1996). EFA-PAF with direct oblimin rotation extracted a 6-factor structure (Cronbach's αs between .90 to .96; KMO = .96) that explained 68% of the variance with eigenvalues greater than 1. Further refinement was made by removing 11 weak traits indicated by low communalities (< .50) (Reise, Comrey, & Waller, 2000). Next, the remaining 79 items were evaluated for convergent, discriminant, and nomological validity using confirmatory factor analysis (CFA) in LISREL 8.8. Maximum likelihood (ML) estimation requires data to meet multivariate normality, thus raw scores were transformed to normal scores via menu option prior to CFA in LISREL 8.8.

Convergent and discriminant validity. We examined the values of Cronbach's αs, composite reliability (CR), and average variance extracted (AVE) values to meet minimum values of .70, .60, and .50 respectively for convergent validity (Bagozzi, Yi, & Phillips, 1991; Fornell & Larcker, 1981; Nunnally & Bernstein, 1994). Additionally, fit indexes such as NNFI, NFI, IFI, and CFI should be at least above .90 or even better above .95, and both RMSEA and SRMR should be below .05 for a good fitting measurement model (Bagozzi *et al*., 1991; Hu & Bentler, 1999). We referred to modification index to sequentially remove one item at a time indicated by the highest measurement error until model fit was achieved for all 6 factors (MacCallum, Roznowski, & Necowitz, 1992; T. A. Schmitt, 2011). The assessments of convergent validity were run separately for all 6 factors (i.e. labelled as sophistication, sincerity, competence, excitement, youth, and social responsibility). Finally, all 6 factors achieved convergent validity except for competence which indicated an AVE value of .47 (Cronbach's αs: .86 to .91; CRs: .87 to .91; AVEs: .47 to .63; NNFI, NFI, IFI, and CFI > .95; RMSEAs < .05; SRMRs < .02).

In total, 40 items were removed. We examined the discriminant validity by adopting two methods recommended by Fornell amd Larcker (1981) (i.e. ϕ^2, shared variance > AVE), and Gerbing and Anderson (1988) (i.e. the difference of the nested and non-nested model should achieve χ^2 value of more than 3.841 for 1 degree of freedom (*df*). The results revealed that several factor pairs failed discriminant validity. Thus, we ran EFA-PAF with direct oblimin rotation to the remaining 39 traits to identify poor performing traits (Farrell, 2010). In total, 14 weak loading items (<.50) and cross-loadings items (> .40) were removed. In the process of item removal, the 6-factor (i.e. dimension) Malaysian brand personality (MBP) construct was reduced to 5 factors, and finally to 4 factors (sophistication, sincerity, competence, and youth). As an additional measure, we compared fit statistics for all 3 models. Results indicated that 25-item 4-factor MBP is a better model that represents the data (**Table 2**).

[INSERT TABLE 2 HERE]

Results from convergent validity reassessment showed that all Cronbach's αs, CRs, AVEs and fit indexes exceeded the recommended values as we removed another 3 items. The re-assessment of discriminant validity indicated that all 4 factors achieved unidimensionality (**Table 3**).[4] The final 22-item brand personality scale is shown in **Table 4**.

[INSERT TABLE 3 HERE]

[INSERT TABLE 4 HERE]

Second-order MBP construct. The final 22-item 4-factor MBP construct showed a good fitting model (χ^2 (203) = 483.07, χ^2/df = 2.38, p < .05, RMSEA = .06, SRMR = .04; NFI, NNFI, IFI, and CFI > .96). Following recent practice in brand personality and marketing studies, we tested for second-higher order MBP construct (Brakus, Schmitt, & Zarantonello, 2009; Sung, Choi, Ahn, & Song, 2015). Measurement model of second-order construct achieved good model fit (χ^2 (205) = 521.87, χ^2/df = 2.55, p < .05, RMSEA = .06, SRMR = .05; NFI, NNFI, IFI, and CFI > .97). Standardized loadings of sophistication, sincerity, competence and youth were .74, .70, .85 and .78, while their respective t-values were 13.93, 11.73, 14.22, and 12.89 (one-tailed). Additional assessment of second-order construct was examined using Schmid-Leiman transformation (Gignac & Watkins, 2013; Revelle & Wilt, 2013; Wolff & Preising, 2005). It provided further insights into factor structure by examining the strength of a general factor (i.e. bifactor) reflected by all 22 trait items of MBP construct. Using SPSS syntax made available by Wolff and Preising (2005), percentage of extracted variance explained by four first-order

