Moderating Role of Perceived Benefit on the Relationship between Attitude and Actual Purchase

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ABSTRACT

Herbs have been used around the world since thousands of years ago, now, 80% of world population are using herbs as part of health practices and treatment of diseases. Due to the increasing interest on herbal products, the global herbal industry have expanded tremendously due to lifestyle changes caused by modernization and health problems. With the increase demand and usage of the herbal product, studies related to actual purchase is considered as limited. Hence, the main objective of the study is to investigate factors that influence the actual purchase related to herbal products. This study has enhanced the understanding factors that influence actual purchase and will provide insightful information to the entrepreneurs regarding the actual purchase of herbal products. Therefore, Smart-PLS was used in testing the interrelation between the proposed research model, the result shows that, perceived benefit moderates the relationship between attitude and actual purchase. In the last section, theoretical and practical implications of the study are discussed.

Keywords: Actual Purchase, Attitude, Perceived Benefit
JEL Classifications: M31, M39, I00

1. INTRODUCTION

Herbs have been used to treat diseases and to maintain well-being since almost a thousand of years ago (Hasan et al., 2010; WHO, 2011). There are many factors that contribute to the increase of interests toward herbal products to correspond with health problem and changes in lifestyle. In addition, there are factors such as the beliefs that herbal products are safe and inexpensive, herbal use is considered as part of a culture, and the knowledge of the users (Astin, 1998; Dufault et al., 2000; Hassali et al., 2009; Kara, 2009; Pal, 2002; Raghavendra et al., 2009). Many studies have proven that people who care about health will strive to maintain a healthy life by using products that can benefit their health (Kim and Chung, 2011; Newsom et al., 2005). The widespread awareness on herbal benefit as well as health care and alternative medicine, has increased the recorded revenue of the global herbal products market from USD 29.3 million in 2010 to USD 35.7 million in 2015 (Euromonitor International, 2016). Despite the fact that the usage of the herbal product has tremendously increased,

studies related to the actual purchase of the herbal product are still underdeveloped. Previous studies on herbal products were focused on usage recurrence, intent to buy, product knowledge and customer retention (Abdullah and Salleh, 2010; Hassali et al., 2009; Kautsar et al., 2016; Rezai et al., 2013). Meanwhile, Ismail and Mokhtar (2015) and Aziz and Tey (2009) studies are examples of studies regarding actual purchasing of the herbal product especially in marketing. Hence, the main objective of this study is to investigate the factors that influence the actual purchase of herbal products based on the theory of planned behaviour (TPB) by Ajzen (1985).

2. LITERATURE REVIEW

2.1. Actual Purchase

Actual purchase has long been the interest to researchers and the knowledge regarding actual purchase will help the researchers to understand customers' needs, to identify the marketing strategy and to ensure the continuity of the business

(Paul and Rana, 2012). According to Ajzen (1985) actual purchase is "individual's readiness and willingness to purchase a certain product or service." Prior researches have classified numerous effect of actual behavior: Intention (Al-Exam, 2013), perceived behavior control (Zia-ur-Rehman and Dost, 2013) subjective norm (Pomsanam et al., 2014). Meanwhile, certain studies found that actual purchase is complex and vary by segment (Shafiq et al., 2011).

2.2. Attitude

Attitude toward behavior refers to the degree of a person's favorable or unfavorable evaluation of the behavior in question (Ajzen, 1991). Basically, the key role of attitude in making a positive or negative assessment of behavior and actual purchase has been noted in previous research (Ajzen and Fishbein, 1980). Characteristically, Ramayah et al. (2010) opined that attitude includes observed consequences associated with behavior. Meanwhile, according to Fishbein and Ajzen (1975) attitude is one of the most important predictor of behavioral intention. In the meantime, attitude is the psychological emotion routed through consumers' evaluations and, when it is positive, behavioral intentions tend to be more positive (Haque et al., 2011). In line with the above positions, a myriad of studies have been done with findings suggesting that attitudes directly influence behavior and it is considered as a better predictor than intention (Hashjin et al., 2014). Specifically, a study carried out with a focus on herbal products by Marinac et al. (2007) found that attitude influenced the use of herbal products. On a similar note, a study on the use of herbal medicine in Thailand by Thongruang (2008) found that attitude affects actual usage. Moreover, Brown et al. (2009) reported similar results in the United States and Mitha et al. (2013) found that attitude also affected consumers' actual purchase of herbal products in Malaysia. In this light, the following hypotheses are proposed;

H_1: Attitude is positively related to intention to purchase.

