CHAPTER FOUR

DATA ANALYSIS AND RESULT

4.1   Introduction

This chapter discuss on the process of data analysis and the result. The first part covers on the process of data examination such as screening an outlier, and normality test. The second part covers on the descriptive analysis which discuss on the level of variables of attitude (AT), subjective norm (SN), perceived behavioural control (PBC), health, nutrition, religiosity, taste, price, intention and demographic as moderating effect. Last part is the examination of all hypothesis through Partial Least Square - Structural Equation Modelling (PLS-SEM).

4.2   Data Screening

The main reason for screening the data is to check whether the data have been correctly entered, that there are no missing values, it is free of outliers and to confirm that the distribution of the variables is normal. The data cleaning process requires careful consideration as it will significantly affect the final statistical results. The process demands consistency checks and treatment of missing data (if required). The

overarching objective of handling of all screening activities is to avoid failure of the model estimation and crashing of fitting programs (Kline, 2005). Hence, the details of the process are discussed in this section.

4.2.1   Assessment of Missing Data

Missing data commonly occurs in research studies when respondents fail to answer one or more items in the survey. According to Cohen and Cohen (1983), up to 10% missing data may not cause any serious problem in the interpretation of the findings. However, prior studies have suggested that missing data requires appropriate treatment and must be based on the patterns of missing values. One of the solutions recommended by Tabachnick and Fidell (2007) is removing the missing values. For this study, the survey resulted in 500 questionnaires distributed, 436 set of questionnaires were returned. By screening the data, 16 questionnaires showed missing value or incomplete responses. Therefore, all these 16 questionnaires were deleted. After deletion, the completed and usable questionnaires is 420. The sample size was valid due to reach a minimum requirement of proportion number of respondents according state in Malaysia. Thus, the sample size for this study is appeared to be sufficient. Furthermore, Table 4.1 shows the distribution of sample in this study.

Table 4.1: Sample of distribution

Item	Frequent	Percentage (%)
Sample Distribution	500	100
Return	436	87.2
Incomplete	16	3.7
Used in Analysis	420	84.0

Furthermore, to confirm the accuracy in the data entry process, another procedure was performed using SPSS 24.0. The data were verified case-by-case and further checking was conducted by using descriptive statistics, including frequency distribution, maximum and minimum values, the mean and standard deviation. The results yielded no missing values in the data entry process and ensured that the data were 100% accurate. In this study, missing data for all items were defined according to frequency distribution. The results of missing data can be looked via missing data imputation method as in the following Figure 4.1.
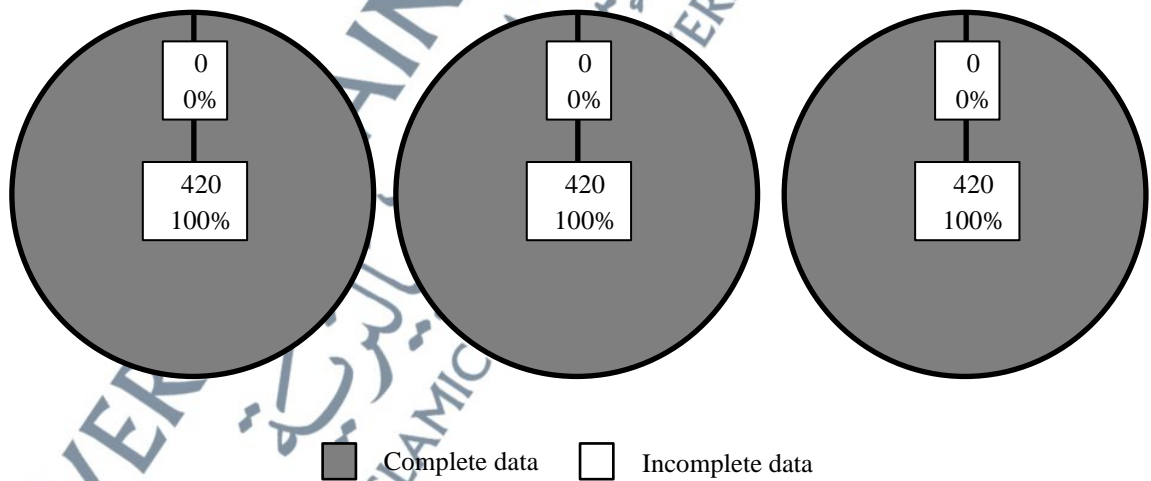
Figure 4.1: Results of missing data analysis

4.2.2   Assessment of Outliers

Checking for outliers is important, as outliers can affect the normality of the data which could then distort the statistical results (Hair et al. 2022; Tabachnick & Fidell 2007). Detecting outliers can be performed from a univariate, bivariate and multivariate perspective. Since this research uses PLS-SEM, a multivariate test for outliers was adopted to investigate if there were any extreme scores for two or more variables (Kline, 2005). Tabachnick and Fidell (2007) recommended that cases with values larger than 1 are a potential problem. To determine if cases are multivariate outliers, the researcher identifies the critical chi-square value using the number of independent variables as the degrees of freedom. D^2 assesses the extent of the dissimilarity of each case across a set of constructs. Furthermore, a D^2 value larger than the critical chi-square value indicates the presence of multivariate outliers. Examination of D^2 values indicates that the maximum D^2 value is 49.67574, which far exceeds the critical value of 29.59. Table 4.2 depicts a list of critical value for evaluating D^2.

Table 4.2: Critical value for evaluating Mahalanobis distance

Number of Independent Variables (df)	Critical Value of χ^2
1	10.83
2	13.82
3	16.27
4	18.47
5	20.52
6	22.46
7	24.32
8	26.13
9	27.88
10	29.59

Further analysis was performed using Cook's Distance to check whether this outlier has an undue influence on the results. Referring to Tabachnick and Fidell (2007), cases with values larger than 1 are a potential problem. Based on the results in Table 4.3, the maximum of Cook's Distance value is 0.4066, suggesting that no cases indicated the presence of an outlier, and all 420 cases were retained for further analysis.

Table 4.3: Multivariate outliers and cook's distance test results

Case	D2	Cook's Distance
1	49.67574	.04066
2	47.67853	.03696
3	43.05580	.03395
4	40.58978	.03210
5	38.82370	.02885
6	34.99853	.02768
7	34.77677	.02480
8	34.26446	.02412
9	34.10314	.02375
10	33.50903	.02171
11	33.07262	.02149
12	33.04784	.01986
13	30.14921	.01949
14	29.95036	.01822

4.2.3 Assessment of Normality

Checking normality is an important early step in almost every multivariate analysis. Normality can be examined at both the univariate and multivariate level. As mentioned by Hair et al (2022), normality measures the data that is normally distributed across the population sample and that there are no excessively high or

164

low scores from a few respondents which can then skew the overall result. Lack of normality will adversely affect the suitability indices and standard errors (Baumgartner & Homburg, 1996). Two components' values used to assess data normality are, skewness and kurtosis. Skewness judges the symmetry of the distribution, whereas kurtosis assesses the peakedness of a distribution. A positive skew represents a distribution that is shifted or skewed to the left and a negative skew reflects a distribution skewed to the right. A negative kurtosis value denotes a flatter distribution, whereas a positive kurtosis value reveals a peaked or taller distribution (Tabachnick & Fidell, 2007). Data distribution with either a highly skewed nature or with high kurtosis indicates non-normality, which has random effects on specification or estimation (Hall & Wang, 2005).

Hair et al. (2014b) suggested that all skewness values should fall within an acceptable range of -1 to +1. Although an absolute value of skewness 1.0 or lower indicates that the data is normally distributed, if the sample size is greater than 200, the absolute skewness could increase to 1.5 (Awang, 2015). On the other hand, the value of the standardised kurtosis index should be within the range of -3 to +3 (Kline, 2005). The absolute values of kurtosis index from about 8.0 to over 20.0 have been described as indicating "extreme" kurtosis or may suggest a problem (DeCarlo, 1977). For this study, the normality test result is presented in Table 4.4. The results demonstrate that all values for the items fall within the acceptable range of skewness +1 to –1 and meet a lenient +3 to –3 range of kurtosis. Therefore, the

165

empirical measures of skewness and kurtosis for all constructs from the questionnaires confirm no issues of multivariate non-normality in the data set.

Table 4.4: Results of the normality distribution test

First-order construct	n	Skewness	Kurtosis
Attitude	420	-.989	.629
Subjective Norm	420	-.235	-.767
Perceived Behavioural Control	420	-.595	-.357
Health	420	-.941	.574
Nutrition	420	-1.085	.817
Religion	420	-1.064	.560
Taste	420	-.474	-.627
Price	420	-.724	.060
Intention	420	-.861	.057
Purchasing Behaviour	420	-.223	-1.176

Further testing was conducted to check the multivariate normality via a residuals test. The residuals plots appear normal in the regression when no significant deviations from normality occur for the present data (Pallant, 2011). Details of the results are discussed in sub-section 4.1.4.

4.2.4 Residuals Test

In the normality assessment, it is important to check the normality of residuals. The other test to assess the multivariate normality is via a residuals test. This can be performed by regressing each variable in the model on all other variables in the model and checking whether all residuals of the variables are normally distributed (Garson, 2012). The normal probability plots were used to see if there are deviations from normality. Some of the deviations reflect the presence

of outliers, mixtures in the data or truncation in the data (D'Agostino et al., 1990).
In the normal probability plot, the points are the observed residuals and the line
represents the normal distribution. In this study, the plots appear to be close to
normal. As shown in Figure 4.2, all dots were situated straight along the line,
indicating that the residuals had been perfectly normally distributed. Thus, it is
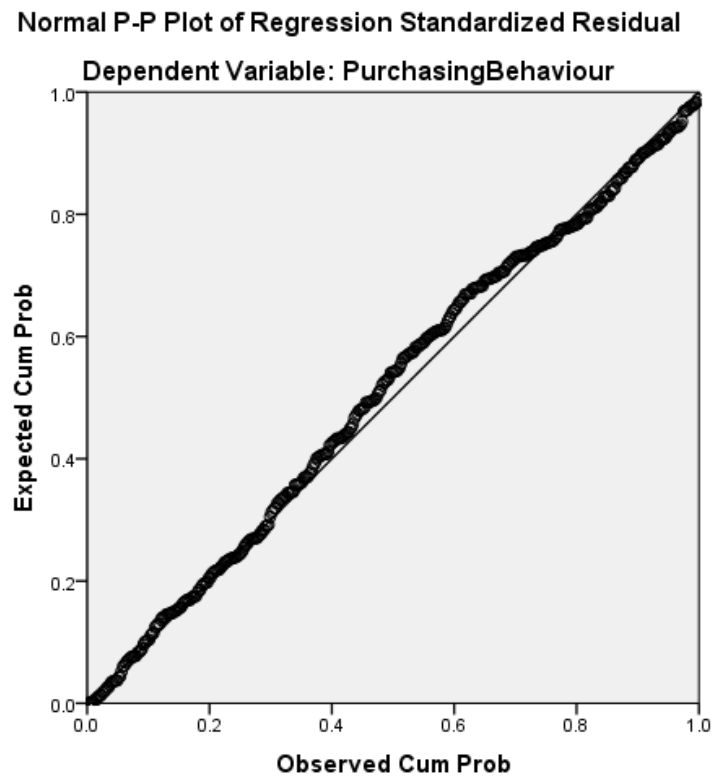assumed that the distribution of data was normal.

Figure 4.2: Normal P-P plot of Muslim consumer intention toward goat milk
purchasing behaviour

4.2.5   Assessment of Multicollinearity

The next assumption is the multicollinearity problem. Multicollinearity
can be defined as the extent to which any variable's influence can be explained by

167

other variables in the analysis (Hair et al. 2022). The ability to specify and further define any variable's effect will become more difficult as multicollinearity increases. With multicollinearity, the variables are identified as having a very high correlation, with a value of 0.90 and above (Tabachnick & Fidell, 2007). The variables probably are redundant or one of the variables is a combination of two or more of the other variables. High multicollinearity can cause both logical and statistical problems (Kline, 2005; Tabachnik & Fidell, 2007).

Assumptions for multicollinearity are tested via correlation matrices and co-linearity diagnostics. For this study, correlation values were calculated for attitude (AT); subjective norm (SN); perceived behavioural control (PBC); health, nutrition, religion, taste, price, intention and purchasing behaviour. Overall, the correlation values between constructs fall into low to middling values, ranging from 0.154 to 0.890 as shown in Appendix 5. In this study, no items were found to be highly correlated that were above 0.9, indicating that the data has no multicollinearity problem.

Collinearity diagnostics can also be determined by noting tolerance values (1-squared multiple correlation) and variance inflation factors (VIF). Low-tolerance values (those approaching zero) indicate that multiple correlations with other variables is high, suggesting the possibility of multicollinearity. The results of the analysis indicate that the tolerance values for all items range from 0.349 to 0.724, which are above 0.20 as suggested by Hair et al (2014). These results confirmed that the assumption has not been violated. The other value given is VIF, which is

the inverse of the tolerance value. VIF values above 5 would be a concern, indicating multicollinearity. VIF values for this analysis are range from 2.104 to 4.015, indicating no possibility of multicollinearity. Hence, this data set is free from multicollinearity.

4.3 Demographic Information of Respondents

The section described the profile of respondents such as distribution according state, age, gender, education level, monthly income, occupation and marital status were explained in this section. The demographic profile of respondents who participated in the survey is presented in this section.

4.3.1 Respondent by State

Respondents involve in this study came from 13 states in Malaysia and 3 federal territories, which are Selangor, Negeri Sembilan, Melaka, Johor, Perak, Pahang, Kelantan, Terengganu, Perlis, Kedah, Pulau Pinang, Sabah, Sarawak, Federal Territory Kuala Lumpur, Federal Territory Putrajaya and Federal Territory Labuan. The percentage distribution according to states are presented in Table 4.5 with the majority were from Selangor (17.9 %); Negeri Sembilan (3.8 %); Melaka (3.8 %); Johor (10.5 %); Perak (7.6 %); Kedah (8.3 %); Pulau Pinang (4.0 %); Perlis (1.4 %); Federal Territory Kuala Lumpur (4.3 %); both Federal Territory Putrajaya and Labuan (0.5 %); Pahang (6.9 %); Terengganu (5.7 %); Kelantan (8.3 %); Sabah (11.9 %) and Sarawak (4.5 %). The following Figure 4.3 shows the proportion of sample size according state in Malaysia among respondents.

Table 4.5: Proportion of sample size according state in Malaysia

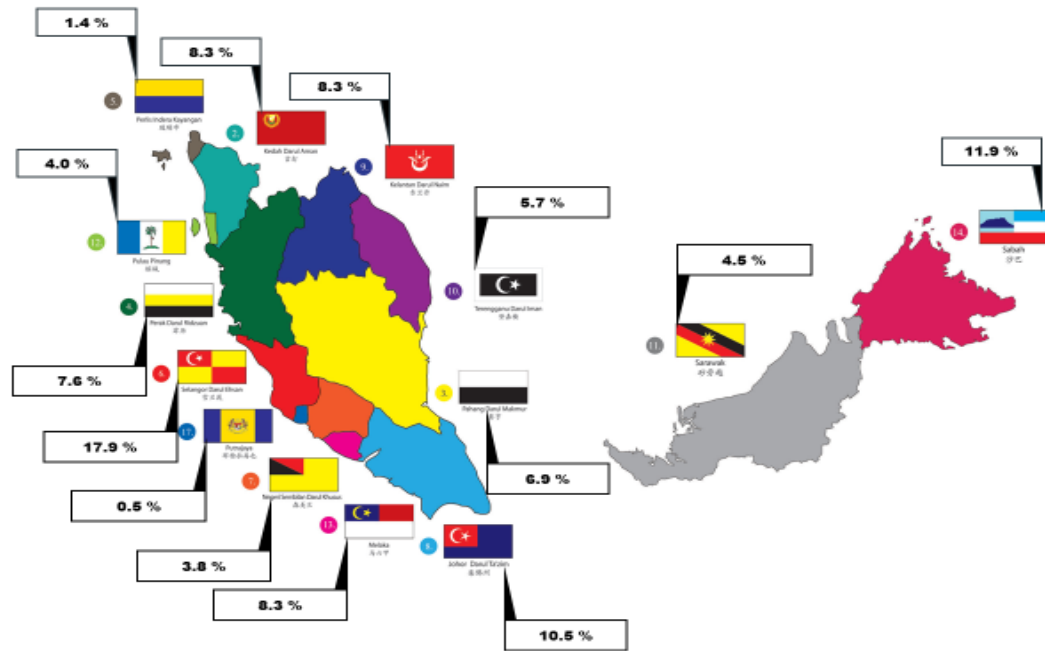| Item	Category	Frequent	Percentage (%)
State	Selangor	75	17.9
	Negeri Sembilan	16	3.8
	Melaka	16	3.8
	Johor	44	10.5
	Perak	32	7.6
	Kedah	35	8.3
	Pulau Pinang	17	4.0
	Perlis	6	1.4
	W.P. Kuala Lumpur	18	4.3
	W.P. Putrajaya	2	0.5
	W.P. Labuan	2	0.5
	Pahang	29	6.9
	Terengganu	24	5.7
	Kelantan	35	8.3
	Sabah	50	11.9
	Sarawak	19	4.5

*F. T = Federal Territory

Figure 4.3: Respondents state chart

170

4.3.2   Age

As shown in the descriptive statistic in Table 4.6, the respondents' age ranged from a minimum of 18 years to the 50 years old and above. With regard to the age group, the majority of respondents were aged between 26 to 33-year-old which is 126 (30.0 %) of respondents. The second largest age group was respondents 117 (27.9 %) aged 18 to 25-year-old years old. Then, followed by 80 (19.0 %) respondents, whose age fell between 34 and 41 years old, and 79 (18.8 %) where respondents were between 42-49 years old. The smallest percentage 18 (4.3 %) was the respondents of age 50 years old and above. The following Figure 4.4 shows that distribution of age between respondents.