[4] Competence dimension increased its AVE value from .469 to .496 ≈ 0.50 which achieved the recommended value. All item loadings were above .50. It also achieved unidimensionality after being examined for discriminant validity. Furthermore, we did not identify facets for each dimensions to ensure brevity while maintaining strong psychometric properties for each MBP subdimension (Geuens *et al*., 2009).

factors was greater (58.9%) as compared to those explaining the general factor (41.1%). In sum, all 4 MBP factors can be organized as distinct and concrete representations of second-order MBP construct.

Nomological validity. Next, we tested for criterion-related or nomological validity by adopting a recent conceptual framework in a brand personality study (see Park *et al*., 2010). Brand personality was hypothesized to be an antecedent of self-brand connection (SBC) and purchase intention, while SBC was posited to be a mediator. Using the same sample in the scale validation phase, we tested nomological validity using the final 22-item MBP, 5-item SBC, and 4-item purchase intention. Because data did not meet multivariate normality, we adopted scaled Satorra and Bentler (1988) correction to model $\chi 2$ for both CFA and SEM (Madrigal & Boush, 2008).

Common method variance. We first examined the latent grouping of MBP, SBC, and purchase intention with EFA-PAF with direct oblimin rotation. As expected, the results extracted 6 clean latent factors (KMO = .93) which explained 70.5% of the variance with eigenvalues greater than 1. Item loadings ranged between .48 and .93.[5] We used Harman's one factor test to detect common method variance which could arise when a questionnaire is used to collect responses from a single setting (Podsakoff, Mackenzie, Podsakoff, & Yeon, 2003). Common method variance poses a serious threat to the interpretation of findings when a single latent variable accounts for all manifest variables (Ramani & Kumar, 2008). We loaded all items into EFA-PAF and examined the unrotated solution to determine number of factors that are necessary to account for the variance in the items. The results revealed that the first extracted factor

[5] All item loadings were above .50 except for exciting (.48).

accounted for only 38.4% if the total variance explained. Thus, common method variance was not present.[6]

Measurement model (CFA). All 6 factors achieved both convergent and discriminant validity. Following current practice, we created mean-scores (i.e. item parcel) of the 4 first-order MBP factors as the reflective items of second-order MBP to keep the number of parameters at a manageable level while preserving the multidimensional nature of the specified construct and simultaneously achieving model parsimony (Brakus *et al*., 2009; Rhemtulla, 2016). It is important that unidimensionality is achieved before items of a factor can be aggregated (i.e. item parceled) (Bagozzi & Heatherton, 1994; Little, Cunningham, Shahar, & Widaman, 2002). We loaded the mean scores of 4 MBP factors together with items of SBC and purchase intention into the measurement model. The results showed that the measurement model fit the data well (Satorra-Bentler scaled χ^2 (51) = 140.10, $p < .001$, RMSEA = .06, SRMR = .04; NFI, NNFI, TLI, and CFI ≥ .97). Items loadings ranged between .68 and .93, followed by t-values ranging from 14.29 to 30.12 (one-tailed).