H_4: Attitude is positively related to actual purchase.

2.3. Social Influence

In the TPB model, a second determinant of behavioral intention is social influence. Social influence is usually related to the way in which others give the impression to the trust they have on a person's feelings and behaviors (Chow et al., 2012). Past studies by Conner et al. (2003), Pawlak et al. (2008), Haque et al. (2011) and Budiman (2012) proved social influence as the most significant contributor in predicting intention. Other studies related to the usage of herbal products also found that social influence affect the intention to use products (Gupchup et al., 2006). Furthermore, numerous studies has incorporated social influence and found that these variables have significant effects and positive influence on behavioral intention (Foon and Fah, 2011; Ahmed Al-Qasa, 2013; Zia-ur-Rehman and Dost, 2013). A Malaysian studies by Zahran et al. (2012) also confirmed that social influence does influence herbal purchase intention. Based on the above positions on the relationship between social influence, intention and actual behavior, the following hypotheses are proposed:

H_2: Social influence is positively related to the intention to purchase.

H_5: Social influence is positively related to the actual purchase.

2.4. Product Safety

Much attention have been given to the safety of herbal products, and they are assumed to be safe, non-toxic and can use without the prescription from the doctors (Boullata and Nace, 2000). In order to protect the safety of customers, the quality of herbal products must be ensured (Fu et al., 2009). According to Grunert (2005), product safety refers to customers' confidence on how safe the product is and it is also related to the manufacturing process (Michaelidou and Hassan, 2008). Consequently, it is important to note that product safety plays an important role in determining the purchase and/or usability of a product (Lodorfos et al., 2006). There are few previous studies on the relationship between product safety and actual purchase consumption. A study done in Sri Lanka found that product safety does effect actual purchase (De Silva and Sandika, 2011). Another study focused on the relationship between safe products and purchase intentions and found that these aspect have significant effects on intention (Chiew et al., 2014; Shaharudin et al., 2010). Numerous studies have proven the effect of product safety on intention and actual purchase, therefore, the following hypotheses are proposed:

H_3: Product safety has a significant positive influence on their intention to purchase.

H_6: Product safety has a significant positive influence on their actual purchase.

2.5. Intention

According to Ajzen (1991) intention is an articulation process which is influenced by attitude and belief toward a product, hence, it plays an essential aspect in human behavior. Purchase intention plays a principle aspect to actual purchase and is also an important basis to anticipate the actual buying (Gomes and Neves, 2011). Moreover, intention has been studied extensively by researchers in the field of marketing and it was found that that intention affects behavior and actual purchase. However, a few other studies reported some challenges in relating intention to actual behavior (Ajzen, 2001). In the study related to the use of herbal medicine and product by Gupchup et al. (2006), the intention to use herbal medicine has been found to be positively affected by actual usage. Whereas, Malaysian studies on herbal products by Rezai et al. (2013) and Ismail and Mokhtar (2015) in Malaysia found that intention significantly affects actual purchase Therefore, we propose this hypothesis:

H_7: Intention is positively and significantly affects the actual purchase.

2.6. Perceived Benefit

Perceived benefits are related to positive beliefs on behaviour (Amin et al., 2011). Past studies found that individuals who choose herbal products to improve their health are dissatisfied with conventional medicines (Vos and Brennan, 2010). While some other studies found that people who see the advantages and benefits of herbal products are more likely to use it (O'Connor and White, 2009). In a study by Goldstein et al. (2008), the respondents believe that there are benefits of using herbal products. Moreover Kanodia et al. (2010) found that 60% of respondents found that herbal products provide benefits to them. We hypothesize:

H_8: Perceived benefit will moderate the relationship between attitude and actual purchase, such that this relationship will be stronger when perceived benefit is high, than when it is low.