Table 4.6: Profile of respondents by age

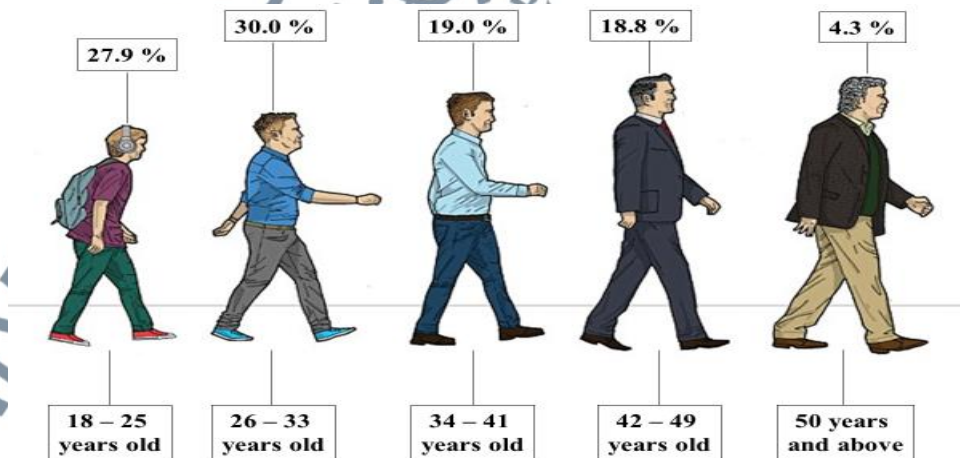| Item	Category	Frequent	Percentage (%)
	18 – 25 years old	117	27.9
	26 – 33 years old	126	30.0
Age	34 – 41 years old	80	19.0
	42 – 49 years old	79	18.8
	50 years and above	18	4.3

Figure 4.4: Age chart

171

4.3.3 Gender

As we can see in Table 4.7, majority of respondents were females 247 (58.8 %) as compared to 173 (41.2 %) males. This result lead to a conclusion that female is the majority who participated in this study and they also purchase goat milk. The following Figure 4.5 shows that distribution of respondents' gender.

Table 4.7: Profile of respondents by gender

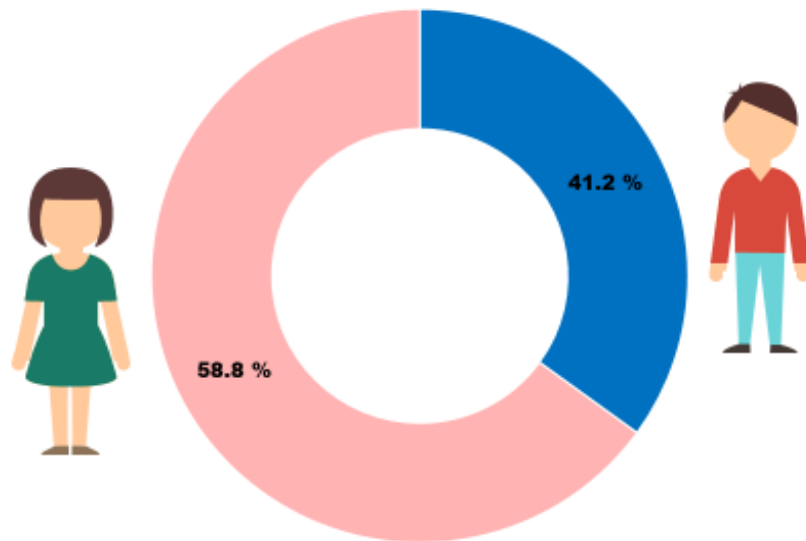| Item	Category	Frequent	Percentage (%)
Gender	Male	173	41.2
	Female	247	58.8

Figure 4.5: Gender chart

4.3.4 Education Level

The respondents had been asked about their level of education as shown in Table 4.8. Majority of respondents 257 (61.2 %) have Bachelor Degree, follow by Master's Degree 61 (14.5 %) and STPM/STAM/Diploma/Matrices 59 (14.0 %). Other percentages according to levels of education of respondents were: MCE/SPM 25 (6.0 %), Philosophy Doctorate Degree 13 (3.1 %), Others 3 (0.7 %) (such as Sekolah Pondok or Madrasah) and LCE/SRP/PMR and below 2 (0.5 %). This result lead to a conclusion that Bachelor Degree is the majority of group education level in purchasing goat milk in Malaysia compared to others. The following Figure 4.6 shows the distribution of education level between respondents.

Table 4.8: Profile of respondents by education level

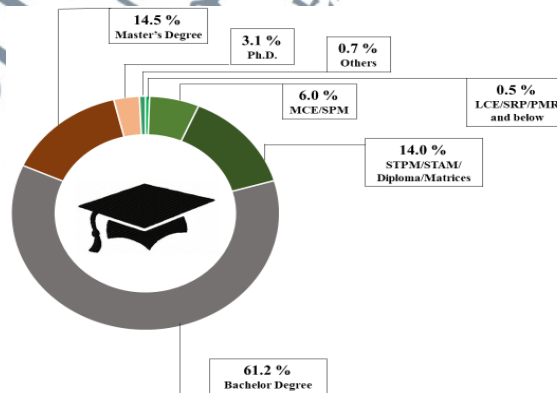| Item	Category	Frequent	Percentage (%)
	LCE/SRP/PMR and below	2	0.5
	MCE/SPM	25	6.0
	STPM/STAM/Diploma/Matrices	59	14.0
Education Level	Bachelor Degree	257	61.2
	Master's Degree	61	14.5
	Philosophy Doctorate Degree	13	3.1
	Others	3	0.7

Figure 4.6: Distribution of education level respondents

173

4.3.5 Monthly Income

Table 4.9 shows the distribution monthly income of respondents. Majority of respondents 126 (30.0 %) earn below RM1,500 per month. Followed by 115 (27.4 %) respondents who earn RM3,001 to RM4,500 per month. While a total of 86 (20.5 %) respondents earns RM1,501 to RM3,000 and 74 (17. 6%) earn RM4,501 to RM6,000 monthly. Finally, 19 (4.5 %) of respondents earn RM6,001 and above per month. This result leads to a conclusion that the majority of respondent involved in this study earn below RM1,500 per month. However, this does not prevent Muslim consumer to purchase goat milk in Malaysia. Furthermore, the following Figure 4.7 shows the distribution monthly income of respondents.

Table 4.9: Profile of respondents by monthly income

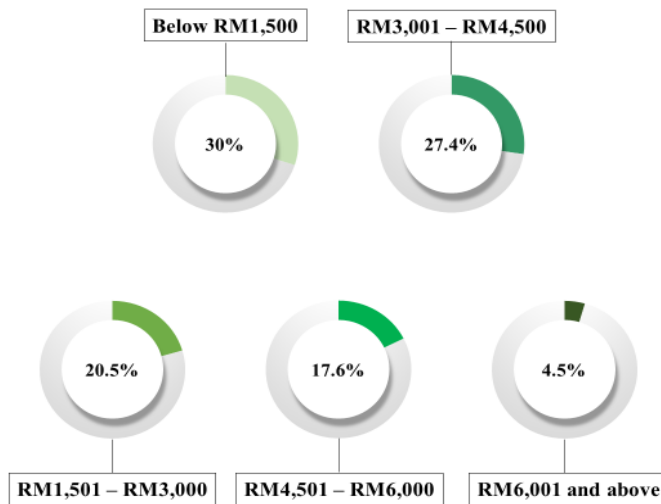| Item	Category	Frequent	Percentage (%)
Monthly Income	Below RM1,500	126	30.0
	RM1,501 – RM3,000	86	20.5
	RM3,001 – RM4,500	115	27.4
	RM4,501 – RM6,000	74	17.6
	RM6,001 and above	19	4.5

Figure 4.7: Distribution monthly income of respondent

174

4.3.6 Occupation

Table 4.10 shows the distribution of occupation among respondents. Take into consideration of the occupation of the respondents, majority of the respondents 137 (32.6 %) are work in Government Sector. Furthermore, followed by respondents who are work in Private Sector 128 (30.5 %) of respondents in second phase. While the number of 100 (23.8 %) respondents who are still Students (including standard and high school, undergraduate and postgraduate students) in third phase. Followed by Others 47 (11.2 %) and 8 (1.9 %) of respondents are Unemployed. This result lead to a conclusion that the Government Sector workers is the most group that able to purchase goat milk. The following Figure 4.8 shows the distribution of occupation in this study.

Table 4.10: Profile of respondents by occupation

Item	Category	Frequent	Percentage (%)
	Student	100	23.8
	Government Sector	137	32.6
Occupation	Private Sector	128	30.5
	Unemployed	8	1.9
	Others	47	11.2
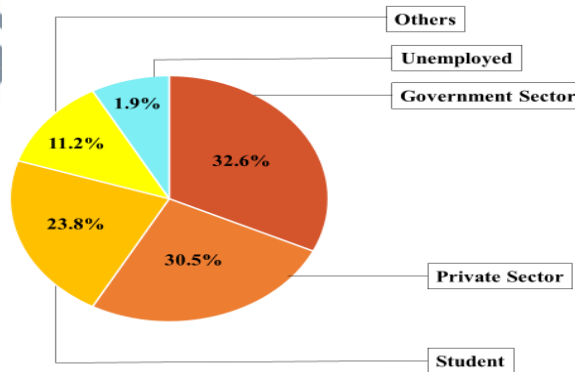
Figure 4.8: Distribution of occupation

175

4.3.7   Marital Status

Table 4.11 shows the distribution marital status of respondents. It is evident that the number of married respondents 236 (56.2 %) represents the majority in this study. Followed by single respondents 181 (43.1 %) in second phase. While the number of divorced respondents 3 (0.7 %) is very small participate in this study. This result lead to a conclusion that married respondents are the purchase of goat milk comparing to other marital status. The following Figure 4.9 shows the distribution of marital status of respondents.

Table 4.11: Profile of respondents by marital status

Item	Category	Frequent	Percentage (%)
	Married	236	56.2
Marital Status	Single	181	43.1
	Divorced	3	0.7

Figure 4.9: Distribution of marital status

4.4   Descriptive Analysis
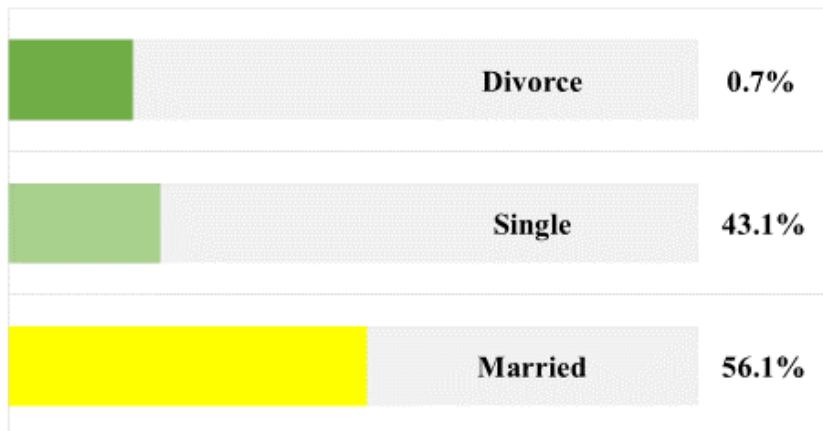
The main idea of this section was to analyse the general information about goat milk purchasing in Malaysia. The descriptive analysis comprised of the information on the total frequent and percentage of data which obtained from the Statistical Package of The Social Science for Windows (SPSS) version 24.0. Table 4.12 shows the information related to goat milk purchasing of Muslim consumer in Malaysia.

Table 4.12: Information related to Goat Milk Purchasing (n=420)

Item	Category	Frequent	Percentage (%)
Do you buy goat milk?	Yes	244	58.1
	No	176	41.9
Why do you buy goat milk?	Health reason	97	23.1
	Nutritional contents	59	14.0
	Religion reason	41	9.8
	Delicious taste	32	7.6
	Affordable price	1	0.2
	Family practice	14	3.3
Please specify the reason why you do not buy goat milk	I do not consume goat's milk	72	17.1
	Unavailability	28	6.7
	Expensive	33	7.9
	Strong odour	20	4.8
	Bad taste	12	2.9
	Goat milk is purchased by other family members	11	2.6
How frequent do you buy goat milk?	Everyday	5	1.2
	At least once per week	34	8.1
	At least once per month	148	35.1
	At least once per year	57	13.6
How much quantity goat milk	Less than 250ml	38	9.0
	251 - 500ml	109	26.0

Item	Category	Frequent	Percentage (%)
bought for each	501ml - 1 litre	70	16.6
purchase?	More than 1 litre	27	6.4

Table 4.12 shows from 420 Muslim respondents involved in this study, 58.1% was purchase goat milk and 41.9% are not purchase. Muslim respondents who are purchase goat milk has stated the reasons of beyond their purchasing. 23.1% of Muslim respondents stated the reason of their purchase goat milk because of health; 14.0% because of nutritional factors; 9.8% due to religion; 7.6% stated because of delicious; 3.3% due to family practice and rest 0.2% stated because of affordable price. Furthermore, Muslim respondents who involved in this study was asked about their reason of not purchasing goat milk. Descriptive analysis conduct found that most state their reason of not purchasing goat milk because of their do not consume goat milk (17.1%). These was followed by the reason of expensive of goat milk (7.9%); unavailability (6.7%); strong odour (4.8%); bad taste (2.9%) and goat milk was purchase by other family members (2.6%). Table 4.5 also shown the frequency of Muslim respondents on purchasing goat milk. Most of Muslim respondents stated they purchase goat milk at least once per month (35.1%). Meanwhile, 13.6% was stated they purchase goat milk at least once per year, this was following by at least once per week (8.1%) and 1.2% of Muslim consumer respondent has stated their purchase goat milk every day. In addition, Muslim respondents was asked about total quantity bought for each purchasing of goat milk. From 58.1% of Muslim respondents who are

178

purchasing goat milk stated that they bought about 251 - 500ml for each purchase (26.0%). This was following by 16.6% of Muslim respondents bought about 501ml - 1 litre; less than 250ml (9.0%) and lastly 6.4% of Muslim respondents who participate in this study stated they bought more than 1 litre of goat milk for each purchasing.

4.5 Motives of Muslim Consumer Intention toward Goat Milk Purchasing Behaviour in Malaysia

Research Questions 1   **:**   What is the motives of Muslim consumer intention toward goat milk Purchasing behaviour in Malaysia?

Research Objectives 1   **:**   To identify motives of Muslim consumer intention toward goat milk purchasing behaviour in Malaysia.