Structural Equation Model (SEM). We then continued to fit both direct and indirect paths simultaneously in the structural model (**Figure 1**). The results showed that the structural model fit the data well (Satorra-Bentler scaled χ^2 (51) = 140.10, $p < .001$, RMSEA = .06, SRMR = .04, CAIC = 331.32; NFI, NNFI, TLI, & CFI ≥ .97). Sobel (1982) value was 5.16 (SE = .11, $p < .001$) which supported a significant mediation. In addition, results from Mplus 6.12 bias-corrected (BC) bootstrap method showed that 95% bias-corrected (BC) confidence interval

[6] The marker-variable technique was not implemented during this study (Lindell & Whitney, 2001). This could have further validated the threat of common method bias.

(CI) for the mediation effect did not include zero [.07, .21] (Lau & Cheung, 2012). This gave support for mediation influence of SBC between MPBS and purchase intention.

Study 6 – Predictive validity. In the following experimental study, a total of 107 student of top Malaysian public university in Kuala Lumpur (M_{Age} = 28.4, Female = 60.7%) participated voluntarily. Participants were randomly assigned to a one-way between-subjects ANCOVA design of 4 brand personality conditions (i.e. competence, sincerity, sophistication and youth).

Methods. Participants in each 4 condition began by giving their consent to participate in the experiment. After reading the brief instruction, the respondent read a brief paragraph on brand personality, '*Like human, a brand can be personified with human characters or traits. If Red Bull energy drink were a human being, it can be characterized as having confident, energetic and daring traits. Brands may acquire personalities through clever and creative advertising efforts in TV, radio, internet, social media, events etc*.' The study then presented trait items of one MBP factor as adopted by impression formation literature (e.g. Asch & Zukier, 1984). For example, the questionnaire set for sophistication condition listed all six trait items – luxurious, elite, stylish, elegant, proud, and charming.

Next, participants wrote the first brand that came to mind which they perceived to be most descriptive of the traits listed. This was followed by a recall task in which respondents wrote a short paragraph on an advertisement of the brand which elicited those traits. The participants then proceed to evaluate the dependent variable, 6-item brand evaluation (α = .94), '*bad / good*', '*low quality / high quality*', '*unappealing / appealing*', '*unpleasant / pleasant*', '*negative / positive*', and '*dislike / like*' (Campbell & Keller, 2003; Lei *et al*., 2008). Next, they assessed two covariates, 3-item brand familiarity (α = .81), '*unfamiliar / familiar*', '*inexperienced / experienced*', and '*not knowledgeable / knowledgeable*' (Kent & Allen, 1994), and 10-item 2-factor product involvement (α = .92), '*unimportant / important*', '*irrelevant /*

relevant', '*worthless / valuable*', '*means nothing / means a lot to me*', '*not needed / needed*', '*boring / interesting*', '*unappealing / appealing*', '*mundane / fascinating*', '*unexciting / exciting*', and '*uninvolving / involving*' (Zaichkowsky, 1994).

Finally, participants evaluated the brand personality of the brand elicited on the 22-item 4-factor MBPS (αs; competence = .92, sincerity = .86, sophistication = .92, and youth = .91), as manipulation checks which was then followed by demographic profiles. All measures were measured on a 7-point scale. Participants were later debriefed on the study.

Analyses and results. EFA-PAF with direct oblimin rotation extracted 8 factors (4 MBP, 2 involvement, 1 familiarity, and 1 brand evaluation) for eigenvalues of more than 1. All communalities were above the recommended values of .50 (KMO = .89). Loadings ranged from .38 to .91.[7] All Cronbach's αs were above .70, thus we created index values by averaging the items of each measurements involved. Manipulations checks revealed that the mean scores for all MBP dimensions were above the scale midpoint ($M_{Competence}$ = 5.78; $M_{Sincerity}$ = 5.95; $M_{Sophistication}$ = 6.41; M_{Youth} = 5.51). GLM-ANCOVA indicated that both covariates were significantly related to brand evaluation – involvement ($F(1, 101) = 7.17$, $p < .01$, $\omega^2 = .04$, $\eta_p^2 = .07$), and brand familiarity ($F(1, 101) = 7.40$, $p < .01$, $\omega^2 = .04$, $\eta_p^2 = .07$), . The main effect of MBP after controlling for covariates revealed significant influence on brand evaluation ($F(3, 101) = 6.56$, $p < .001$, $\omega^2 = .11$, $\eta_p^2 = .16$).