3. RESEARCH MODEL

Based on the TPB, this study explores the relationship between attitudes, social influence, intention and actual purchase of herbal products. We further explore how perceived benefit moderate the relationship between attitude and actual purchase. This model is represented visually in Figure 1.

4. METHODOLOGY

The population of this study consists of 573 herbal products users of herbal product, aged 18-67 years. Concurrently, quota sampling and mall intercept were used to determine the sampling technique and data collection methods. According to Lohr (1999), quota sampling is found to be suitable for marketing research. Meanwhile, the mall intercept selection was to widen the characteristic of the respondent in term of geographical and socio-economic. A total of 30 supermarkets were randomly selected from six states in Malaysia (Penang, Kuala Lumpur, Johor, Kelantan, Terengganu and Pahang). The data collection was done during the week from 11.00 am to 9.00 pm. As a result, a total 473 were returned representing a total of 82% response rate.

5. ANALYSIS AND RESULTS

This study used structural equation modelling using the partial least squares (PLSs) approach. Smart PLSM3 (Ringle et al., 2015) software to analyze the data with the application of a bootstrapping technique to determine the significance levels for loadings, weights, and path coefficients. Following the recommended two-stage analytical procedures by Hair et al. (2014), we began by testing the validity and reliability of the measurement model followed by an examination of the structural relationships outlined in the structural model.

5.1. Measurement Model

First, we tested the measurement model for convergent validity which is the degree to which multiple items used to measure the same concept are in agreement. This was assessed through factor loadings, composite reliability (CR) and average variance extracted (AVE) (Hair et al., 2014). The CR values, which depict the degree of the construct indicators indicate the latent construct, which exceeded the recommended value of 0.7, while AVE, which reflects the overall amount of variance in the indicators accounted for by the latent construct, exceeded the recommended value of 0.5 (Hair et al., 2014). Next, we proceeded to test for discriminant validity, which is the extents to which the measures are not a reflection of some other variables and it is indicated by the low correlations between the measure of interest and the measures of other constructs the square root of the AVEs (diagonal values) are larger than their corresponding correlation coefficients (off-diagonal values) indicating adequate discriminant validity (Fornell and Larcker, 1981). In total, the measurement model demonstrated adequate convergent validity and discriminant validity (Table 1).

5.2. Structural Model

Following the assessment of the measurement model, the hypothesized relationships in the structural model were tested.
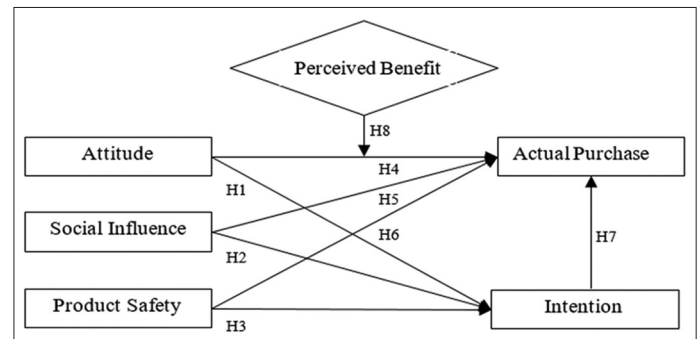
Figure 1: Research model with hypotheses

Table 1: Result of measurement model

Latent variable and indicator	Standardized loadings	CR	AVE
Actual purchase			
A56	0.831	0.908	0.712
A57	0.879		
A58	0.821		
A59	0.843		
Intention			
I54	0.811		
I55	0.849		
I6	0.599		
I9	0.693		
Attitude			
Att40	0.825	0.928	0.721
Att41	0.848		
Att42	0.839		
Att43	0.872		
Att44	0.859		
Social influence			
S45	0.827	0.931	0.729
S46	0.867		
S47	0.884		
S48	0.857		
S49	0.832		
Product safety			
P50	0.855	0.954	0.837
P51	0.926		
P52	0.945		
P53	0.931		
Perceived benefit			
Pb36	0.776	0.898	0.687
Pb37	0.859		
Pb38	0.828		
Pb39	0.848		