The main idea of this section was to identify Muslim consumer intention toward goat milk purchasing behaviour in Malaysia. In order to achieve this objective, a qualitative analysis was used to identify the Muslim consumer intention toward goat milk purchasing. A Focus Group Discussion (FGD) were conducted to identified motives of Muslim consumer intention toward goat milk purchasing behaviour in Malaysia. Traditionally, focus group research is "a way of collecting qualitative data, which essentially involves engaging a small number of people in an informal group discussion (or discussions), 'focused' around a particular topic or set of issues" (Wilkinson, 2004). FGD are less threatening to many research participants, and this environment is helpful for participants to discuss perceptions,

179

ideas, opinions, and thoughts (Krueger & Casey, 2000). Researcher have used focus groups to capture data for the thematic analysis. Theoretical thematic analysis was conducted by relying on the theory of planned behaviour model. Inductive thematic analysis gave way for other dimensions like health, nutrition, religion, taste and price that evolved out of the themes.

Motivation offers a potentially powerful source for understanding the driving forces of consumers' actions (Solomon et al., 2006). A purchasing motive is the reason why the customers purchase the goods. Motive is the driving force behind to purchase the goods. Motivation explains the behaviour of the consumers' why they are going to purchase goods or use services. Purchasing motive is concerned with the reasons that explain the consumers to take the decision for the action. It motives the consumers' that may be affected due to several reasons such as pride, fashion, fear, safety, love and affection, comfort and convenience and economy. The term of purchasing motive has been defined as a drive or an urge for which an individual seeks satisfaction. It becomes a purchasing motive when the individual seeks satisfaction through the purchase of something (Chaubey & Tariq, 2010). Meanwhile, motive is an inner urge that moves or prompt a person to some action. According to Christos and Athanasios (2002), purchasing motives are those influence or consideration which provide the impulse to purchase, include action and determined choice in the purchase of goods and services. Therefore, the primary aim of this analysis is to identify the motives of Muslim consumer intention toward goat milk purchasing behaviour in Malaysia.

From the FGD, participants agreed that their intention to purchase goat milk is due to health reason. They also know that goat milk contains a lot of nutrition benefits to human body. Participants has stated religion is the motive on their intention toward goat milk purchasing behaviour. Lastly, the intention of taste and price are the factors considered as a motive by Muslim consumer toward goat milk purchasing behaviour. Therefore, these variables were tested to the TPB model. Previous studies were proved others variables contributed to the consumer intention toward goat milk purchasing (Kurajdová & Petrovičová, 2015; Rani et al., 2016; Chang et al., 2016; Umar et al., 2017). As mentioned early, the question is what is the motives of Muslim consumer intention toward goat milk purchasing behaviour in Malaysia. Based on this question, the discussion and finding had been organized.

Table 4.13: Demographic profiles of focus group discussion participants

Code	Gender	Age
FGD1 - A	Female	35
FGD1 - B	Female	39
FGD1 - C	Female	45
FGD1 - D	Female	30
FGD1 - E	Female	27
FGD2 - A	Female	29
FGD2 - B	Male	31
FGD2 - C	Male	30
FGD2 - D	Male	34
FGD2 - E	Female	34

The FGD conducted in this study involved ten (10) participants of Muslim consumers and divided into two group as shown in Table 4.13. A summary of their background, including gender, age and occupation is presented as follows: the age

181

of participants ranged from 27 years old (the youngest) to 45 years old (the oldest). Most gender of participants involved in FGD is female (7) and remains are male (3). Participants are come from various occupation background and most working in private sector (e.g., banker and administrator) and government sector (e.g., researcher, lecturer and teacher). While remains of participants involved in this focus group discussion is postgraduate student in public university.

4.5.1 Health

Participants were asked to provide their motives of intention toward purchasing goat milk. In general, the motives shared by the participants namely health, nutrition, religion, taste and price. First, participants view health is the main factors of intend for them to purchase goat milk. In the modern society, health is one of the central values. Consumers are increasingly aware that food influences health condition (Young, 2000). Findings from this study similar to findings from Leipamaa-Leskinen (2007) that health is an important motivating factor in food purchasing. The following are quotes from FGD1-A that explain further motives of Muslim consumers' intention toward purchasing goat milk due to health reason.

"From my previous purchasing experience, health factor is the first point out in my mind when I go to purchase or consumed goat milk, because it contains many benefits to human body. For example, when I consume goat milk I am easily digest. This is different when I consumer cow milk, it not shows any drastic significant effect to human body.

182

Thus, from my point of view I can said that goat milk is good to human health" (Female, aged 35).

The statement form above participants is in line with the study by Jasinka (1995). This is a key reason why goat milk is considered more easily digestible than cow milk. A softer casein curd with smaller flakes could be expected to result in more rapid digestion of milk proteins, and this was confirmed in vitro. Human casein was completely hydrolysed, compared with 96% of goat casein and 76-90% of cow casein. This was attributed to the greater level of beta casein, and lower level of alpha-s1-casein, in human and goat milk casein. In addition, FGD1-B has agreed with the statement made from first participant that goat milk contents health benefit to human. The following statement is described:

"Goat milk is good and beneficial to human health. Thus, it become my intention and motivates when purchase goat milk products. From my experience on consuming goat milk, it is not only giving an effect to my digestion. But it also reduces my diabetes level. Since I noticed this effect, I am regularly consumed goat milk to control my diabetes" (Female, aged 39).

Goat milk contains A2 Beta-Casein, not the A1 Beta-Casein that cow's milk contains. Recent research published in February, 2003 has implicated the protein A1 beta-casein as a trigger for Type 1 diabetes and other health issues (Febian et al., 2020). According to Malik et al (2012), the number of people

diagnosed with type 2 diabetes has risen steeply recently exhausting the ability of health care systems to deal with the epidemic. Seventy-five percent of people with diabetes live in low- and middle-income countries. Combined forces of governmental health care, charities and donation of pharmaceutical companies would not be able to cope with the financial demands needed for medicaments and treatments for these people. There is a traditional belief in the Middle East that regular consumption of goat milk helps in the prevention and control of diabetes.

Besides that, goat milk plays an important role in controlling blood pressure (Nguyen et al., 2013; Reuser et al., 1994). Dietary goat milk regularly may be could reduce blood pressure in normotensive patient. Goat milk components such as sodium, potassium, calcium, and magnesium have been studied substantially in the past decades. Low levels of calcium, either due to dietary deficiencies or altered calcium metabolism, have been linked by several epidemiological and laboratory studies to higher blood pressure, or hypertension (McCarron, 2003; Morris & Reusser, 1995). Thus, following statement from FGD2-E described that goat milk play important role in controlling her blood pressure:

"I have high blood pressure due uncontrol consume of food. Previously, I am dependent on consuming medicine from hospital. But, it just to reduce my blood pressure. After few suggestions from friends and advise from the doctor, they suggested me to purchase and consume goat milk as an alternative for me to control the blood pressure. It was really affect and control my blood pressure after regularly consume of

184

goat milk. Thus, to recover it I choose to purchase and consume goat milk regularly. Because it beneficial to my health" (Female, aged 45).

Furthermore, recent years, the increased consumer awareness on healthy food consumption and interest on traditional foods has affected goat milk and goat milk products demand positively (Guney, 2019). Consumer motives to purchase also related to health awareness. Aarker (1991) found out that consumers consider before they purchase products is health awareness. Socio-economics studies on motives indicate that people were willing to pay additional premium for a product perceived to have good quality characteristics (Carlos et al., 2005). Thus, the following passage from FGD2-A illustrate on health issue:

"Awareness on health care make me consume and regularly purchase goat milk. Because, goat milk is better than other types of milk. And as what I know about goat milk fact, it is the best after breast milk. Before purchase and consume foods, I always remind myself to get health information. Thus, when it turns to purchasing goat milk, I have noticed it contains health benefit to human body from my reading information about goat milk. This create my awareness on consuming healthy foods" (Female, aged 30).

Thus, this statement is definitely similar with Ministry of Health Malaysia revealed about goat milk is the nearest composition to breast milk (MOH, 2016). Earlier studies indicate that consumers' behaviour, knowledge and awareness

185

towards consuming goat milk and its products differ according to several factors including gender, age, environment, income and educational level among others (Bongard et al., 2012; Guney & Ocak, 2013; Tuan et al., 2013). Therefore, health is one of the factors of Muslim consumer motives in intention toward goat milk purchasing behaviour in Malaysia. Consequently, health motives influence Muslim consumer related decision in purchase goat milk. A good composition of goat milk lead to the health of human. Thus, Muslim consumer who consume and purchase goat milk identified health as their motive.

4.5.2   Nutrition

Participants also identified other motives that contribute in their purchasing of goat milk. Health is not the only motive of consideration when purchasing foods. There is a set of motives significance for many people such as sensory appeal, price, ethical concern, weight control, convenience, natural content, familiarity and others (Gagić et al., 2014). Goat milk is composed of different usable nutrients which are important to their young and humans. Among those important nutrients that are found in goat milk are fat, protein, lactose, vitamins, enzymes and mineral salts. Most of the component of goat milk are greater than other types of animal milk. For instance, goats milk contains 25% more vitamin B6, 47% more vitamin A and 13% more calcium than cow's milk (Getaneh et al., 2016).

186

Nutritional of goat milk directly impress Muslim consumers motive toward intention in purchasing. More specifically, nutritional and health benefits of goat milk are related to a number of medical problems of people, foremost being food allergies with cow milk proteins the dominant food cause (Walker, 1964). This in line with the statement from participants of the FGD, which is purchasing of goat milk due to the nutritional contents. The following passage from FGD1-d illustrates on motive of purchasing goat milk:

"Most people when they sick, they will find an alternative to cure. This not point forward to others, but to myself. It happens to me previously. I am skin allergies when consume cow milk. My skin will allergies and show the red symptom when I drink a cow milk. Therefore, avoid such this happens I find the alternatives. Of course, with our environment after a cow milk is the goat milk. For me goat milk is easy to find. Thus, I tried goat milk for the first time. And after several time consuming it, my skin allergies are not happened. I believed, nutritional contents of goat milk were made me my antibody going strong" (Female, aged 27).

According to Kaiser (1990), the prevalence of cow milk allergy varies with countries and age of people, but exact data are lacking partly because differential diagnostic methods are difficult to perform in the apparent absence of standardized antigens and because cow milk contains 18 different proteins against which antibodies in animal experiments have been demonstrated (Hanson and Mansson, 1961). ß-Lactoglobulin is not present in human milk and has therefore been

assumed to be the most offending protein in cow milk, however comparative studies showed no difference between the allergenicity of ß-lactoglobulin and caseins (Buergin-Wolff et al., 1980; Taylor, 1986). In actual clinical skin prick-tests on 21 adult and 13 infant patients with suspected cow milk allergies, ß-lactalbumin caused the most positive skin reactions. Ten of the 13 infants showed positive reactions, while only 5 of the 21 adults reacted (Kaiser, 1990). Of these 5 adults, only one had a weak IgG-titer (ELISA) against ß-lactalbumin.

Goat milk is high nutritious animal product, compared with cow milk, goat milk has more benefited, such as high-mineral. Selenium which us useful to improve the body protection system (Patrick, 1999) and consists of capric and caprylic acids as anti-microbe (Dosch et al., 1994). Goat milk does not cause allergy. It is assumed that goat milk consists lower casein protein ά si-CN and χ-CN than cow milk, while protein ß-CN is higher (Ceballos, 2008). Fat form of goat milk are smaller and soft and also consists of more short and medium chained fat compared to cow milk (Park & Haenlein, 2007). This fact is assumed because goat milk easier to absorb by human body. Therefore, it does not cause allergy. Goat milk is also rich polyunsaturated fatty acids could reduce the cardiovascular disease (Cattaneo et al., 2006).

Moreover, cow milk allergy is considered a common disease with a prevalence of 2.5% in children during the first 3 years of life (Businco and Bellanti, 1993), occurring in 12–30% of infants less than 3 months old (Lothe et al., 1982), with an overall frequency in Scandinavia of 7–8% (Host et al., 1988), even as high

as 20% in some areas (Nestle, 1987), and reported in Italy in 3% of children under 2 years of age (Bevilacqua et al., 2000). Treatment with goat milk resolved between 30 and 40% of the problem cases, and in one particular study 49 of 55 treated children benefited from treatment with goat milk. To strengthen the statement from these participants and literature, a researcher has conducted the interview session with local nutritionist. Researcher has meet and interview with Dr. Nur Syazana Umar from Universiti Sains Islam Malaysia which is expert in dairy nutritionist. From the statement of nutritionist:

"One of the most important contributions of goat milk to human nutrition is the calcium and phosphate that it supplies. Human milk contains much less of minerals with only one-fourth as much calcium and one-sixth as much phosphate. Thus, goat milk provides a great excess of Ca and P in relation to energy to human infant, both calcium and phosphorus of goat milk are absorbed by the human infant. The soft curd of goat milk may be an advantage for adult humans suffering from gastrointestinal disturbances and ulcers. High buffering capacity of goat milk appears to be useful for treatment of gastric ulcers. Goat milk has been recommended as a substitute for patients allergic to cow milk. Between 40-100% of patients allergic to cow milk proteins tolerate goat milk." (Nutritionist)

This was supported with a literature (Getaneh et al., 2016; Haenlein, 2004) found that goat's milk is the most complete food known which is highly compatible

and nourishing natural food. It is highly nutritious that it can actually serve as a substitute for a meal. It is also preferred due to its low-fat content and its capability to neutralize the acids and toxins present in the body. It differs from cow or human milk in higher digestibility, distinct alkalinity, higher buffering capacity, and certain therapeutic values in medicine and human nutrition. The nutritional and health benefits of goat milk are related to a number of medical problems, foremost being food allergies and also a substitute for those who suffer from cow milk allergy (Getaneh et al., 2016). Besides that, other participants have stated different motives on their intention to purchase goat milk.

4.5.3 Religion

Studies in the marketing literature suggest that religion is a key element of culture, influencing both behaviour and purchasing decisions (Essoo & Dibb, 2004). The influence of religion on society's value systems and the effect of these value systems on consumer behaviour cannot be underestimated (Delener, 1994). Thus, religion motives influence the emphasis placed on purchasing and consuming foods. Sometimes religious traditions even prohibit the use of certain goods and services altogether (e.g., Islam forbids the eating of pork and Hindus do not consume beef). There are two main perspectives: religious affiliation and religious commitment. Religious affiliation is the adherence of individuals to a particular religious group while religious commitment, often termed religiosity, is the degree to which beliefs in specific religious values and ideals are held and practiced by an individual.

Studies in the marketing literature argue that religion is often a key element of culture, greatly influencing behaviour, which in turn affects purchasing decisions (Hirschmann, 1981; Delener, 1990). According to Harrell (1986) this influence takes two forms. The first is through the direct influence of religious codes of conduct on personal choice. The second is indirect, relating to religion's influence on attitude and value formation (especially those which are concerned with economic issues). Bailey and Sood (1993, p.328) clearly highlight the connections between religion and consumer behaviour in their comments about the effects of religious beliefs and practices: 'Prominent examples are the importance of fasting and feasting to patterns of food purchases, belief in taboos on clothing styles and activities of women, practices of personal hygiene related to purchases of toiletries and cosmetics, and influences on housing and entertainment patterns'. During the discussion, FGD2-D elaborated on her thoughts:

> "As we know, a Muslim require to find good things in this life. There are many good things to be followed such as to take care on health, Goat milk is one of the dietary practices that can take care of our health and it falls under the good things. In addition, goat milk is halal and *thoyib* because based on my experience, I have purchase goat milk at the farm it is fresh and tasty. Thus, as religion require me to keep healthy and goat milk practice is part of it, I have purchase goat milk" (Male, aged 30).