Study 7 – Aaker BPS vs MBPS. To establish MPB scale in the brand personality literature, we collected a total of 246 new respondents comprised both undergrads and working MBA samples of a top public business school in Kuala Lumpur (M_{Age} = 29; Female = 63.4%;

[7] Although all items emerged nicely into their respective construct, cross-loadings (> .40) were evidence for 2 items – '*means nothing / means a lot*' of cognitive involvement factor, and '*youth*' for youth factor. Additionally, 3 items had weak item loading (< .50) – '*irrelevant / relevant*' of cognitive involvement (.38), '*uninvolving / involving*' of affective involvement factor (.41), and '*positive*' of youth factor (.45).

Working adults = 46.9%). The composition of ethnicity comprised Malay 44.4%, Chinese 31.7%, Indian 11.5%, and others 12.3%. All respondents participated voluntarily and gave their consents. Three cases were taken out of the analysis because of more than 50% missing data. We included both Aaker (1997) 15 facet items, and 22-item of MBP scale.[8] We also included attention check questions to examine acquiescence survey responses (Kung, Kwok, & Brown, 2018; Oppenheimer, Meyvis, & Davidenko, 2009). We created a new 10 set of questionnaires to assess brand personality of top 10 global and local consumer brands taken from YouGov Brand Index for Malaysia in 2017 (https://www.brandindex.com/ranking/malaysia/2017-index) . The brands were (descending ranking order) WhatsApp, Facebook, Google, Lazada, YouTube, Maybank, Dettol, Honda, Toyota, and Apple iPhone.

Analysis and results. A total of 31 cases did not pass the attention check questions. We ran EFA using Jamovi 0.9.5.16, a free and open 3rd generation statistical software (www.jamovi.org). We ran both EFA and PA for the remaining 212 cases (item-to-response ratio of 5.7:1) and extracted 7 factors. Factor unidimensionality was demonstrated by sophistication (Cronbach's $\alpha = .95$), sincerity (Cronbach's $\alpha = .87$), and ruggedness (Cronbach's $\alpha = .79$) dimensions in which most item loadings exceeded the minimum value of .50.[9] In other words, all trait items that correspond to these dimensions of both BPS and MBPS emerged together in their respective dimensions. In contrast, MBPS youth (Cronbach's $\alpha = .90$) and competence (Cronbach's $\alpha = .90$) dimensions are two separate factors as compared to BPS excitement (Cronbach's $\alpha = .84$) and competence (Cronbach's $\alpha = .85$) dimensions (**Table 5**).[10]

[8] Many studies have adopted Aaker's facet items to measure brand personality (Mathur et al., 2012).

[9] Aaker's item Sin08 (wholesome) has a item loading value of .45

[10] MBPS item Com05 (professional) and Com06 (productive) loaded into Aaker's competence dimension

[INSERT TABLE 5 HERE]