CR: Composite reliability, AVE: Average variance extracted

Results of the analysis indicated that attitude (β: 0.352, t: 7.850, $P < 0.01$), social influence (β: 0.419, t: q10.202, $P < 0.01$), product safety (β: 0.064, t: 1.993, $P < 0.05$) had a positive effect on intention. Meanwhile, attitude (β: 0.189, t: 3.096, $P < 0.01$), social influence (β: 0.188, t: 3.806, $P < 0.01$), product safety (β: 0.102, t: 1.927, $P < 0.05$), intention (β: 0.275, t: 5.254, $P < 0.01$ were discovered to exert a positive impact on actual purchase explaining 59% of variance found in actual purchase. Lastly, perceived benefit (β: −0.061, t: 2.043, $P < 0.050$) moderates the relationship between attitude and actual purchase. In all, the results provide sufficient evidences to support all the hypotheses (H_1, H_2, H_3, H_4, H_5, H_6, H_7, H_8) tested in this study (Table 2 and Figure 2).

5.2.1. Effect size and predictive relevance

In order to determine the effect size, this study applied the following effect size formula (Cohen, 1988; Selya et al., 2012) which indicate that the relative effect of a particular exogenous latent variable on endogenous latent variable(s) by means of changes in the R^2 (Chin, 1998). The calculation of the effect size is based on the increase in R^2 of the latent variable to which the path is connected, relative to the latent variable's proportion of unexplained variance (Chin, 1998). According to Cohen (1988) f^2 values of 0.02, 0.15, and 0.35 as having small, medium, and large effects.

Effect size: $$f^2 = \frac{R^2 \text{ included} - R^2 \text{ excluded}}{1 - R^2 \text{ included}}$$

Small effect sizes were found on actual purchase intention (0.13), social influence (0.18, medium), intention (0.08), attitude (0.06), social influence (0.03). Meanwhile, there were small effect sizes for product safety (0.01, very small) and product safety (0.01, very small), Thus, the effect size for actual purchase and intention are considered as small (Cohen, 1988).

The present study applied Stone-Geisser in order to test predictive relevance of the research model by using blindfolding procedures (Geisser, 1974; Stone, 1974). This test are used to assess the goodness-of-fit in PLS-SEM (Duarte and Raposo, 2010) and in line with the reflective measurement model (Hair et al., 2014). According to Henseler et al. (2009), a research model with Q^2 statistic(s) greater than zero is considered to have predictive relevance. In addition, a research model with more positive Q^2 value shows greater predictive relevance (Ruiz et al., 2010). The result from the analysis revealed the cross-validated redundancy Q^2 for endogenous latent variable are above zero for actual purchase 0.43 and intention 0.31, suggesting predictive relevance of the model (Chin, 1998; Henseler, 2009).

5.2.2. Testing moderating effect

To test the moderating effect this study apply product-indicator approach using PLSs structural equation modeling and Cohen (1988) effect size criteria in order to detect and estimate the strength of the moderating effect of perceived benefit between attitude and actual purchase (Chin et al., 2003; Henseler and Chin, 2010). Recall that hypothesis 8 predicted that perceived benefit will moderate the relationship between attitude and actual purchase, such that this relationship will be stronger when perceived benefit is high, than when it is low. As shown in Table 2, there was a significant interaction effect between attitude and actual purchase (β: −0.61, t: 2.043, P < 0.05). Thus, hypothesis 8 was supported. Figure 3 depicts the pattern of interaction between attitude and actual purchase, it illustrates that buyers' attitude is stronger when the buyers perceived benefit of herbal product is higher and the higher perceived benefit the more likely customer will purchase the product. The moderating effect size for this is 0.04, thus, suggesting a small effect.