191

Various studies have examined religion's influence upon people's values, habits, attitudes and behaviour. Religion is one of the fundamental elements of social behaviour and has been studied from various, often contrasting theoretical perspectives (Berger, 1961; Gleason, 1969; Gurvitch, 1971; Merton, 1937). Pargament and Hahn (1986) indicate that religion helps people understand and cope with life events by offering guidance, support and hope. A similar view is offered by Spilka et al., (1985), who see religion as providing a frame of reference to help individuals understand, predict and control events and maintain self-esteem. For Gorsuch and Smith (1983), religion affects how individuals interpret problems, while religious beliefs and practices help them to select solutions. According to Peterson and Roy (1985), religion provides a source of meaning and purpose for people; it makes life understandable and interpretable. Religion fosters established practices and provides a series of tools and techniques for social behaviour (Hawkins et al., 1980; Schiffman & Kanuk 1991). As the links between dietary practices and their positive health implications have emerged, individual attitudes and beliefs towards health have become important factors in food purchasing and consumption decisions. In a similar, FGD1-E turns to followed religion commitment such as practice Prophet Muhammad (*pbuh*) sunnah. Thus, following passage from FGD1-E session such as below:

"As a Muslim, I practiced the sunnah of Prophet Muhammad (*pbuh*).
Goat milk is part of the prophetic foods which has consume by the
Prophet as far as I know. By following Prophet Muhammad (*pbuh*)

192

sunnah, we as Muslim will be guided and protect from all the bad things. Thus, in order to get *baroqah* in this life and hereafter I choose to followed this sunnah by consumed it regularly" (Female, aged 34).

Furthermore, goat milk is one of the sunnah foods, which is consume and likely by the Prophet Muhammad (*pbuh*). Following hadith has clearly mentioned about goat milk:

"Abu Bakr Siddiq reported: As we went along with Allah's Messenger (*pbuh*) from Mecca to Medina, we passed by a shepherd and Allah's Messenger (*pbuh*) was feeling thirsty. He (Abu Bakr Siddiq) said: *I milked for him a small quantity of milk (from his goat) and brought it to him (the Holy Prophet), and he drank it and I was very happy.*" (Imam Muslim, translation by Abdul Hamid Siddiqui, Volume: The Book of Drinks (Kitab Al-Ashriba), Number 498).

Both of the above passages show that religion commitment is part of the motive of Muslim consumers intention towards goat milk purchasing behaviour in Malaysia. Influence and practicing Prophet Muhammad (*pbuh*) to Muslim cannot be denied. As require by following hadith:

"I leave behind me two things, the Qur'an and my example, the Sunnah and if you follow these you will never go astray." (Hadits Shahih Lighairihi, H.R. Malik; al-Hakim, al-Baihaqi, Ibnu Nashr, Ibnu Hazm.

Sahih by Syaikh Salim al-Hilali in the Chapter at *Ta'zhim wal Minnah fil Intisharis* Sunnah, Pages. 12-13).

To describe above hadith and both FGD passages, researcher had conduct interview with expert in religion matters. The expert in religion about sunnah practice is Ustaz Mohd Aizuddin Abdul Aziz a Director of Kompleks Islam Tuanku Muhriz and also as a senior lecture at Centre of Core Studies in Universiti Sains Islam Malaysia. Thus, following passage from short interview to clarify goat milk as sunnah foods and as a good choice for Muslim consumer to purchase and consume it regularly has illustrated:

"Muslim was guided by the Quran, hadith of Prophet Muhammad (*pbuh*), *ijma'* and *qias*. By following these, for sure Muslim will never go astray. Allah SWT said: "Descend from Paradise - all, [your descendants] being enemies to one another. And if there should come to your guidance from Me - then whoever follows My guidance will neither go astray [in the world] nor suffer [in the Hereafter]. And whoever turns away from My remembrance - indeed, he will have a depressed life, and We will gather him on the Day of Resurrection blind." (Quran: Surah Taha, Chapter 20, Verses 123-124). Thus, a specific guidance has been given to a Muslim accordingly. By consuming goat milk is one of the good things for healthy and religion practice, for sure we will be reward by Allah SWT according to our intention." (Expert)

According to Delener (1990), religiosity (the degree to which individuals are committed to a particular religious group) is one of the most important cultural forces and a key influence in buyer behaviour. This is because the purchasing decision can be categorised according to how much consumers adhere to a particular faith. Thus, by following the Prophet Muhammad (*pbuh*) practice as a sunnah and guidance for every Muslim. Furthermore, other participants have stated different motives on their intention to purchase goat milk.

4.5.4   Taste

Moreover, several factors have been identified to affect the intention of Muslim consumers to purchase goat milk. According to Jetop et al. (2013), the major reason for purchasing goat milk is taste and its wide usage in household (for the purpose of cooking). Besides that, literatures found consumers are intent to purchase if taste is not being significantly compromised (Hung et al., 2016a; Shan et al., 2016; Tobin et al., 2014). Similar with this finding, one of the participants said motive of his intention to purchase goat milk because of taste. As the following passage with FGD2-C illustrates:

"Goat milk have different taste compared to others milk. The texture is viscous and produce some odour that stimulate me to consume goat milk frequently. Thus, it is motive me to purchase goat milk twice a week. I had purchased a 1 litre bottle for every purchasing. So, basically a week I had consumed about 2 litre of goat milk." (Male, aged 34).

195

According to Durling (2019), the biggest differentiator in goat milk taste and consistency is the percentage of butterfat. Goat milk taste can vary depending on the breed and Alpine breed considered watery with a stronger taste. In the field of studying and examining motives of milk purchase and consumption was realized a number of scientific studies and researches. Nagová et al (1998) revealed that the top stated reason for purchasing milk by Slovak consumers were taste. Mannerbo and Wallin (2007) examined determinant of a purchase of ecolabel milk. Based on their research results, perceived taste was found to be statistically significant motives leading consumers of Stockholm towards a purchase of eco-labelled milk. Alwis et al (2009) did an analysis of factors influencing consumption of fresh milk among consumers of Sri Lanka and revealed that taste have positive (stimulating) impact on consumer decision to purchase fresh milk. Similar to already mentioned motives came also other authors Krešiü et al. (2010) who identified taste as the most important motives for selecting dairy beverages.

4.5.5 Price

Price is one of the motives reveals by the participant during their intention to purchase goat milk. Goat milk production in Malaysia is not as popular as that of cow milk. Its production estimated from the number of milking does each year is from two to five thousand tons per year compared to approximately a million tons of cow milk produced per year, goat milk production is only 0.35% of cow milk. The price of raw goat milk in 2017 was around 7.00 Malaysian Ringgit (MYR) per 250ml which was approximately 3.3 times higher than that of cow milk (5.00

MYR). The prices of goat milk range from 5.00 to 7.00 Malaysian Ringgit for every 250ml in recent years (Department of Veterinary Malaysia, 2019). The following quote illustrates such price experiences for the FGD2-B:

"The price of goat milk is considered affordable for me. I bought goat milk at the farm which in front of the farm have a nice shop sale goat milk product. The farm was near with my house at Pajam, Negeri Sembilan around 1 kilometre. The price of goat milk is around RM5.50 for 250ml. I've purchased goat milk every single week. For every purchased, a total quantity I bought is around 2 litres for household consumed. It became a routine for my family to consume goat milk in every morning. Even for some people they compared price of goat milk with others milk such as cow and it was cheaper. But, if we look again on the benefits gain, it much worth it compare to money we spend. It was good for me to spend money for the purpose of health benefits. Thus, it become my motives toward intention in purchasing goat milk." (Male, aged 29).

This statement is similar with Jerop et al. (2013), consumers were willing to pay higher prices for goat's milk. This implies that many consumers of goat's milk did not mind the price of the milk, possibly because of the additional health benefits of goat's milk. In line with this statement, FGD1-C had expressed his experience on motive of goat milk purchasing.

197

"Goat milk price for 250ml per bottle around RM5.00 to RM6.50 depends on area of sale; it is affordable to purchase and with nutritious contents and beneficial to health it is reasonable." (Female, aged 31).

Moreover, the above quote from FGD1-C also illustrates that price of goat milk is considered reasonable due to its luxurious benefits. A study by Kulsatapornchai (2007) revealed that consumers in Bangkok Metropolis revealed that the significance level of factors price was moderately important. Thus, it should be noted that further analysis of the FGD suggests that health, nutritional, religion, taste and price triggers further action in the analysis of significant effects. More specifically, it was found that most participants who had health and nutritional motives on their intention toward goat milk purchasing behaviour. Although, within the context of a qualitative study, the existence of such causal relationship cannot be further substantiated, it can provide stimulus for further quantitative research. Based on the above statement from all FGD participants, the study identified health, nutrition, religion, taste and price is the motives of Muslim consumer intention toward goat milk purchasing behaviour in Malaysia.

4.6   Structural Equation Modelling (SEM)

The next step is analysis according to answers of respondents through a modelling technique. The observed variables are the answer to phrases in the questionnaire. In this section and following sub-section the observed variables are the items of the questionnaire. As found in previous section, the results show that

198

each variable consists of specific number of factors, and each factor consists of specific number of observed variables (items), which are called indicators of the factor.

The study used Statistical Program for the Social Science (SPSS) version 24.0 and Partial Least Square - Structural Equation Modelling (PLS-SEM) to execute the data analysis. Firstly, the database was key in using SPSS, in which all the variables (dependent and independent) were coded an inputted to the program in the same was as if using SPSS solely as analysis program (Kline, 2011). Furthermore, a new graphic was created by converting the theoretical framework of the study to graphic in PLS-SEM. In using toolbar to draw the tested model in the study, boxes shape indicates observed variable while the circles indicate latent variables. Since this study is testing the direct effect of independent variables on dependent variables, arrows are direct from independent variable towards the dependent variables. After the model is drawn, the data filed created in SPSS is selected in PLS-SEM and statistical test are directly conducted (Sarstedt et al., 2021; Peredaryenko, 2016).

4.6.1 Testing Goodness of Data

By using PLS-SEM as an analysis tool for this study, there are two important models that need to be reported which are (i) measurement model; and (ii) structural model. The measurement model is referred to an analysis that has been done in order to examine to what extent items used in the study measure what

supposedly needs to be measured, the accuracy of items in representing the construct and further fulfil validity and reliability standards. Meanwhile, the structural model is referred to as an analysis that has been done in order to examine the relationship between variables in the study which also known as hypothesis testing. Therefore, this section focuses on both measurement and structural model analysis.

4.6.2   Factor Analysis

In order to explore the construct dimensions, Exploratory Factor Analysis (EFA) was first conducted to check if the proposed factor structures are indeed consistent with the actual data. EFA was run using the principal components extraction method with varimax rotation.

The results from EFA confirmed the need to remove one item from price (P1). Items has been removed from the variables construct with the factor loading lower than 0.5. All the remaining forty-eight items carried forward to the analysis are having good factor loading analysis value of greater than 0.5 and loaded as predicted onto their dimensions. The factor structures suggested by the EFA match the one proposed in the research model.

The items that are used to measure the dependent, independent and moderator variables were entered into a single exploratory factor analysis. In order to determine the degree of relationship between the variables, the factor loading for

200

each dimension is examined. The results of the exploratory factor analysis are shown in Table 4.14.

4.6.3   Measurement Model

Under the measurement model, several tests were used in order to satisfy the goodness of data. Basically, the measurement model is involving both construct validity testing (a combination of convergent and discriminant validity) and reliability testing (a combination of internal reliability and composite reliability) (Chin 1998; Hair et al. 2014; Hair et al., 2017). The measurement model for this study developed by using PLS-SEM is shown in the following Figure 4.10.
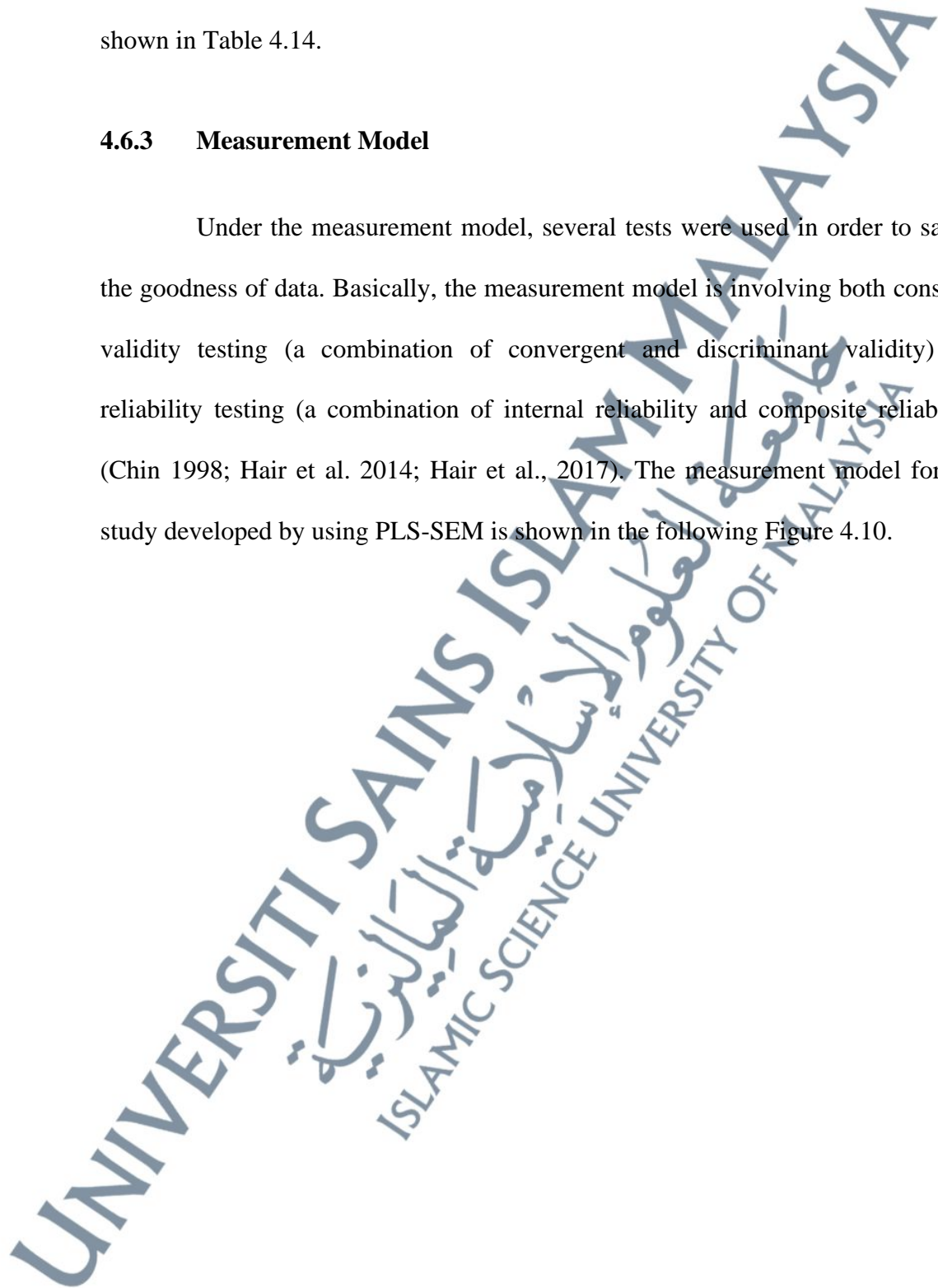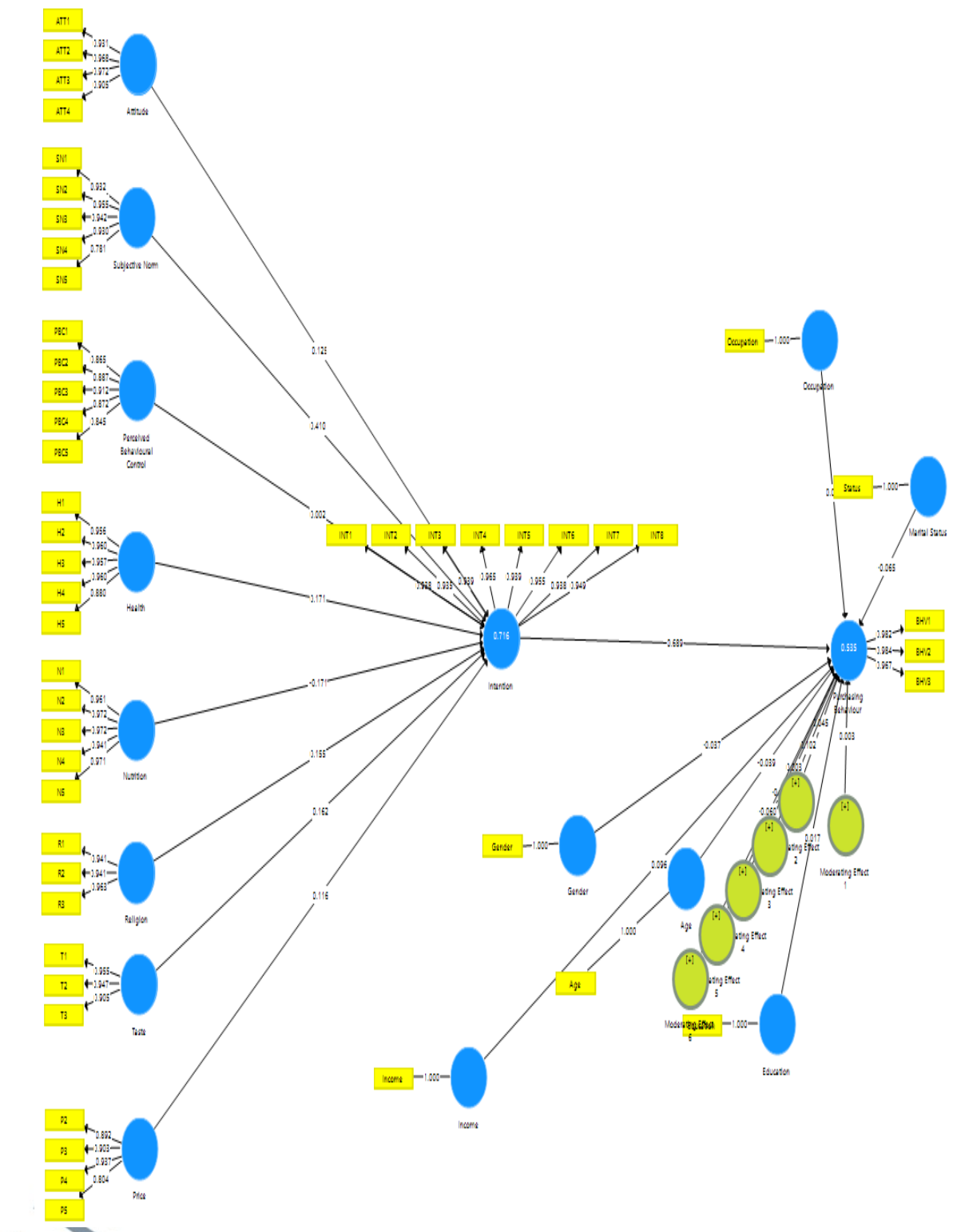
Figure 4.10: Measurement model (Outer model)