4. General Discussion

The present study develops MBP scale to be adopted future study when examining brand personality construct and its influence on consumer behaviors and market outcomes. By adopting combined etic-emic approach, the 22-item 4-factor MBP is reflected by four first-order factors of sophistication, sincerity, competence, and youth. We prove that MBP is developed according to stringent psychometric procedures. We also reveal that items that represent BPS excitement and competence dimensions are different that those of MBPS youth and competence dimensions (Study 7). This further validate the arguments which call for combined emic-etic approach to scale development (Cheung et al., 2011). Out of the 22 trait items, seven are indigenous (luxurious, elite, proud, flexible, casual, champion, and enjoyable) while ten from the remaining fifteen items originate from the studies of Aaker and colleagues (1997; 2001). Scrutinizing both dimensions and items of MBP show similarities to Aaker's US brand personality construct and items despite missing ruggedness dimension and its items. So far, only two previous studies successfully extract ruggedness factor, and these are studies done in the US (see Madrigal & Boush, 2008; Sung & Tinkham, 2005). Our study further validates the emic nature of ruggedness dimension and its items. In addition, we adopt three Aaker's (1997) factor labels except for youth because exciting item did not survive discriminant validity in study 5. However, those items in MBPS youth dimension clearly represent excitement dimension (**Table 4**). Importantly, we have proved strong and consistent construct validity and reliability in all studies. This should be sufficient to promote the adoption of MBPS especially in Malaysia

It is evident that MBPS comprises approximately 46 percent of Aaker's items. After all, most previous studies successfully extract sophistication, excitement and competence dimensions,

although items may vary to a certain extent (e.g. Aaker *et al*., 2001; Willems *et al*., 2012). Parallel to previous findings, we prove that these three brand personality dimensions are universal but not the trait items that represent them, at least some them. Brand personality trait compositions vary across cultures as proven by the current and other previous studies . Our findings also indicate that Malaysians' perception of brand personality construct largely mirrors those in the US. It is probably because both western and Southeast Asian are culturally similar in regards to the perception of brand personality as compared to those of Chinese and South Koreans (Rojas-Méndez *et al*., 2013; Sung & Tinkham, 2005). McCrae and Terracciano (2005b) argue that geographically and historically related cultures have higher tendency to exhibit similar personality factors. Malaysia was once a British controlled territory since the early 19th century, thus in some extent Western cultural symbols, values, attitudes and norms may have been acculturated. Another reason is there is a strong global brand presence in Malaysia. In an annual survey done by Campaign Asia-Pacific and Nielsen, only 25 Malaysian brands are included in the top 1000 brands in Asia for the year 2015 (Mahpar, 2015). Top global brands (in order of rankings) such as Samsung, Sony and Apple each spent above US$190 million on advertising in this region alone in 2015.

5. Managerial Implications

The MBP scale brings several implications to managers. First, it enables managers to precisely measure the brand personality impressions of their brands in Malaysia. In doing so, managers can position the personality of their brands in the portfolio accordingly. It is important that managers can precisely identify what are the specific traits for a brand personality dimension. It will prevent managers from making huge costly mistake in their marketing and communication campaigns. For example, to focus on ruggedness dimension will not be appropriate for managers in Malaysia since the Malaysian consumers do not relate strong to this brand personality dimension. Second, managers will be able to create perceptual maps of

competitors and their brands in the market. Should the need for market repositioning arise, managers are able to visualize the direction that they should take. Building strong brand image takes a lot of creativity and effort. Identification of emic-etic traits facilitate better brand image positioning. Finally, rather than having similar brand personality impressions for all brands in the portfolio, managers can capitalize on the complementarity effect of imbuing different brand personalities to a pair of brands (Monga & Lau-Gesk, 2007). There are specific complementarity effects that can enhance brand evaluation (see Mohtar, 2015).

6. Study Limitations and Further Research

Despite the rigor shown in developing MBP, the current study did not include items from Big Five or FFM. Few studies find that the Big Five structure could not be replicated for brands (Caprara, Barbaranelli, Consiglio, Laura, & Zimbardo, 2003; Milas & Mlačić, 2007). Not all human traits are relevant and applicable to brands (Bao & Sweeney, 2009; Huang *et al*., 2012). Next, both student and non-student samples were used in the scale development process. Few studies have sampled mostly from general public to generate items, develop and purify their scales (e.g. Jennifer Lynn Aaker *et al*., 2001; Geuens *et al*., 2009). However, there are few studies which use students in all 3 phases of scale development (e.g. Grohmann, 2009; Rojas-Méndez *et al*., 2013). Furthermore, 2010 census estimated that about 21.6 percent (6.1 millions) of Malaysians (28.3 millions) aged 20 years and above are with higher education qualifications (Ministry of Higher Education Malaysia, 2010). From that percentage, about 1.1 million students were actively pursuing tertiary education in Malaysia during the census period. Thus, undergraduates are significant representative samples of Malaysian population. Another limitation is regarding the control for common method variance (CMV) during the scale validation process. Although CMV was not detected, statistical control such as using marker variable (see Ramani & Kumar, 2008) is a further remedy to this issue.

