

## **CHAPTER 4 : RESEARCH RESULTS**

### **4.0 Results and Interpretations**

The Statistical Package for Social Science (SPSS) Version 16.0 was used for the data analysis. Details of the analysis conducted and the respective result interpretations will be discussed in the next section.

#### **4.1 Response Rate and Respondents' Profile**

A total of 320 sets of survey questionnaires were distributed. There were 255 returned responses, 3 were discarded due to incomplete information. The overall response rate is  $(255-3)/320 \times 100\% = 78.75\%$ .

Descriptive statistics have been conducted to develop a profile of respondents.

A total of 252 usable survey questionnaires were collected and being analysed. Male respondents made up of 36.9% (n= 93) while the remaining 63.1% (159) were female. The higher female respondents in this sample were due to majority of the shoppers in shopping malls were mostly females as compared to males.

As for ethnicity, Malay ethnic constituted 40.5% (n=102), Chinese 45.2% (n=114), while Indian ethnic made up of 10.3% (n=26) and other ethnic 4.0% (n=10). The under-representation of Malays could be due to the convenience sampling method whereby questionnaires were distributed to the offices in private sector of which has higher composition of non-Malay employees.

About 56% (n=114) of the respondents were single, 42.4% (n=107) were married and 1.6% (n=4) were widowed/divorced.

As for Age, majority of the respondents fell in the age group of 22-30 (n=117 or 46.4%) and 31-40 (n=90 or 35.7%), only 12 were below 21 and 9 were in the age group of 51-60. 54% (n=136) of the respondents had a bachelor degree, 11.5% or 29 had postgraduate degree, 19.4% or 49 were Certificate or Diploma holders while 11.5% (n= 29) had Secondary/High School education. Professional certificate holders only made up of 3.2% (n=8). The education background of the sample was consistent with the characteristics of urban community population where the sample was drawn from; most of the respondents had a bachelor degree.

38.1% (n = 96) of the respondents were executive, 22.6% or 57 of them were manager or professional. Student made up of 11.9% (n=30) while non-executive made up of 9.5% (n=24), other occupation categories included were self-employed/business owner 6.0% (n=15), supervisor 1.6% (n=4), not working/retired 2% (n=5) and others 8.3% (n=21).

In terms of monthly household income, 44% (n=112) of the respondents had a monthly household income in the range of RM2,000-RM5,000. About 19.4% (n=49) earned between RM5,001-RM8,000. 43 of the respondents (17.1%) earned less than RM2,000 per month while 9.5% (n=24) of them earned between RM8,001-RM10,000. Only 9.5% (n=24) earned more than RM10,000 per month.

As for household size, 31.7% (n=80) had 5 or more family members, 21.8% (n=55) had only 1 member, 19% (n=48) had 4 members while household which had 3 family members constituted 14.7% (n=37) and lastly those had 2 family members constituted 12.7% (n=32). The high number of the single member household was consistent with the characteristics of the urban community, especially in Petaling Jaya and Kuala Lumpur where many of the

population were originally from other states or sub-urban areas, who work in this vicinity due to higher job opportunities.

Although the sample was not representative of the Malaysian ethnic population composition, nevertheless, it provided sufficient coverage across the ethnic groups, age groups, job groups, income groups and other important demographics which were good enough to reflect the consumers' composition in Malaysia and considered appropriate for this study. Summary of the respondents' profile is listed in Table 4.1.