4.6.3.1   Validity Testing

Under validity testing, there are two tests that need to be conducted which are: (i) convergent validity; and (ii) discriminant validity. For convergent validity, this test is conducted in order to identify whether a set of items that assumed to the same construct either they are inter-correlations at least moderate in magnitude (Kline, 2016; Henseler et al., 2015). The statistic parameter used to measure convergent validity is loadings, composite and average variance extracted (AVE). As mentioned in the previous chapter, this study employs loadings with the score 0.5 or above, composite with the score 0.7 or above and AVE with the score 0.5 or above.

Meanwhile, discriminant validity is conducted in order to measure the inter-correlation of the inter-construct. Discriminant validity can be achieved when the measurement is free from redundant items (Kline 2016; Henseler et al., 2015). For this, Fornell-Larcker Criterion, Heterotrait Monotrait Ratio (HTMT) and cross-loadings are used in order to measure discriminant validity. For Fornell-Larcker Criterion, the acceptance value for each variable is when the value of the square root AVE is greater than other correlation value between latent variables. Meanwhile, for Heterotrait Monotrait Ratio (HTMT), the accepted value is not exceeding 0.9 for each variable (Henseler et al., 2015). Last but not least, for cross-loadings, the acceptance value for each variable is when the value for each variable is greater than other variables values in that specific variable construct.

Based on Table 4.14, the results of convergent validity testing conducted on data collected for actual survey shows that all loadings, composite and AVE values exceed the threshold value set. However, there are 4 items that need to be removed as their loadings are under 0.5 for this study.

Table 4.14: Results of convergent validity testing

Variables	Items	Loadings	AVE	Composite
Attitude	ATT1	0.931	0.892	0.971
	ATT2	0.968		
	ATT3	0.972		
	ATT4	0.905		
Subjective Norm	SN1	0.932	0.828	0.960
	SN2	0.955		
	SN3	0.942		
	SN4	0.930		
	SN5	0.781		
Perceived Behavioural Control	PBC1	0.865	0.768	0.943
	PBC2	0.887		
	PBC3	0.912		
	PBC4	0.872		
	PBC5	0.845		
Health	H1	0.956	0.890	0.976
	H2	0.960		
	H3	0.957		
	H4	0.960		
	H5	0.880		
Nutrition	N1	0.961	0.929	0.985
	N2	0.972		
	N3	0.972		
	N4	0.941		
	N5	0.971		
Religion	R1	0.941	0.899	0.964
	R2	0.941		
	R3	0.963		
Taste	T1	0.955	0.877	0.955
	T2	0.947		
	T3	0.905		
Price	P2	0.892	0.784	0.935

Variables	Items	Loadings	AVE	Composite
	P3	0.903		
	P4	0.937		
	P5	0.804		
Intention	INT1	0.938	0.893	0.985
	INT2	0.935		
	INT3	0.939		
	INT4	0.965		
	INT5	0.939		
	INT6	0.955		
	INT7	0.938		
	INT8	0.949		
Purchasing Behaviour	BHV1	0.982	0.956	0.985
	BHV2	0.983		
	BHV3	0.967		
Demographic Profiles	Age	1.000	1.000	1.000
	Education	1.000		
	Gender	1.000		
	Income	1.000		
	Occupation	1.000		
	Marital Status	1.000		

*Loadings = > 0.5; *Composite = > 0.7; *AVE = > 0.5 (Kline, 2016).

Next, for discriminant validity, Table 4.15 to Table 4.17 shows the results of all discriminant validity tests are passed. This happened when in Table 4.15, it shows the value of the square root AVE is greater than other correlation value between latent variables for Fornell-Larcker criterion. Meanwhile, all variables' values are not exceeding 0.9 as suggested for Heterotrait Monotrait Ratio (HTMT) in Table 4.16. Last but not least, the value of cross-loadings for each variable tabled in Table 4.17 is greater than other variables values in that specific variable construct.

Table 4.15: Results of discriminant validity testing (Fornell-larcker criterion)

Variables	AGE	ATT	EDC	GEN	HLT	INC	INT	MS	NUT	OCC	PBC	PRC	BHV	RLG	SN	TST
AGE	1.000															
ATT	0.235	0.945														
EDU	0.197	0.154	1.000													
GEN	-0.141	0.015	0.018	1.000												
HLT	0.162	0.804	0.091	0.018	0.943											
INC	0.715	0.224	0.321	-0.144	0.156	1.000										
INT	0.296	0.709	0.107	-0.098	0.706	0.283	0.945									
MS	-0.638	-0.179	-0.159	0.095	-0.172	-0.566	-0.225	1.000								
NUT	0.144	0.770	0.069	0.050	0.889	0.133	0.636	-0.141	0.964							
OCC	0.385	0.032	0.028	-0.153	0.000	0.391	0.071	-0.317	0.016	1.000						
PBC	0.268	0.804	0.185	0.014	0.789	0.260	0.697	-0.242	0.750	0.062	0.877					
PRC	0.073	0.595	0.071	0.036	0.641	0.038	0.615	-0.073	0.649	-0.063	0.655	0.885				
BHV	0.297	0.531	0.127	-0.121	0.525	0.325	0.705	-0.262	0.427	0.118	0.578	0.415	0.978			
RLG	0.183	0.706	0.126	-0.034	0.759	0.152	0.687	-0.159	0.742	0.050	0.671	0.612	0.526	0.948		
SN	0.308	0.702	0.112	-0.099	0.686	0.325	0.780	-0.267	0.636	0.144	0.709	0.547	0.711	0.624	0.910	
TST	0.248	0.684	0.135	-0.037	0.688	0.237	0.721	-0.217	0.659	0.068	0.725	0.651	0.610	0.697	0.692	0.936

Table 4.16: Results of discriminant validity testing (Heterotrait monotrait ratio - HTMT)

Variables	AGE	ATT	EDU	GEN	HLT	INC	INT	MS	NUT	OCC	PBC	PRC	BHV	RLG	SN	TST
AGE																
ATT	0.241															
EDU	0.197	0.158														
GEN	0.141	0.028	0.018													
HLT	0.164	0.836	0.092	0.033												
INC	0.715	0.228	0.321	0.144	0.157											
INT	0.298	0.730	0.108	0.099	0.721	0.285										
MS	0.638	0.184	0.159	0.095	0.174	0.566	0.227									
NUT	0.146	0.796	0.069	0.051	0.914	0.134	0.648	0.143								
OCC	0.385	0.033	0.028	0.153	0.013	0.391	0.071	0.317	0.025							
PBC	0.277	0.854	0.193	0.035	0.836	0.268	0.728	0.250	0.792	0.071						
PRC	0.074	0.636	0.075	0.041	0.682	0.047	0.650	0.076	0.686	0.068	0.711					
BHV	0.300	0.546	0.128	0.122	0.534	0.329	0.718	0.265	0.435	0.119	0.603	0.440				
RLG	0.188	0.741	0.129	0.035	0.793	0.156	0.713	0.163	0.770	0.052	0.718	0.657	0.547			
SN	0.319	0.733	0.118	0.104	0.710	0.337	0.807	0.276	0.656	0.149	0.755	0.587	0.738	0.660		
TST	0.258	0.723	0.140	0.038	0.723	0.247	0.755	0.225	0.689	0.070	0.779	0.708	0.639	0.743	0.738	

Table 4.17: Results of discriminant validity testing (Cross-loadings)

VRB	ATT	SN	PBC	HLT	NUT	RLG	TST	PRC	INT	BHV	AGE	EDU	GEN	INC	MS	OCC
ATT1	0.931	0.678	0.759	0.715	0.672	0.652	0.660	0.533	0.692	0.563	0.266	0.136	-0.022	0.260	-0.183	0.048
ATT2	0.968	0.677	0.773	0.777	0.757	0.696	0.659	0.585	0.693	0.497	0.197	0.132	0.033	0.181	-0.147	0.003
ATT3	0.972	0.683	0.755	0.772	0.749	0.692	0.656	0.590	0.692	0.512	0.204	0.150	0.015	0.210	-0.162	0.014
ATT4	0.905	0.611	0.751	0.780	0.738	0.626	0.606	0.541	0.596	0.427	0.223	0.167	0.032	0.193	-0.190	0.059
SN1	0.702	0.932	0.703	0.672	0.635	0.576	0.644	0.531	0.715	0.638	0.232	0.077	-0.047	0.254	-0.199	0.099
SN2	0.680	0.955	0.677	0.667	0.625	0.584	0.662	0.513	0.747	0.682	0.292	0.071	-0.080	0.309	-0.251	0.154
SN3	0.675	0.942	0.687	0.675	0.628	0.605	0.661	0.527	0.758	0.690	0.260	0.085	-0.096	0.246	-0.231	0.125
SN4	0.628	0.930	0.644	0.620	0.572	0.555	0.632	0.482	0.708	0.667	0.343	0.141	-0.107	0.344	-0.300	0.159
SN5	0.494	0.781	0.498	0.469	0.410	0.516	0.543	0.431	0.612	0.547	0.281	0.145	-0.128	0.337	-0.239	0.118
PBC1	0.715	0.579	0.865	0.755	0.759	0.608	0.566	0.573	0.538	0.378	0.149	0.154	0.078	0.129	-0.146	0.045
PBC2	0.698	0.644	0.887	0.637	0.577	0.545	0.665	0.544	0.623	0.573	0.258	0.166	-0.002	0.253	-0.216	0.048
PBC3	0.732	0.623	0.912	0.773	0.757	0.664	0.633	0.580	0.610	0.457	0.253	0.156	0.032	0.208	-0.229	0.077
PBC4	0.718	0.613	0.872	0.661	0.609	0.594	0.684	0.628	0.675	0.546	0.204	0.161	-0.016	0.229	-0.202	-0.010
PBC5	0.659	0.645	0.845	0.642	0.603	0.529	0.617	0.539	0.594	0.560	0.305	0.176	-0.019	0.311	-0.262	0.120
H1	0.781	0.667	0.770	0.956	0.823	0.719	0.664	0.601	0.701	0.531	0.165	0.096	0.003	0.169	-0.159	-0.009
H2	0.777	0.604	0.752	0.960	0.862	0.739	0.618	0.619	0.642	0.430	0.134	0.092	0.044	0.125	-0.143	0.004
H3	0.768	0.623	0.757	0.957	0.886	0.722	0.638	0.621	0.630	0.446	0.140	0.073	0.031	0.132	-0.153	0.014
H4	0.781	0.591	0.740	0.960	0.887	0.729	0.627	0.616	0.634	0.421	0.133	0.080	0.045	0.118	-0.149	0.013
H5	0.683	0.735	0.697	0.880	0.741	0.668	0.689	0.566	0.707	0.625	0.186	0.086	-0.030	0.182	-0.203	-0.019
N1	0.735	0.629	0.718	0.853	0.961	0.716	0.649	0.627	0.617	0.416	0.131	0.078	0.041	0.135	-0.112	0.009
N2	0.746	0.598	0.727	0.866	0.972	0.707	0.631	0.639	0.607	0.391	0.102	0.084	0.040	0.087	-0.106	-0.008
N3	0.770	0.588	0.735	0.873	0.972	0.739	0.617	0.645	0.608	0.375	0.129	0.077	0.069	0.104	-0.122	-0.011
N4	0.714	0.641	0.701	0.834	0.941	0.694	0.633	0.592	0.622	0.445	0.149	0.036	0.042	0.155	-0.158	0.046
N5	0.748	0.606	0.733	0.856	0.971	0.717	0.642	0.624	0.611	0.428	0.184	0.056	0.053	0.160	-0.183	0.044
R1	0.629	0.578	0.593	0.688	0.667	0.941	0.624	0.555	0.630	0.499	0.168	0.088	-0.023	0.118	-0.145	0.065
R2	0.670	0.588	0.637	0.714	0.709	0.941	0.662	0.584	0.652	0.459	0.153	0.144	-0.044	0.162	-0.141	0.035