Despite these limitations, we have identified several future studies to extend our findings. First, future study may want to test the factor structure of MBP scale translated into bilinguals' mother tongues rather than English. Previous findings indicate that factor structure may differ when bilinguals are cued with differed languages (see Chen *et al*., 2014; Chen & Bond, 2010). Second, MBP should be examined to Malaysians in the rural areas where their command of English is relatively weak. All respondents in this current study are those studying, working, and living in the Klang Valley, Malaysia.

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Author (s) - *Journal*	Country (Context)	Dimensions (Items)	Total Items
Aaker (1997) - *JMR*	US (Brands)	Sincerity (11) Excitement (11) Competence (9) Sophistication (6) Ruggedness (5)	42
Aaker, *et al*. (2001) - *JPerSocPsy*	Japan (Brands)	Excitement (12) Competence (9) Peacefulness (6) Sincerity (3) Sophistication (6)	36
	Spain (Brands)	Excitement (9) Sincerity (5) Sophistication (6) Peacefulness (6) Passion (6)	32
Caprara *et al.*(2001) - *JEconPsy*	Italy (Brands)	Emotional stability (7) Openness (8) Extroversion (8) Agreeableness (8) Conscientiousness (9)	40
d'Astous & Lévesque (2003) - *Psy & Mar*	Canada (Retails)	Enthusiasm (7) Sophistication (7) Genuineness (7) Solidity (7) Unpleasantness (6)	34
Slaughter *et al*., (2004) - *J App Psy*	US (Organizations)	Boy Scout (9) Innovativeness (7) Dominance (5) Thrift (8) Style (4)	33
Sung & Tinkham (2005)- *JCP*	US vs. Korea (Brands)	Competence (16) Trendiness (11) Likeableness (14) Western (13) Sophistication (6) Ruggedness (4) Tradition (5) Ascendancy (11)	80
Venable *et al*. (2005) - *JAMS*	US (Non-profit)	Integrity (5) Ruggedness (4) Sophistication (3) Nurturance (3)	15
Chun & Davies (2006) - *JAMS*	Unstated (Retails)	Agreeableness (12) Enterprise (9) Competence (8) Chic (8) Ruthlessness (6)	43

Bosnjak *et al*. (2007)	Germany (Brands)	Emotion (4) Conscientiousness (4) Superficiality (4) Drive (8)	20
Geuens *et al*. (2009)	US & Europe (Brands)	Responsibility (3) Activity (3) Aggressiveness (2) Simplicity (2) Emotionality (2)	12

Table 1 – Brand personality scales

Measurement Model	df	χ^2	χ^2/df	RMSEA	SRMR	CAIC	NFI	NNFI	CFI	IFI
6-Factor	687	1972.73	2.87	0.07	0.06	2631.37	0.96	0.97	0.98	0.98
5-Factor	290	755.4	2.61	0.06	0.05	1187.42	0.97	0.98	0.98	0.98
4-Factor	203	483.07	2.38	0.06	0.04	837.18	0.97	0.98	0.98	0.98

Table 2 – Factor structure evaluations

Factor	Sophistication	Sincerity	Competence	Youth
Sophistication	0.91	0.63 0.62	0.63 0.50	0.63 0.53
Sincerity	0.20	0.87	0.62 0.50	0.62 0.53
Competence	0.48	0.33	0.86	0.50 0.53
Youth	0.31	0.43	0.39	0.87