**Table 4.1 : Frequency Distribution and Respondents' Profile**

Variable	Frequency	%	Variable	Frequency	%
<u>Gender</u>			<u>Ethnic</u>		
Male	93	36.9	Malay	102	40.5
Female	159	63.1	Chinese	114	45.2
			Indian	26	10.3
			Others	10	4.0
<u>Age</u>			<u>Occupation</u>		
Below 21	12	4.8	Managerial/Professional	57	22.6
22-30	117	46.4	Executive	96	38.1
31-40	90	35.7	Supervisor	4	1.6
41-50	24	9.5	Non-executive	24	9.5
51-60	9	3.6	Student	30	11.9
			Not working/Retired	5	2.0
-			Self-employed/Business Owner	15	6.0
			Others	21	8.3
<u>Highest Level of Education</u>			<u>Household Income</u>		
Secondary/High School	29	11.5	Below RM2,000	43	17.1
Certificate or Diploma	49	19.4	RM2,000 - RM5,000	112	44.4
Bachelor Degree	136	54.0	RM5,001-RM8,000	49	19.5
Postgraduate Degree	29	11.5	RM8,001-RM10,000	24	9.5
Professional Certificate	8	3.2	Above RM10,000	24	9.5
Others	1	0.4			
<u>Household Size</u>			<u>Marital Status</u>		
1	55	21.8	Single	141	56.0
2	32	12.7	Married	107	42.4
3	37	14.7	Widowed/Divorced	4	1.6
4	48	19.0			
5 and above	80	31.8			

Total number of respondents = 252

#### **4.1.1 Assumption of Normality**

Normality test was conducted for all the scale data to ensure the normality assumption was not violated and fit for further analysis. The results of the normality test revealed that all the data collected did not violate the assumption of normality with the statistics of Skewness and Kurtosis falling between -2 and +2.

#### **4.1.2 Factor Analysis for Psychological Variables (Segmentation)**

Firstly, exploratory factor analysis with principal component extraction method was used to explore the underlying interrelationship among the items adopted and developed for the 4 proposed segments of consumers, as well as for the purpose to reduce the items by eliminating items with low factor loading.

The twenty five items of the four psychological variables on consumers' purchase motivation and decision-making (Coupon Proneness : eight items; Value Consciousness : seven items; Price Consciousness : four items; Brand Involvement : six items) were subjected to principal components factor analysis with Varimax rotation. Prior to performing the factor analysis, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of 0.3 and above. The Kaiser-Meyer-Okin value was 0.861, exceeding the recommended value of 0.6 and Bartlett's Test of Sphericity reached statistical significance ( $p = 0.000$ ), supporting the factorability of the correlation matrix. Principal components analysis revealed that the presence of six components with eigenvalues exceeding 1, explaining 28.97%, 12.62%, 9.75%, 6.61%, 5.45% and 4.07% of the variance respectively. An inspection of the screeplot revealed a clear break after the fourth components, and also with the support of the earlier literature, it was decided to retain only the first four components.

The four-component solution explained a total of 57.95% of the variance; their respective contributions are: Component 1, 28.97%; Component 2, 12.62%; Component 3, 9.75% and Component 4, 6.61%.

#### 4.1.3 Internal Consistency Reliability Test for Psychological variables

The reliability of the scale of each components extracted was then tested and proven all the scales have acceptable internal consistency with Cronbach's Alpha value within the range of 0.708 to 0.871. A summary of the component extracted, eigenvalues and the composite reliability is presented in Table 4.2.

**Table 4.2 : Factor Loading, Eigenvalues, Variance Explained and Composite Reliability for Psychological Variables**

Variable	Item retained	Factor Loading	Eigenvalues	Variance Explained	Cronbach's Alpha
Coupon Proneness	CP3	0.849	7.243	28.97%	0.871
	CP1	0.794			
	CP4	0.753			
	CP8	0.721			
	CP2	0.684			
Brand Involvement	BI5	0.815	3.155	12.62%	0.830
	BI4	0.737			
	BI6	0.722			
	BI3	0.715			
	BI1	0.704			
	BI2	0.529			
Value Consciousness	VC4	0.830	2.438	9.75%	0.841
	VC3	0.785			
	VC5	0.746			
	VC2	0.643			
	VC1	0.625			
Price Consciousness	PC1	0.740	1.653	6.61%	0.708
	PC3	0.702			
	PC4	0.697			

Extraction Method: Principal Component Analysis Rotation

Method: Varimax with Kaiser Normalization

KMO 0.861, Bartlett's Test of Sphericity; p = 0.000

#### 4.1.4 Discriminant Validity Test

Discriminant validity was tested for the four psychological variables by using Pearson Product-Moment Correlation Coefficient. The results,  $r$  range from 0.281 to 0.433 ( $p < 0.01$ ,  $n = 252$ ) confirmed that there were weak correlations between the four variables, discriminant validity were supported and hold up the use of Coupon Proneness, Value Consciousness, Price Consciousness and Brand Involvement as separate variables. Details as per Table 4.3.