VRB	ATT	SN	PBC	HLT	NUT	RLG	TST	PRC	INT	BHV	AGE	EDU	GEN	INC	MS	OCC
R3	0.708	0.608	0.675	0.755	0.732	0.963	0.695	0.600	0.671	0.537	0.200	0.125	-0.030	0.152	-0.165	0.044
T1	0.687	0.651	0.716	0.676	0.652	0.693	0.955	0.616	0.703	0.597	0.223	0.137	-0.029	0.199	-0.185	0.052
T2	0.626	0.674	0.658	0.634	0.603	0.647	0.947	0.576	0.672	0.602	0.241	0.102	-0.075	0.236	-0.198	0.062
T3	0.605	0.619	0.662	0.622	0.593	0.616	0.905	0.638	0.651	0.512	0.235	0.139	0.000	0.233	-0.227	0.076
P2	0.508	0.487	0.585	0.555	0.548	0.573	0.608	0.892	0.535	0.392	0.062	0.060	0.037	0.021	-0.049	-0.085
P3	0.521	0.558	0.567	0.572	0.582	0.552	0.577	0.903	0.565	0.405	0.089	0.040	-0.003	0.061	-0.068	-0.012
P4	0.606	0.504	0.657	0.635	0.648	0.606	0.625	0.937	0.596	0.362	0.093	0.082	0.043	0.061	-0.075	-0.049
P5	0.464	0.376	0.500	0.499	0.511	0.421	0.486	0.804	0.473	0.306	0.004	0.070	0.055	-0.017	-0.065	-0.084
INT1	0.731	0.689	0.705	0.704	0.647	0.675	0.690	0.624	0.938	0.601	0.280	0.143	-0.061	0.241	-0.203	0.046
INT2	0.719	0.711	0.673	0.687	0.637	0.647	0.685	0.605	0.935	0.599	0.271	0.101	-0.058	0.239	-0.204	0.066
INT3	0.628	0.752	0.643	0.638	0.573	0.642	0.688	0.521	0.939	0.716	0.312	0.102	-0.101	0.308	-0.252	0.116
INT4	0.691	0.763	0.685	0.696	0.628	0.668	0.702	0.586	0.965	0.676	0.270	0.082	-0.103	0.262	-0.217	0.075
INT5	0.665	0.738	0.661	0.665	0.593	0.665	0.688	0.597	0.939	0.677	0.259	0.096	-0.091	0.251	-0.212	0.048
INT6	0.643	0.756	0.637	0.645	0.574	0.638	0.675	0.559	0.955	0.699	0.284	0.107	-0.100	0.293	-0.212	0.070
INT7	0.616	0.760	0.605	0.639	0.565	0.613	0.648	0.547	0.938	0.691	0.292	0.076	-0.129	0.292	-0.226	0.080
INT8	0.677	0.723	0.666	0.666	0.597	0.650	0.677	0.614	0.949	0.665	0.266	0.101	-0.096	0.253	-0.178	0.033
BHV1	0.496	0.684	0.548	0.492	0.395	0.494	0.581	0.400	0.667	0.982	0.279	0.124	-0.107	0.313	-0.256	0.109
BHV2	0.496	0.700	0.546	0.500	0.404	0.501	0.582	0.385	0.675	0.984	0.291	0.137	-0.103	0.331	-0.264	0.116
BHV3	0.563	0.700	0.598	0.546	0.450	0.545	0.624	0.430	0.724	0.967	0.300	0.111	-0.144	0.309	-0.249	0.120
AGE	0.235	0.308	0.268	0.162	0.144	0.183	0.248	0.073	0.296	0.297	1.000	0.197	-0.141	0.715	-0.638	0.385
EDU	0.154	0.112	0.185	0.091	0.069	0.126	0.135	0.071	0.107	0.127	0.197	1.000	0.018	0.321	-0.159	0.028
GEN	0.015	-0.099	0.014	0.018	0.050	-0.034	-0.037	0.036	-0.098	-0.121	-0.141	0.018	1.000	-0.144	0.095	-0.153
INC	0.224	0.325	0.260	0.156	0.133	0.152	0.237	0.038	0.283	0.325	0.715	0.321	-0.144	1.000	-0.566	0.391
MS	-0.179	-0.267	-0.242	-0.172	-0.141	-0.159	-0.217	-0.073	-0.225	-0.262	-0.638	-0.159	0.095	-0.566	1.000	-0.317
OCC	0.032	0.144	0.062	0.000	0.016	0.050	0.068	-0.063	0.071	0.118	0.385	0.028	-0.153	0.391	-0.317	1.000

4.6.3.2   Reliability Test

Reliability Testing – under reliability testing, there are two tests that need to be conducted which are: (i) internal reliability; and (ii) composite reliability. For internal reliability, this test is conducted in order to measure the capability of items to measure the construct. The statistic parameter used to measure internal reliability is Cronbach's alpha (α). As mentioned in the previous chapter, this study employs the acceptance value of Cronbach's alpha 0.6 (Sekaran & Bougie, 2010).

Meanwhile, composite reliability is conducted in order to estimate to the extent which the set of latent construct indicators share in their measurement construct (Hair et al. 2014). As mentioned in the previous chapter, this study employs CR with the score 0.7 or above. Based on Table 4.18, the results of reliability testing conducted on data collected for the actual survey shows that all Cronbach's alpha and composite reliability values exceed the threshold value set.

Table 4.18: Results of reliability testing

Variables	Cronbach's Alpha ($\alpha \geq 0.6$)	Composite Reliability ($CR \geq 0.7$)
Attitude	0.960	0.971
Subjective Norm	0.947	0.96
Perceived Behavioural Control	0.925	0.943
Health	0.969	0.976
Nutrition	0.981	0.985
Religion	0.944	0.964
Taste	0.929	0.955
Price	0.834	0.888

210

Variables	Cronbach's Alpha ($\alpha \geq 0.6$)	Composite Reliability ($CR \geq 0.7$)
Intention	0.983	0.985
Purchasing Behaviour	0.977	0.985
AGE	1.000	1.000
EDU	1.000	1.000
GEN	1.000	1.000
INC	1.000	1.000
MS	1.000	1.000
OCC	1.000	1.000

4.6.4   Structural Model

Once the measurement model analysis is completed, then the next step is to assess the structural model before to answer the hypothesis testing. This involves examining the model's predictive capabilities and the relationship between constructs. There are several tests that need to be conducted including: (i) coefficient of determination (R^2); (ii) effect size (f^2). The measurement model for this study developed by using SmartPLS-SEM is shown in the following Figure 4.11.
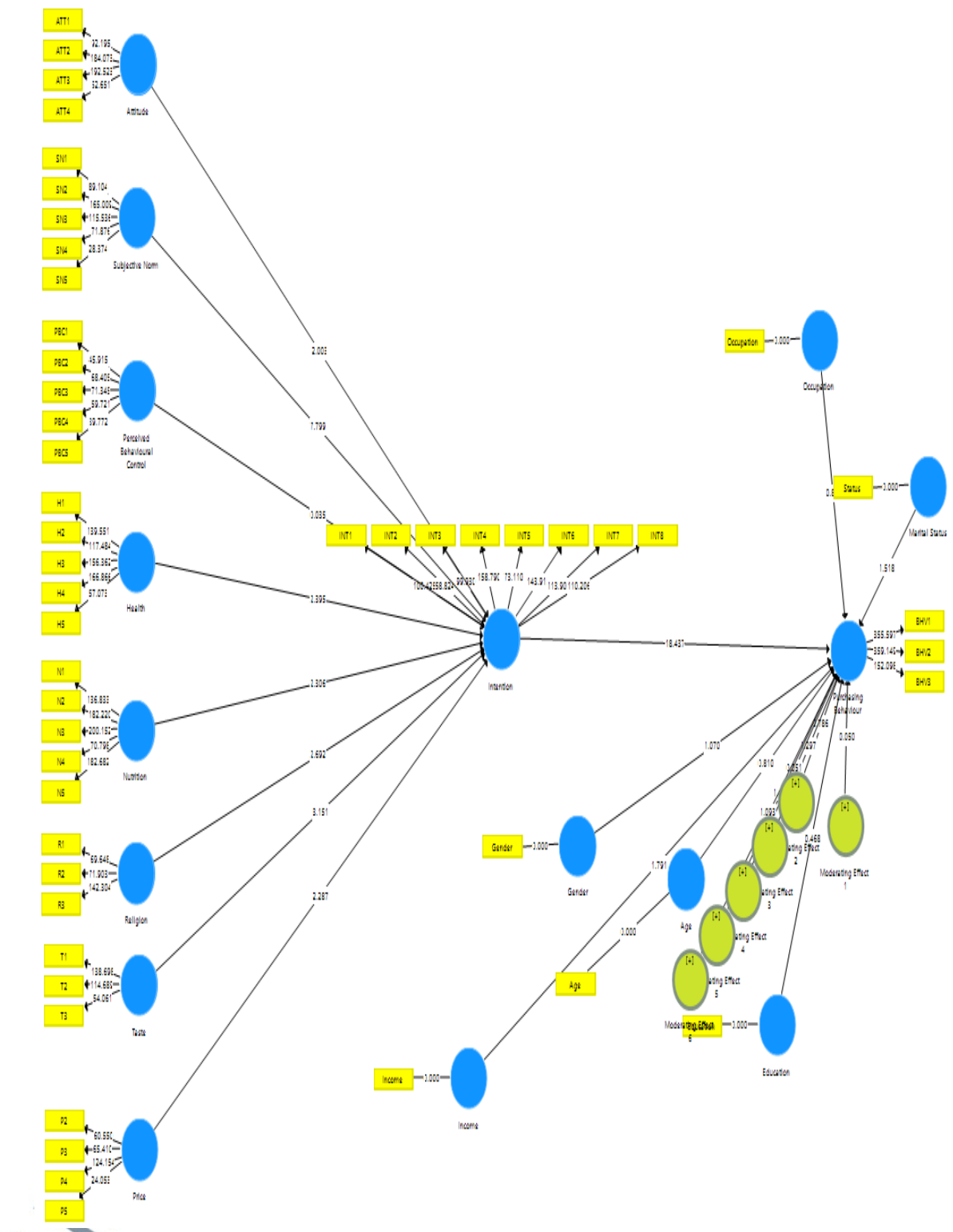
Figure 4.11: Structural model (Inner model)

212

4.6.4.1　Coefficient of Determination (R^2)

Coefficient of Determination (R^2) – In a simple word, R^2 is a measure of the model's predictive accuracy (Hair et al. 2014). The R^2 value is range from 0 to 1, where the higher value means higher predictive accuracy. In order to evaluate the level of predictive accuracy for the structural model developed for this study, the predictive accuracy can be calculated based on the following formula:

$$f^2 = \frac{R^2_{Included} - R^2_{Excluded}}{1 - R^2_{Included}}$$

Based on the effect size (f^2) formula above, the following Table 4.19 highlights the level of R^2 value as suggested by Chin (1998).

Table 4.19: Predictive accuracy

R^2 Value	Level
$R^2 > 0.67$	High
$0.33 > R^2 > 0.66$	Moderate
$R^2 > 0.19$	Low

Source: Adapted from Chin (1998)

This study specifically set the number of re-sampling (bootstrapping) of 420. Based on the results, the structural model for this

213

study has moderate predictive accuracy values which are $R^2 = 0.716$ for intention variable and $R^2 = 0.52$ for purchasing behaviour variable. This means that R^2 value proposed that 61.5 per cent of variance can be explained by independent constructs toward moderating construct and 42 per cent of variance can be explained by moderating construct toward dependent construct, which shown in the previous Figure 4.11.

4.6.4.2 Effect Size (f^2)

Effect Size (f^2) – Another aspect that needs to be viewed is the effect size (f^2). The impact of a variable towards another variable can be examined by looking with effect size (f^2). The effect size can be identified based on three f^2 categories value which are: (i) small (0.020-0.150); (ii) medium (0.150-0.350); and (iii) big (> 0.350) (Chin 1998). The results of the effect size (f^2) are shown in the following Table 4.20.

Table 4.20: Results of effect size (f^2)

Variables	f^2 Value	Category
Attitude -> Intention	0.014	No Effect
Subjective Norm -> Intention	0.234	Medium
PBC -> Intention	0.000	No Effect
Health -> Intention	0.016	No Effect
Nutrition -> Intention	0.019	Small
Religion -> Intention	0.029	Small
Taste -> Intention	0.032	Small
Price -> Intention	0.022	Small
Intention -> Purchasing Behaviour	0.783	Big
Age Moderating -> Purchasing Behaviour	0.001	No Effect
Education Moderating -> Purchasing Behaviour	0.001	No Effect

214

Variables	f^2 Value	Category
Gender Moderating -> Purchasing Behaviour	0.003	No Effect
Income Moderating -> Purchasing Behaviour	0.008	No Effect
Marital Status Moderating -> Purchasing Behaviour	0.005	No Effect
Occupation Moderating -> Purchasing Behaviour	0.002	No Effect

Based on Table 4.20 above, it shows that intention to purchasing behaviour has the biggest effect size $f^2 = 0.783$. Next, subjective norm to intention has medium effect size $f^2 = 0.234$, nutrition to intention have a small effect size $f^2 = 0.019$; religion to intention have a small effect size $f^2 = 0.029$; taste to intention have a small effect size $f^2 = 0.032$; price to intention have a small effect size $f^2 = 0.022$. Meanwhile, attitude to intention ($f^2 = 0.014$); perceived behavioural control to intention ($f^2 = 0.000$); health to intention ($f^2 = 0.016$); age as moderating effect to purchasing behaviour ($f^2 = 0.001$); education as moderating effect to purchasing behaviour ($f^2 = 0.001$); gender as moderating effect to purchasing behaviour ($f^2 = 0.003$); income as moderating effect to purchasing behaviour ($f^2 = 0.008$); marital status as moderating effect to purchasing behaviour ($f^2 = 0.005$); and occupation as moderating effect to purchasing behaviour ($f^2 = 0.002$) have no effect size when their effect size is below than 0.020. Therefore, it can be concluded that there is a big impact by intention toward purchasing behaviour.

4.7   Hypothesis Testing

Under this section, the presentation of findings will be divided into three sub-sections, which are: (i) factors influence; (ii) moderating effect and (iii) intention. There are eight independent variables, one dependent variable and one moderating variable involve in this study. Explanations of the relationships between these variables are as follow.

4.7.1   Factors Influence

Research Question 2   :   What is the factor influence Muslim consumer intention towards goat milk purchasing behaviour in Malaysia?

Research Objective 2   :   To examine factors that influence Muslim consumer intention towards goat milk purchasing behaviour in Malaysia.

This sub-section addresses the above Research Question 2 (RQ2) and Research Objective 2 (RO2). The main idea of this sub-section was to examine factors that influence Muslim consumer intention towards goat milk purchasing behaviour in Malaysia.

By using PLS-SEM, the relationship between variables can be examined in structural model evaluation. In this case, the structural model consists of the arrow (directed point) that give the meaning of the relationship between a construct to other construct (hypothesis relationship) with consists of Beta value (β) for hypothesis testing and T statistics (t-value). The strength

216

relationship value between construct was measured by Beta value, while the significant of the relationship value between construct was measured by t-value. Therefore, a summary of the findings for hypothesis testing between factors influence and intention for this study is presented in the following Table 4.21.

Table 4.21: Findings on hypothesis testing (Independent variables to mediating variable)

	Hypothesis	**Beta Value (β)**	**Standard Deviation (STDEV)**	**T Statistics**	**P Values**	**Results**
H1	Attitude -> Intention	0.125	0.062	2.003	0.045*	Supported
H2	SN -> Intention	0.410	0.053	7.799	0.000*	Supported
H3	PBC -> Intention	0.002	0.062	0.035	0.972	Not Supported
H4	Health -> Intention	0.171	0.071	2.395	0.017*	Supported
H5	Nutrition -> Intention	-0.171	0.074	2.306	0.021*	Supported
H6	Religion -> Intention	0.155	0.058	2.692	0.007*	Supported
H7	Taste -> Intention	0.162	0.052	3.151	0.002*	Supported
H8	Price -> Intention	0.116	0.051	2.287	0.022*	Supported

* p-value is significant at 0.05

The explanations for each hypothesis tested between factor influence Muslim consumer intention towards goat milk purchasing behaviour in Malaysia are as follow.

217

Hypothesis 1 : *Attitude will have a significant effect on Muslim consumer intention towards goat milk purchasing behaviour in Malaysia.*

H1: β = 0.125, *t* = 2.003
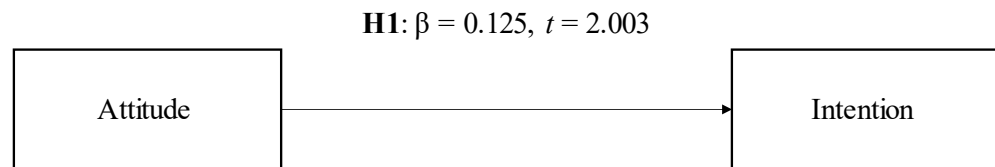
| Attitude | → | Intention |

Figure 4.12: Hypothesis testing model of attitude on intention towards goat milk purchasing behaviour in Malaysia

Based on Table 4.21 and Figure 4.12, the following results on hypothesis tested on the relationship between attitude and intention towards goat milk purchasing behaviour in Malaysia are as follow:

Hypothesis 1: The relationship between attitude and intention is positive significant with the value (β = 0.124, *t* = 2.003, p = 0.045). Therefore, hypothesis 1 (H1) is supported.

Hypothesis 2 : *Subjective Norm will have a significant effect on Muslim consumer intention towards goat milk purchasing behaviour in Malaysia.*
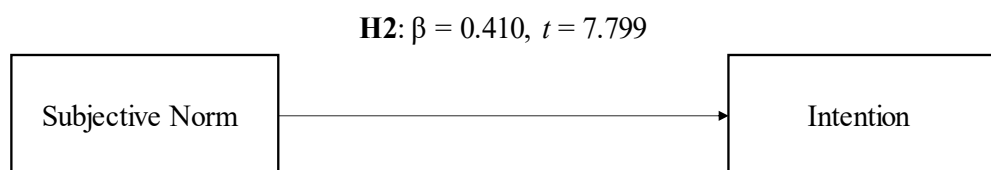
H2: β = 0.410, *t* = 7.799

| Subjective Norm | → | Intention |

Figure 4.13: Hypothesis testing model of subjective norm on intention towards goat milk purchasing behaviour in Malaysia

218

Based on Table 4.21 and Figure 4.13, the following results on hypothesis tested on the relationship between subjective norm and intention towards goat milk purchasing behaviour in Malaysia are as follow:

Hypothesis 2: The relationship between subjective norm and intention is positive significant with the value (β = 0.410, t = 7.799, p = 0.000). Therefore, hypothesis 2 (H2) is supported.