Note: Diagonals are composite reliability (Cronbach's α), below diagonals are ϕ^2, and above diagonals are AVEs of 2 respective factors

Table 3 – Convergent and discriminant validity

Construct Name and Item	MN	SD	t-values	SE	Unstd λx	Std λ x	Θδ	R^2	CR	AVE
Sophistication (F1)			10.33						**0.91**	**0.63**
Luxurious	4.12	1.81			1.00	0.83	0.32	0.68		
Elite	4.06	1.77	21.08	0.05	1.00	0.85	0.28	0.72		
Stylish	4.27	1.72	15.21	0.05	0.77	0.67	0.55	0.45		
Elegant	4.23	1.78	21.47	0.05	1.02	0.86	0.26	0.74		
Proud	4.34	1.69	20.48	0.05	0.94	0.83	0.31	0.69		
Charming	4.16	1.66	16.28	0.05	0.78	0.71	0.5	0.5		
χ^2 (9) = 20.35, *p*-value=0.02, RMSEA=0.05, SRMR=0.02, NFI=0.99, NNFI=0.99, CFI=1.00, IFI=1.00										
Sincerity (F2)			8.23						**0.87**	**0.62**
Sincere	4.69	1.40			1.00	0.72	0.48	0.52		
Flexible	4.7	1.45	16.2	0.08	1.23	0.86	0.26	0.74		
Casual	4.67	1.38	15.51	0.07	1.10	0.81	0.35	0.65		
Good nature	4.51	1.44	14.68	0.07	1.08	0.76	0.43	0.58		
χ^2 (2) = .34, *p*-value=0.85, RMSEA=0.00, SRMR=0.01, NFI=1.00, NNFI=1.01, CFI=1.00, IFI=1.00										
Competence (F3)			8.41						**0.86**	**0.5**
Champion	4.42	1.52			1.00	0.74	0.46	0.54		
Competitive	4.53	1.5	12.34	0.07	0.85	0.63	0.6	0.4		
Achievement-oriented	4.47	1.58	12.36	0.07	0.9	0.64	0.6	0.4		
Successful	4.61	1.45	14.8	0.07	0.99	0.77	0.42	0.59		
Professional	4.62	1.55	13.61	0.07	0.97	0.7	0.51	0.49		
Productive	4.57	1.39	14.45	0.06	0.93	0.75	0.45	0.56		
χ^2 (9) = 13.64, *p*-value=0.14, RMSEA=0.03, SRMR=0.02, NFI=0.99, NNFI=1.00, CFI=1.00, IFI=1.00										
Youth (F4)			8.33						**0.87**	**0.53**
Youthful	4.48	1.62			1.00	0.58	0.67	0.33		
Exciting	4.45	1.49	11.32	0.07	0.73	0.72	0.48	0.52		
Outgoing	4.54	1.49	15.31	0.07	1.00	0.78	0.39	0.62		
Positive	4.72	1.45	13.58	0.06	0.86	0.69	0.52	0.48		
Enjoyable	4.52	1.58	14.95	0.07	1.03	0.77	0.42	0.59		
Happy	4.60	1.55	15.69	0.07	1.07	0.81	0.35	0.65		
χ^2 (9) = 12.33, *p*-value=0.20, RMSEA=0.03, SRMR=0.02, NFI=0.99, NNFI=1.00, CFI=1.00, IFI=1.00										