**Table 4.3 : Correlations**

	Mean Coupon Proneness	Mean Value Consciousness	Mean Price Consciousness	Mean Brand Involvement
Mean Coupon Proneness	1	.281*	.433*	.31*
Mean Value Consciousness	.281*	1	.329*	.384*
Mean Price Consciousness	.433*	.329*	1	.307*
Mean Brand Involvement	.331*	.384*	.307*	1

\* Correlation is significant at the 0.01 level

#### 4.1.5 Psychological-based Segments Derivation

Mean scores for each variable mentioned above were then calculated based on the items retained. Respondents were then assigned to their respective segment based on the highest mean score they obtained in one of the variables. Table 4.4 shown the descriptive on frequency and percentage of each segments derived.

**Table 4.4 : Frequency and Percentage of Each Segments Derived**

Segment	Frequency	%
Coupon Prone	29	11.5
Value Conscious	145	57.5
Price Conscious	38	15.1
Brand Involved	40	15.9
Total	252	100.0

#### **4.1.6 Factor Analysis for Attitudinal Variables, Coupon Characteristics Variables and Behavioural Variable**

Factor analysis was carried out to explore the underlying interrelationship among the items adopted and developed for each of the attitudinal variables, behavioural variables and coupon characteristics variables. It was also means for the purpose to reduce the items by eliminating items with low factor loading.

The ten items from the two attitudinal variables, five items from the behavioural variable and seven items from the two coupon characteristics variables were subjected to factor analysis. Prior to performing factor analysis, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of 0.3 and above. The Kaiser-Meyer-Okin value was 0.897, exceeding the recommended value of 0.6 and Bartlett's Test of Sphericity reached statistical significance ( $p = 0.000$ ), supporting the factorability of the correlation matrix.

Factor analysis revealed that presence of five components with eigenvalues exceeding 1. The five-component solution explained a total of 79.11% of the variance; their respective contributions were: Component 1, 48.62%; Component 2, 10.19%; Component 3, 8.88%; Component 4, 6.85% and Component 5, 4.57%.



#### 4.1.7 Internal Consistency Reliability Test for Attitudinal Variables, Coupon

##### Characteristics Variables and Behavioural Variable

The reliability of the scale of each component extracted was then tested and proved that the scales have high internal consistency with Cronbach's Alpha value within the range of 0.894 to 0.954. A summary of the component extracted, eigenvalues and the composite reliability is presented in Table 4.5.

**Table 4.5 : Factor Loading, Eigenvalues, Variance Explained and Composite Reliability for Dependent and Independent Variables under Investigation**

Variable	Item retained	Factor Loading	Eigenvalues	Variance Explained	Cronbach's Alpha
Subjective Norms	SN2	0.853	10.697	48.62%	0.954
	SN5	0.830			
	SN4	0.827			
	SN1	0.819			
	SN3	0.801			
Redemption Intentions	RI3	0.857	2.241	10.19%	0.894
	RI4	0.824			
	RI1	0.750			
	RI2	0.730			
	RI5	0.689			
Attitude	AA2	0.772	1.954	8.88%	0.913
	AA1	0.763			
	AA4	0.717			
	AA5	0.657			
	AA3	0.611			
Coupon Value	FV3	0.843	1.506	6.85%	0.918
	FV2	0.835			
	FV4	0.788			
	FV1	0.690			
Expiration Date	CE2	0.914	1.006	4.57%	0.901
	CE3	0.894			
	CE1	0.864			

Extraction Method : Principal Component Analysis  
Rotation Method: Varimax with Kaiser Normalization  
KMO 0.897, Bartlett's Test of Sphericity; p = 0.000

#### **4.1.8 One-way Analysis of Variance Between-Groups with Post-Hoc Tests for Mean Scores Comparison between Psychological-based Segments**

Levene's test for homogeneity of variances was conducted prior to the one-way between-groups analysis of variance to ensure the assumption of homogeneity of variance was not violated. The Sig. values for all five variables which set for further testing were all greater than 0.05, indicated that homogeneity of variance assumption was supported.