6. CONCLUSION AND DISCUSSION

This study has enhanced the understanding on the factors that influence the actual purchase of herbal products. Furthermore, the

Table 2: Path coefficients and hypothesis testing

Hypothesis	Relation	Beta	Standard error	t-statistics	Findings
H_1	A→I	0.352	0.045	7.850***	Supported
H_2	SI→I	0.419	0.041	10.202***	Supported
H_3	PS→I	0.064	0.032	1.993**	Supported
H_4	A→AP	0.189	0.061	3.096***	Supported
H_5	SI→AP	0.188	0.049	3.806***	Supported
H_6	PS→AP	0.102	0.053	1.927**	Supported
H_7	I→AP	0.275	0.052	5.254***	Supported
H_8	PB*A→AP	−0.061	0.030	2.043**	Supported

Actual purchase (R^2)=63% and intention to purchase (R^2)=57%. ***P<0.01, **P<0.05

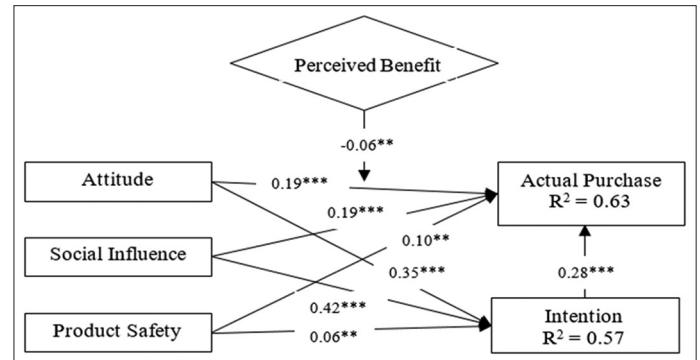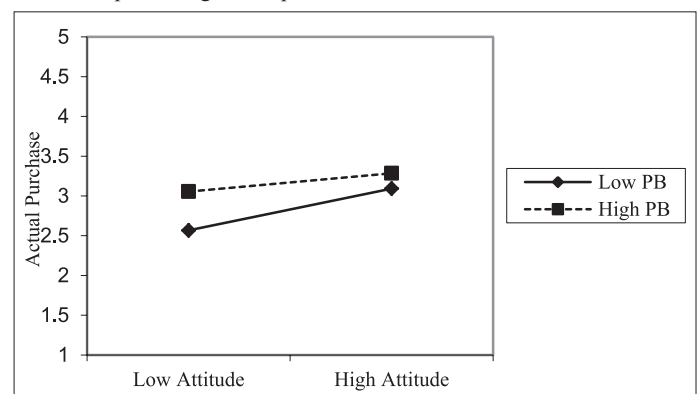**Figure 2:** Structural model result analysis (**P < 0.05; ***P < 0.01)

Figure 3: The interaction between attitude and perceived benefit in predicting actual purchase - Note: PB = Perceived

findings will be useful to entrepreneurs who are interested to know the fundamental factors that influence the actual purchase of herbal product and benefit when drawing up their marketing strategy. The result suggests positive attitude towards herbal product play an important role in influencing intention and actual purchase. The finding in this study is consistent with a previous study Gupchup et al. (2006). Meanwhile, the analysis shown that the relationship between social influence, intention and actual purchase were significantly positive, this finding was also supported by several previous studies that showed that social influence plays a very important role in influence intention and actual purchase (Ahmed Al-Qasa, 2013). Product safety is also an important determinant to purchase intention is actual purchase due to its ability to dispose whether a product is safe to be bought and used (Lodorfos et al., 2006). The finding of this study was in line with previous studies (Kavaliauske and Ubartaite, 2014). Empirical evidence indicate that there is a significant and positive relationship between

intention and actual purchase of herbal product in Malaysia, the result showed that buyers has strong desire to buy the product and the finding is in line with others studies (Pawlak et al., 2008). This study investigated the influence of perceived benefit as moderator on the relation between attitude and actual purchase. The analysis showed that the perceived benefits moderate the relationship between attitudes and actual purchases and the relationship is more positive for buyers who have a high perceive benefit compared to buyers with low perceived benefits. The findings from this study indicate that the attitude and the actual purchase is more compelling for buyers who have a high perception of benefit compared to buyers with low perceived benefits. Thus, these findings support the hypothesis.

7. LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The study focuses on a specific product when examining the actual purchase of herbal products in Malaysia. This suggests that findings could not be easily generalizable to all herbal products. Furthermore, the generalizability of the findings of this study seems limited to the product and are context specific, hence, this study proposed further studies on other products such as phytomedicines, nutraceutical, functional food, cosmetic and personal care products.

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