Table 4 – 22-item MBPS

Factor Loadings

	Factor							
	1	2	3	4	5	6	7	Uniqueness
SOP04	0.926							0.147
SOP07	0.866							0.170
SOP02	0.815							0.192
SOP05	0.804							0.248
SOP01	0.797							0.279
SOP03	0.767							0.301
SOP06	0.763							0.261
SIN04		0.759						0.328
SIN05		0.714						0.367
SIN06		0.687						0.498
SIN01		0.665						0.427
SIN03		0.633						0.433
SIN02		0.595						0.494
SIN07		0.530						0.527
SIN08		0.448						0.589
EXC01			0.783					0.297
EXC03			0.738					0.223
EXC02			0.713					0.254
EXC05			0.572					0.379
EXC04			0.397					0.537
EXC06			0.396	0.323		0.306		0.361
COM07				0.731				0.359
COM08				0.646				0.271
COM06				0.642				0.348
COM09				0.594				0.377
COM05				0.429				0.430
COM02					0.797			0.202
COM04					0.630			0.321
COM01					0.625			0.318
COM03					0.549			0.328
EXC08						0.760		0.313
EXC07						0.756		0.365
EXC09						0.630		0.404
EXC10						0.459		0.433
RUG02							0.620	0.315
RUG01							0.589	0.484

Note. 'Principal axis factoring' extraction method was used in combination with direct oblimin rotation.

MBPS Sophistication (SOP01-SOP06), BPS Sophistication (SOP06 & SOP07); MBPS Sincerity (SIN01-SIN06), BPS Sincerity (SIN05-SIN08); MBPS youth (EXC01-EXC06), BPS excitement (EXC07-EXC10); MBPS competence (COM01-COM06), BPS competence (COM07-COM09); BPS ruggedness (RUG01 & RUG02).

Table 5 - EFA result of BPS and MBPS

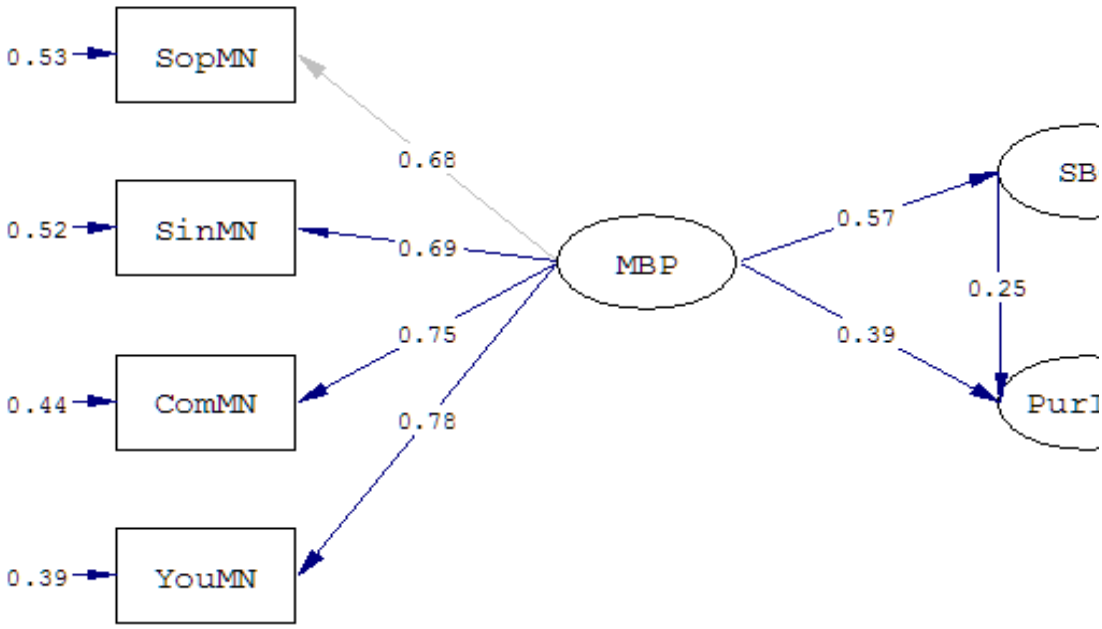

Figure 1 – Nomological validity (Structural Equation Modeling)