Hypothesis 3 : *Perceived Behavioural Control will have a significant effect on Muslim consumer intention towards goat milk purchasing behaviour in Malaysia.*
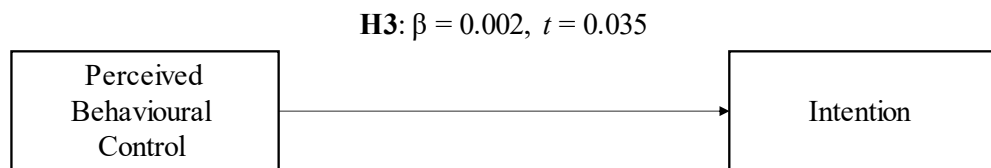
H3: β = 0.002, t = 0.035

```
┌─────────────────┐                           ┌─────────────────┐
│    Perceived    │                           │                 │
│   Behavioural   │ ────────────────────────► │    Intention    │
│     Control     │                           │                 │
└─────────────────┘                           └─────────────────┘
```

Figure 4.14: Hypothesis testing model of perceived behavioural control on intention towards goat milk purchasing behaviour in Malaysia

Based on Table 4.21 and Figure 4.14, the following results on hypothesis tested on the relationship between perceived behavioural control and intention towards goat milk purchasing behaviour in Malaysia are as follow:

Hypothesis 3: The relationship between perceived behavioural control and intention is positive significant with the value (β = 0.002, t = 0.035, p = 0.972). Therefore, hypothesis 3 (H3) is not supported.

219

Hypothesis 4 : *Health will have a significant effect on Muslim consumer intention towards goat milk purchasing behaviour in Malaysia.*

H4: $\beta = 0.171$, $t = 2.395$

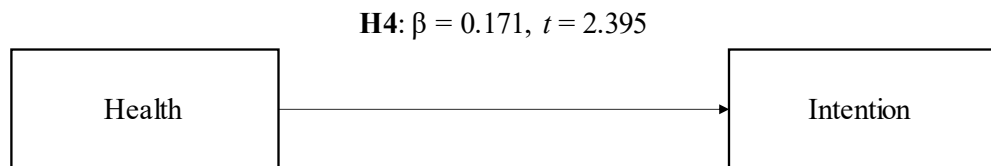| Health	→	Intention

Figure 4.15: Hypothesis testing model of health on intention towards goat milk purchasing behaviour in Malaysia

Based on Table 4.21 and Figure 4.15, the following results on hypothesis tested on the relationship between health and intention towards goat milk purchasing behaviour in Malaysia are as follow:

Hypothesis 4: The relationship between health and intention is positive significant with the value ($\beta = 0.171$, $t = 2.395$, p = 0.017). Therefore, hypothesis 4 (H4) is supported.

Hypothesis 5 : *Nutrition will have a significant effect on Muslim consumer intention towards goat milk purchasing behaviour in Malaysia.*
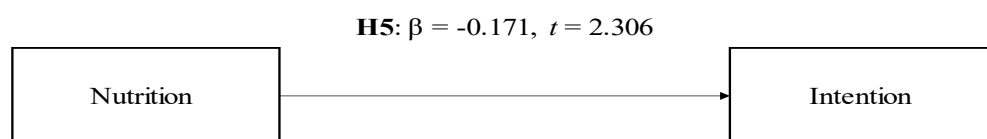
H5: $\beta = -0.171$, $t = 2.306$

Nutrition	→	Intention

Figure 4.16: Hypothesis testing model of nutrition on intention towards goat milk purchasing behaviour in Malaysia

220

Based on Table 4.21 and Figure 4.16, the following results on hypothesis tested on the relationship between nutrition and intention towards goat milk purchasing behaviour in Malaysia are as follow:

Hypothesis 5: The relationship between nutrition and intention is positive significant with the value (β = -0.171, t = 2.306, p = 0.021). Therefore, hypothesis 5 (H5) is supported.

Hypothesis 6   :   *Religion will have a significant effect on Muslim consumer intention towards goat milk purchasing behaviour in Malaysia.*

H6: β = 0.155, t = 2.692

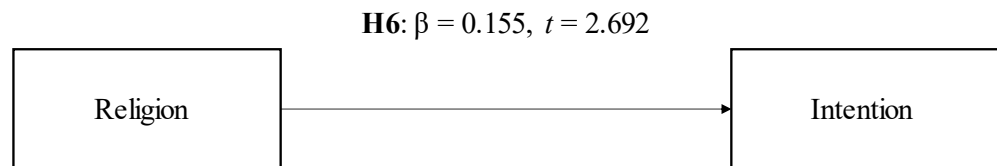|	
Religion	Intention

Figure 4.17: Hypothesis testing model of religion on intention towards goat milk purchasing behaviour in Malaysia

Based on Table 4.21 and Figure 4.17, the following results on hypothesis tested on the relationship between religion and intention towards goat milk purchasing behaviour in Malaysia are as follow:

Hypothesis 6: The relationship between religion and intention is positive significant with the value (β = 0.155, t = 2.692, p = 0.007). Therefore, hypothesis 6 (H6) is supported.

Hypothesis 7 : *Taste will have a significant effect on Muslim consumer intention towards goat milk purchasing behaviour in Malaysia.*

H7: β = 0.162, *t* = 3.151
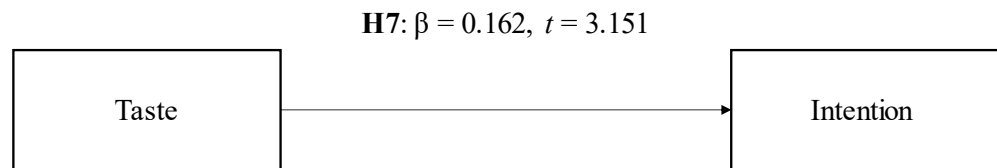
| Taste | → | Intention |

Figure 4.18: Hypothesis testing model of taste on intention towards goat milk purchasing behaviour in Malaysia

Based on Table 4.21 and Figure 4.18, the following results on hypothesis tested on the relationship between taste and intention towards goat milk purchasing behaviour in Malaysia are as follow:

Hypothesis 7: The relationship between taste and intention is positive significant with the value (β = 0.162, *t* = 3.151, p = 0.002). Therefore, hypothesis 7 (H7) is supported.

Hypothesis 8 : *Price will have a significant effect on Muslim consumer intention towards goat milk purchasing behaviour in Malaysia.*
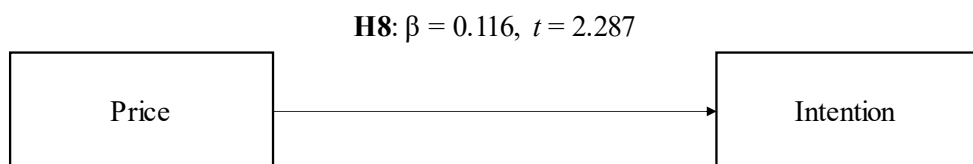
H8: β = 0.116, *t* = 2.287

| Price | → | Intention |

Figure 4.19: Hypothesis testing model of price on intention towards goat milk purchasing behaviour in Malaysia

222

Based on Table 4.21 and Figure 4.19, the following results on hypothesis tested on the relationship between price and intention towards goat milk purchasing behaviour in Malaysia are as follow:

Hypothesis 8: The relationship between price and intention is positive significant with the value ($\beta = 0.116$, $t = 2.287$, $p = 0.022$). Therefore, hypothesis 8 (H8) is supported.

4.7.2 Moderating Effect

Research Question 3 : Does Muslim consumer demographic profile as moderate have any effect between intention and goat milk purchasing behaviour in Malaysia?

Research Objective 3 : To study demographic profile of Muslim consumer as moderating effect between intention and goat milk purchasing behaviour in Malaysia.

This sub-section addresses the above Research Question 3 (RQ3) and Research Objective 3 (RO3). The main idea of this sub-section was to study demographic profiles of Muslim consumer as moderating effect between intention and goat milk purchasing behaviour in Malaysia.

To evaluate the hypotheses, a multigroup analysis is performed. The objective is to verify the moderating effect between intention and goat milk purchasing behaviour in Malaysia. According to Henseler et al. (2016a), before proceeding to perform the multigroup analysis, it is necessary to study the MICOM. The objective of this MICOM study is to confirm that the

223

differences between the two groups are, in fact, due to differences between the latent variables and not to other issues. In other words, the differences are only due to differences in the structural model and not in the measurement model (Henseler et al., 2016a). MICOM is a three-stage process that includes: (1) configuration invariance (Step 1); (2) compositional invariance (Step 2); (3) the equality of composite mean values and variances (Steps 3a and 3b) (Henseler et al., 2016a). Based on the results of MICOM, partial measurement invariance is established (Table 4.22), which is a major requirement prior to perform MGA (Henseler et al., 2016a).

Firstly, the configuration invariance assessment is performed. In this case, it is verified that the corresponding model for gender, age, education, monthly income, occupation and status has the same configuration. The second step is to study the compositional invariance, which is established when the scores of a composite using the weights of the demographic variables do not differ from those created using the weights. Therefore, to verify composite invariance, the original correlation C is compared with the 5%- quantile of C_u. Since C is always equal to or greater than the 5%-quantile, the composite invariance is confirmed (see Table 4.22). To complete the next step, first researcher examines the equality of means, and, subsequently, the equality of variances using the non-parametric permutations test. In this case, the equality of means and variances could not be verified (see Table 4.20), so the measurement invariance is partial.

224

After the consideration of measurement invariance, researcher proceed to assess whether there are significant differences between the group of demographic profiles (gender, age, education, monthly income, occupation and status) using two nonparametric methods: the permutations test and Henseler's MGA (Henseler et al., 2016a). The multigroup analysis results indicate that the differences in p-values are not-significant for H9a, H9b, H9c, H9d, H9e and H9f. Therefore, hypotheses H9a, H9b, H9c, H9d, H9e and H9f adopted for this study cannot be supported by the results obtained. Hence, the moderator role of demographic profile is not proposed (see Table 23 to Tabel 28).

Table 4.22: Measurement invariance result using permutation test

Compositional Invariance Correlation = 1					Equal Mean Assessment			Equal Variance Assessment			
Construct	Configure Invariance	C = 1	95% CI	Partial Measurement Invariance Established	Difference of Mean Value	95% Confidence Interval	Equal Mean	Difference of the Variances Value	95% CI	Equal Variance	Full Measurement Invariance Established
ATT	Yes	0.994	0.983–1.000	Yes	-0.268	-0.234–0.228	No	0.234	-0.277–0.249	Yes	No
SN	Yes	0.999	0.993–1.000	Yes	-0.33	-0.229–0.236	No	0.611	-0.304–0.272	No	No
PBC	Yes	0.995	0.997–1.000	Yes	-0.25	-0.221–0.229	No	0.065	-0.298–0.26	Yes	No
HLT	Yes	0.992	0.999–1.000	Yes	-0.25	-0.224–0.216	No	0.076	-0.27–0.257	Yes	No
NUT	Yes	0.999	0.997–1.000	Yes	0.27	-0.231–0.227	No	0.034	-0.238–0.223	Yes	No
REL	Yes	0.998	0.993–1.000	Yes	-0.33	-0.224–0.216	No	0.034	-0.277–0.249	Yes	No
PRC	Yes	0.996	0.993–1.000	Yes	-0.25	-0.231–0.227	No	0.234	-0.304–0.272	No	No
TST	Yes	0.995	0.999–1.000	Yes	-0.26	-0.221–0.229	No	0.065	-0.298–0.26	Yes	No
INT	Yes	0.995	0.997–1.000	Yes	-0.24	-0.229–0.236	No	0.076	-0.27–0.257	Yes	No
BHV	Yes	0.991	0.997–1.000	Yes	-0.33	-0.224–0.216	No	0.611	-0.238–0.223	Yes	No

Table 4.23: Assessment of age group difference

Hypothesis	Relationship	Std Beta Values					SE Values					t-Values					Path Coefficient Differences	p-Values		Supported
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5		Henseler MGA	Permutation	
H9a	INT- BHV	0.182	0.183	0.185	0.186	0.188	0.185	0.187	0.188	0.189	0.189	0.183	0.184	0.185	0.186	0.188	-0.039	0.418	0.493	No

Note: 1 = 18-25; 2 = 26-33; 3 = 34-41; 4 = 42-49; 5 = >50

Note: * $p < 0.05$, ** $p < 0.01$

Table 4.24: Assessment of gender group difference

Hypothesis	Relationship	Std Beta Values		SE Values		t-Values		Path Coefficient Differences	p-Values		Supported
		Male	Female	Male	Female	Male	Female		Henseler MGA	Permutation	
H9b	INT-BHV	0.186	0.312	0.119	0.312	1.070	2.987 **	-0.037	0.285	0.499	No

Note: * $p < 0.05$, ** $p < 0.01$

Table 4.25: Assessment of monthly income group difference

Hypothesis	Relationship	Std Beta Values					SE Values					t-Values					Path Coefficient Differences	p-Values		Supported
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5		Henseler MGA	Permutation	
H9c	INT- BHV	0.182	0.183	0.185	0.186	0.188	0.185	0.187	0.188	0.189	0.189	0.183	0.184	0.185	0.186	0.188	0.096	0.074	0.483	No

Note: 1 = <RM1,500; 2 = RM1,501-RM3,000; 3 = RM3,001-RM4,500; 4 = RM4,501-RM6,000; 5 = >RM6,001

Note: * $p < 0.05$, ** $p < 0.01$

Table 4.26: Assessment of education level group difference

Hypothesis	Relationship	Std Beta Values							SE Values							t-Values							Path Coefficient Differences	p-Values		Supported
		1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7		Henseler MGA	Permutation	
H9d	INT-BHV	0.182	0.183	0.185	0.186	0.188	0.185	0.187	0.188	0.189	0.189	0.183	0.184	0.185	0.186	0.188	0.182	0.183	0.185	0.186	0.188	0.185	0.017	0.640	0.477	No

Note: 1 = <LCE/SRP/PMR; 2 = MCE/SPM; 3 = STPM/STAM/Diploma/Matrices; 4 = Bachelor Degree;
4 = Master's Degree; 5 = Philosophy Doctorate Degree; 6 = Others

Note: * $p < 0.05$, ** $p < 0.01$

Table 4.27: Assessment of marital status group difference

Hypothesis	Relationship	Std Beta Values			SE Values			t-Values			Path Coefficient Differences	p-Values		Supported
		Married	Single	Divorce	Married	Single	Divorce	Married	Single	Divorce		Henseler MGA	Permutation	
H9e	INT-BHV	0.182	0.183	0.185	0.185	0.187	0.188	0.183	0.184	0.185	-0.065	0.129	0.455	No

Note: * $p < 0.05$, ** $p < 0.01$

Table 4.28: Assessment of occupation group difference

Hypothesis	Relationship	Std Beta Values					SE Values					t-Values					Path Coefficient Differences	p-Values		Supported
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5		Henseler MGA	Permutation	
H9f	INT- BHV	0.182	0.183	0.185	0.186	0.188	0.185	0.187	0.188	0.189	0.189	0.183	0.184	0.185	0.186	0.188	0.032	0.424	0.499	No

Note: 1 = Student; 2 = Government Sector; 3 = Private Sector; 4 = Unemployed; 5 = Others

Note: * $p < 0.05$, ** $p < 0.01$

228

By using SmartPLS-SEM, the relationship between variables can be examined in structural model evaluation. In this case, the structural model consists of the arrow (directed point) that give the meaning of the relationship between a construct to other construct (hypothesis relationship) with consists of Beta value (*β*) for hypothesis testing and T statistics (*t*-value). The strength relationship value between construct was measured by Beta value, while the significant of the relationship value between construct was measured by t-value. Therefore, a summary of the findings for hypothesis testing between age, income, occupation as moderator and purchasing behaviour for this study is presented in the following Table 4.29.