A one-way between-groups analysis of variance with post-hoc tests was then conducted to explore whether there were significant differences between the mean scores on the attitudinal variables, behavioural variable and coupon characteristics variables across the four derived psychological-based segments: Coupon Prone, Value Conscious, Price Conscious and Brand Involved respectively.

There was a statistically significant difference at the  $p < 0.05$  level in the Attitude towards act of redeeming coupons:  $F(3, 248) = 4.0$ ,  $P = 0.008$  and Redemption Intentions:  $F(3, 248) = 3.8$ ,  $p = 0.11$  for the four segments. Despite reaching statistical significance, the actual difference in mean scores between the groups was small, the effect size, calculated using eta squared, was 0.046 and 0.044 respectively.

Post-hoc comparisons using the Tukey HSD test indicated that the mean score of Attitude towards the act of redeeming coupons for Coupon Prone ( $M = 5.26$ ,  $SD = 0.87$ ) was significantly different from Value Conscious ( $M = 4.58$ ,  $SD = 1.02$ ). Price Conscious ( $M = 4.91$ ,  $SD = 1.09$ ) and Brand Involved ( $M = 4.64$ ,  $SD = 1.22$ ) did not differ significantly from each other and also Coupon Prone and Value Conscious.

As for Redemption Intentions, mean score for Price Conscious ( $M = 4.45$ ,  $SD = 1.10$ ) was significantly different from Brand Involved ( $M = 3.70$ ,  $SD = 1.53$ ). Coupon Prone ( $M =$

4.43, SD = 1.00) and Value Conscious (M = 3.97, SD = 1.16) did not differ significantly from each other and also from Price Conscious and Brand Involved.

There were no significant differences in the mean scores for the Coupon Value, Coupon Expiration Date and Subjective Norms across the four psychological-based segments.

‘Coupon Prone’ has the most positive attitude towards the act of redeeming coupon, while ‘Value Conscious’ has the least positive attitude. The result is not surprising as ‘Coupon Prone’ (Deal-prone) consumers by definition are those who constantly looking for good deal while coupon promotion is one kind of deal offered by marketers. As for ‘Value Conscious’ consumers, they are those who constantly compared on what they paid for and what they received. As such, their least positive attitudes among all the psychological-based segments on the act of redeeming coupon might be due to their perceived value or benefit offered by coupon is not comparable to the quality of product that they will receive. In other words, ‘Value Conscious’ consumers might perceived the value offered by the coupon is relatively low compared to the product quality that they will receive, hence not worthy of redemption.

**Table 4.6 : Mean Differences in Consumer Correlates Across Psychological-Based Segments**

<b>Variable</b>	<b>Coupon Prone (Segment 1) (n=29)</b>	<b>Value Conscious (Segment 2) (n=145)</b>	<b>Price Conscious (Segment 3) (n=38)</b>	<b>Brand Involved (Segment 4) (n=40)</b>	<b>Tukey Test<sup>a</sup></b>
<b>Attitudinal Variables</b>					
Attitude towards act of redeeming coupons	5.26	4.58	4.91	4.64	S1* S2* S3 S4
Subjective norms toward act of redeeming coupons	4.57	4.25	4.69	4.14	S1 S2 S3 S4
<b>Perception toward Coupon Characteristics</b>					
Coupon Value	5.38	4.79	4.97	4.80	S1 S2 S3 S4
Coupon Expiration Date	4.36	3.81	4.14	3.73	S1 S2 S3 S4
<b>Behavioural Variable</b>					
Redemption Intentions	4.43	3.97	4.45	3.70	S1 S2 S3* S4*

<sup>a</sup>Segments highlighted with asterisk \* are significantly different from each other at the 0.05 level

#### 4.1.9 Comparison of Mean Differences on Variables under examination across Demographic-based segments

Several mean scores comparisons of the variables under investigation across demographics variables were also examined in order to test on the Proposition 2, 4 and 7. The analysis and results were discussed as below.