Table 4.29: Findings on hypothesis testing (Moderating variable)

Hypothesis		Beta Value (β)	Standard Deviation (STDEV)	T Statistics	P Values	Results
H9a	Age -> Purchasing Behaviour	-0.039	0.048	0.810	0.418	Not Supported
H9b	Gender -> Purchasing Behaviour	-0.037	0.035	1.070	0.285	Not Supported
H9c	Income -> Purchasing Behaviour	0.096	0.053	1.791	0.074	Not Supported
H9d	Education -> Purchasing Behaviour	0.017	0.037	0.468	0.640	Not Supported
H9e	Marital Status ->	-0.065	0.043	1.518	0.129	Not Supported

	Hypothesis	Beta Value (β)	Standard Deviation (STDEV)	T Statistics	P Values	Results
	Purchasing Behaviour					
H9f	Occupation -> Purchasing Behaviour	0.032	0.040	0.801	0.424	Not Supported

* p-value is significant at 0.05

The explanations for hypothesis tested moderating effect of demographic characteristic on Muslim consumer intention towards goat milk purchasing behaviour in Malaysia are as follow.

Hypothesis 9 : *Demographic profile of Muslim consumer as moderator will have a significant affect between intention and goat milk purchasing behaviour in Malaysia*
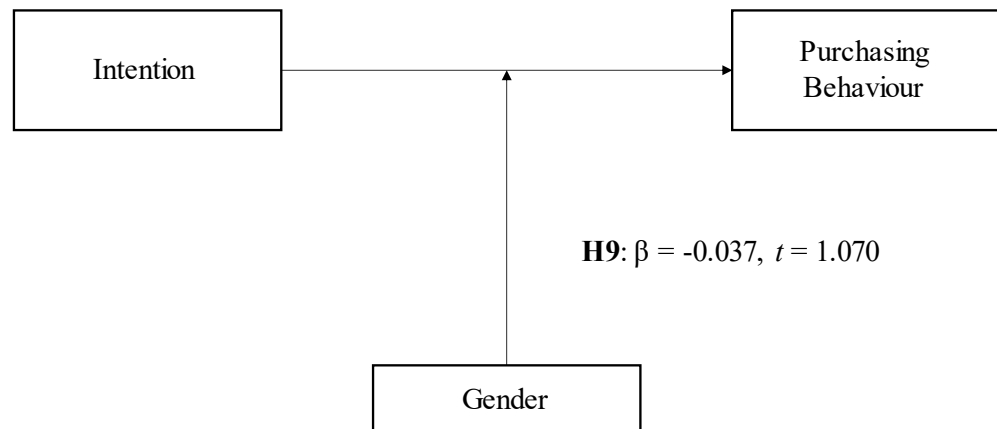

H9: β = -0.039, *t* = 0.810
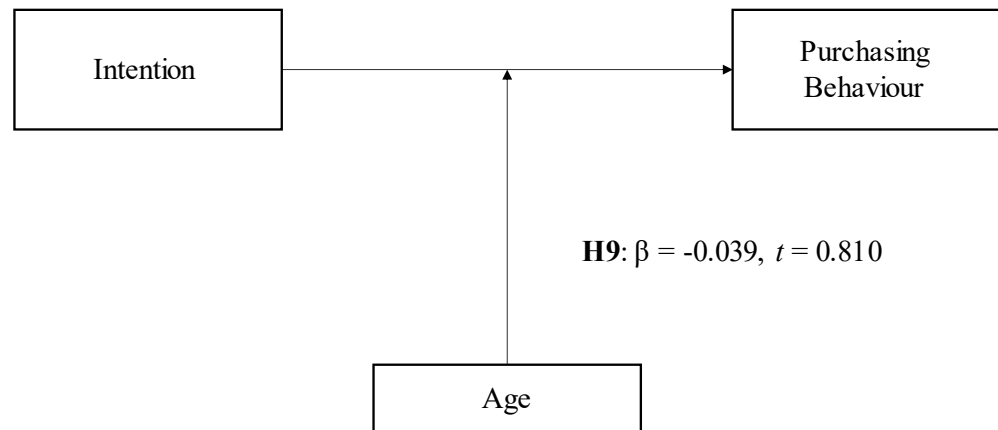
Figure 4.20: Hypothesis testing model of demographic as moderator toward goat milk purchasing behaviour in Malaysia

230

Based on Table 4.29 and Figure 4.20 the following results on hypothesis tested on the relationship between age as moderator between intention and goat milk purchasing behaviour in Malaysia are as follow:

Hypothesis 9a: The relationship between age as moderator between intention and purchasing behaviour is unsignificant with the value (β = -0.039, t = 0.810, p = 0.418). Therefore, hypothesis 9a (H9a) is not supported.

Hypothesis 9b : *Gender of Muslim consumer as moderator will have a significant affect between intention and goat milk purchasing behaviour in Malaysia*
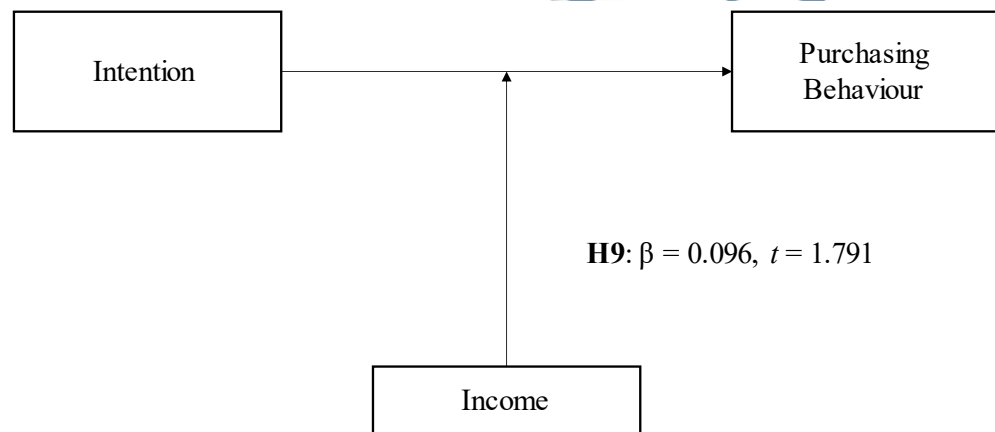

H9: β = -0.037, t = 1.070

Figure 4.21: Hypothesis testing model of gender of Muslim consumer as moderator between intention and goat milk purchasing behaviour in Malaysia

Based on Table 4.29 and Figure 4.21 the following results on hypothesis tested on the relationship between gender as moderator between intention and goat milk purchasing behaviour in Malaysia are as follow:

231

Hypothesis 9b: The relationship between gender as moderator between intention and purchasing behaviour is unsignificant with the value (β = -0.037, t = 1.070, p = 0.285). Therefore, hypothesis 9b (H9b) is not supported.

Hypothesis 9c : *Income of Muslim consumer as moderator will have a significant affect between intention and goat milk purchasing behaviour in Malaysia*
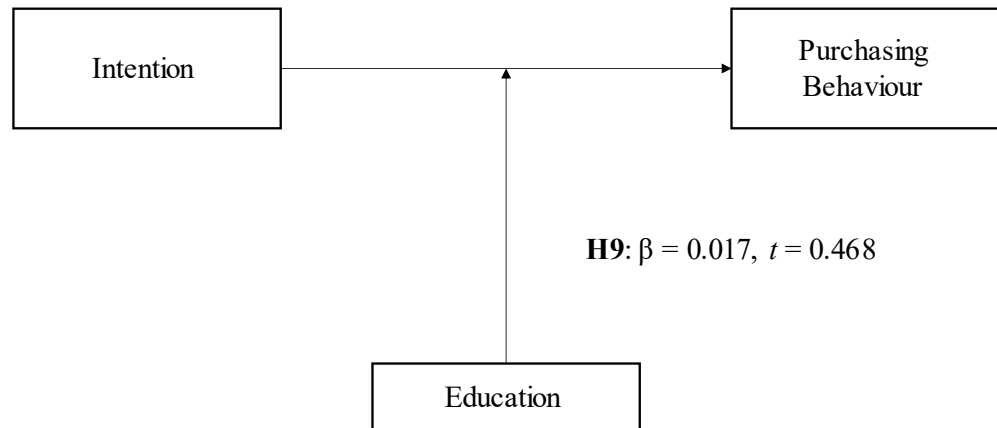

H9: β = 0.096, t = 1.791

Figure 4.22: Hypothesis testing model of income of Muslim consumer as moderator between intention and goat milk purchasing behaviour in Malaysia

Based on Table 4.29 and Figure 4.22 the following results on hypothesis tested on the relationship between income as moderator between intention and goat milk purchasing behaviour in Malaysia are as follow:

Hypothesis 9c: The relationship between income as moderator between intention and purchasing behaviour is unsignificant with the value (β = 0.096, t = 1.791, p = 0.074). Therefore, hypothesis 9c (H9c) is not supported.

Hypothesis 9d : *Education of Muslim consumer as moderator will have a significant affect between intention and goat milk purchasing behaviour in Malaysia*

Figure 4.23: Hypothesis testing model of education of Muslim consumer as moderator between intention and goat milk purchasing behaviour in Malaysia

Based on Table 4.29 and Figure 4.23 the following results on hypothesis tested on the relationship between education as moderator between intention and goat milk purchasing behaviour in Malaysia are as follow:

Hypothesis 9d: The relationship between education as moderator between intention and purchasing behaviour is unsignificant with the value ($\beta = 0.017$, $t = 0.468$, p = 0.640). Therefore, hypothesis 9d (H9d) is not supported.

Hypothesis 9e : *Marital Status of Muslim consumer as moderator will have a significant affect between intention and goat milk purchasing behaviour in Malaysia*
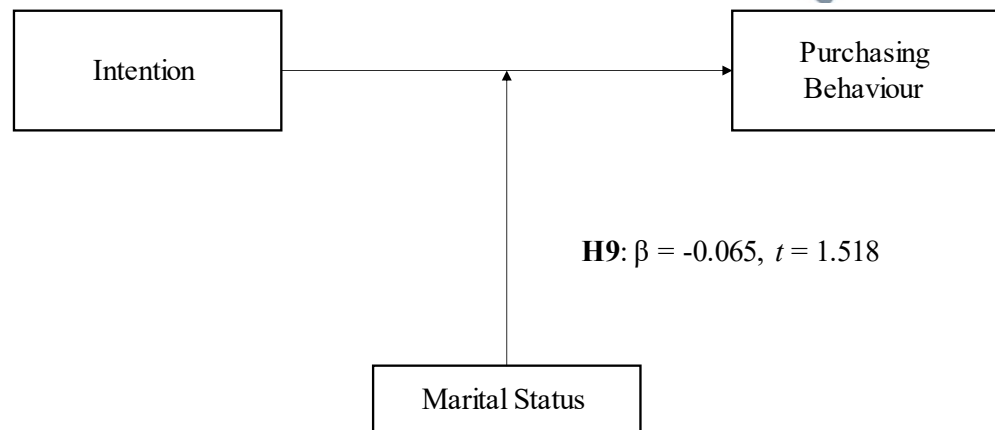

Figure 4.24: Hypothesis testing model of marital status of Muslim consumer as moderator between intention and goat milk purchasing behaviour in Malaysia

Based on Table 4.29 and Figure 4.24 the following results on hypothesis tested on the relationship between marital status as moderator between intention and goat milk purchasing behaviour in Malaysia are as follow:

Hypothesis 9e: The relationship between marital status as moderator between intention and purchasing behaviour is unsignificant with the value ($\beta = 0.065$, $t = 1.518$, p = 0.129). Therefore, hypothesis 9e (H9e) is not supported.

234

Hypothesis 9f : *Occupation of Muslim consumer as moderator will have a significant affect between intention and goat milk purchasing behaviour in Malaysia*
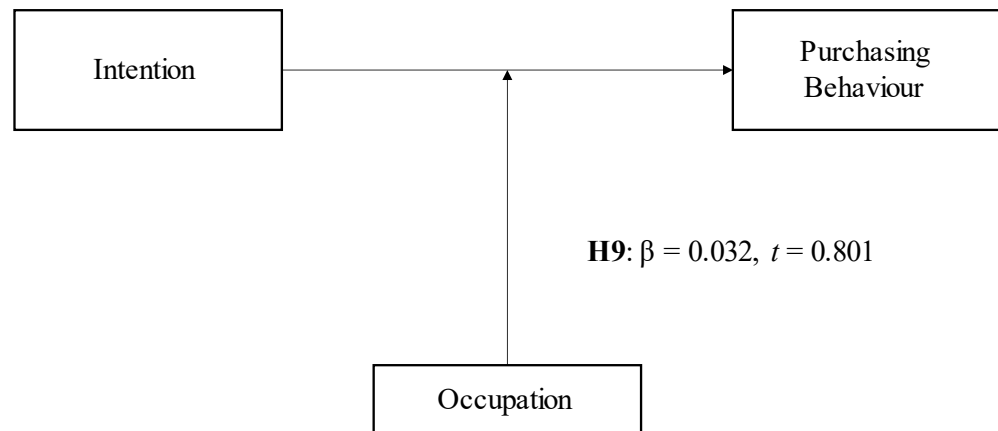

Figure 4.25: Hypothesis testing model of occupation of Muslim consumer as moderator between intention and goat milk purchasing behaviour in Malaysia

Based on Table 4.29 and Figure 4.25 the following results on hypothesis tested on the relationship between occupation as moderator between intention and goat milk purchasing behaviour in Malaysia are as follow:

Hypothesis 9f: The relationship between occupation as moderator between intention and purchasing behaviour is unsignificant with the value ($\beta = 0.032$, $t = 0.801$, p = 0.424). Therefore, hypothesis 9f (H9f) is not supported.

4.7.3   Intention

Research Question 4 : What is the intention of Muslim consumer towards goat milk purchasing behaviour in Malaysia?

Research Objective 4 : To study the intention of Muslim consumer towards goat milk purchasing behaviour in Malaysia.

This sub-section addresses the above Research Question 4 (RQ4) and Research Objective 4 (RO4). The main idea of this sub-section was to the intention of Muslim consumer towards goat milk purchasing behaviour in Malaysia.

By using SmartPLS-SEM, the relationship between variables can be examined in structural model evaluation. In this case, the structural model consists of the arrow (directed point) that give the meaning of the relationship between a construct to other construct (hypothesis relationship) with consists of Beta value (β) for hypothesis testing and T statistics (t-value). The strength relationship value between construct was measured by Beta value, while the significant of the relationship value between construct was measured by t-value. Therefore, a summary of the findings for hypothesis testing between intention and purchasing behaviour for this study is presented in the following Table 4.30.

Table 4.30: Findings on hypothesis testing between intention and purchasing behaviour

	Hypothesis	Beta Value (β)	Standard Deviation (STDEV)	T Statistics	P Values	Results
H10	Intention -> Purchasing Behaviour	0.689	0.037	18.437	0.000*	Supported

* p-value is significant at 0.05

The explanations for hypothesis tested between intention and purchasing behaviour are as follow:

Hypothesis 10 : *Intention will have a significant effect toward goat milk purchasing behaviour in Malaysia.*

H10: β = 0.689, *t* = 18.437

Figure 4.26: Hypothesis testing model between intention and goat milk purchasing behaviour in Malaysia

Based on Table 4.30 and Figure 4.26 the following results on hypothesis tested on the relationship between intention and goat milk purchasing behaviour in Malaysia are as follow:

Hypothesis 10: The relationship between intention and purchasing behaviour is positive significant with the value (β = 0.689, *t* = 18.437, p = 0.000). Therefore, hypothesis 10 (H10) is supported.

237

4.8   Summary

This chapter entail of the explanation of the early process of data collection, editing, coding. The collected data then were analysed by using SPSS for descriptive analysis, a measurement of validity and reliability; and hypothesis testing. Based on the analysis, all the hypotheses were significant. The result shown that the Muslim consumer intention toward goat milk purchasing was influenced by the attitude, subjective norm, perceived behavioural control, health, nutrition, religiosity, taste and price. Meanwhile, Muslim consumer demographic characteristic was moderate the goat milk purchasing behaviour. The most important finding was intention positively and directly influences goat milk purchasing behaviour. Discussion on findings, implications and future research are elaborated in the next chapter.