##### a. Gender

**Independent-samples t-test** was conducted to compare if there is any difference between male and female respondents on the mean scores for all variables under examination. There were no significant differences in mean scores of all the variables under examination for male and female.

**Table 4.7 : Mean Differences in Consumer Correlates to Gender**

Variable	Male Group 1 (n=93)	Female Group 2 (n=159)	t-test Differences Significant at 0.05 level ?
<b>Attitudinal Variables</b>			
Attitude towards act of redeeming coupons	4.62	4.77	No
Subjective norms toward act of redeeming coupons	4.41	4.29	No
<b>Perception toward Coupon Characteristics</b>			
Coupon Value	4.75	4.97	No
Coupon Expiration Date	3.91	3.91	No
<b>Behavioural Variable</b>			
Redemption Intentions	4.17	3.98	No

A **one-way between-groups analysis of variance with post-hoc tests** was conducted to explore whether there are differences between the mean scores on the variables under investigation across the demographic-based segments - Household Income, Ethnic, Occupation and Household Size.

Results and interpretations as follows:

**b. Household Income**

There was a statistically significant difference at the  $p < 0.05$  level in the Redemption Intentions:  $F(4, 247) = 3.0$ ,  $p = 0.02$  for the five different income groups.

Despite reaching statistical significance, the actual differences in mean scores between the groups were small, the effect size, calculated using eta squared, was 0.046.

Post-hoc comparisons using the Tukey HSD test indicated that only the mean score of Redemption Intentions for Group 1 (Below RM2,000) ( $M = 4.57$ ,  $SD = 0.91$ ) was significantly different from Group 3 (RM5,001-RM8,000) ( $M = 3.83$ ,  $SD = 1.34$ ) and Group 4 (RM8,001-RM10,000) ( $M = 3.70$ ,  $SD = 1.17$ ).

The results revealed that the lowest household income group (Below RM2,000) had the highest redemption intentions as compared to those in higher Household Income Group.

This could be explained as the lowest household income group is likely to have the highest financial constraints as compared to other groups and the savings provided by coupon will help them in their expenditure while those fell under higher household income groups are less sensitive to coupon promotions due to their relatively lower financial constraints.

**Table 4.8 : Mean Differences in Consumer Correlates Across Household Income Groups**

<b>Variable</b>	<b>Below RM2,000  Group 1  (n=43)</b>	<b>RM2,000- RM5,000  Group 2  (n=112)</b>	<b>RM5,001- RM8,000  Group 3  (n=49)</b>	<b>RM8,001- RM10,000  Group 4  (n=24)</b>	<b>Above RM10,000  Group 5  (n=24)</b>	<b>Tukey Test<sup>a</sup></b>
<b>Attitudinal Variables</b>						
Attitude towards act of redeeming coupons	4.94	4.78	4.56	4.69	4.36	G1 G2 G3 G4 G5
Subjective norms toward act of redeeming coupons	4.42	4.52	4.05	4.22	4.06	G1 G2 G3 G4 G5
<b>Perception toward Coupon Characteristics</b>						
Coupon Value	5.03	4.95	4.65	4.82	4.88	G1 G2 G3 G4 G5
Coupon Expiration Date	3.91	3.84	4.21	3.64	3.89	G1 G2 G3 G4 G5
<b>Behavioural Variable</b>						
Redemption Intentions	4.57	4.04	3.83	3.70	3.98	G1*” G2 G3* G4” G5

<sup>a</sup>Group highlighted with \* and " are significantly different from each other at the 0.05 level

**c. Ethnic**

There was a statistically significant difference at the  $p < 0.05$  level in the Redemption Intentions:  $F(3, 248) = 5.6$ ,  $p = 0.01$  for the four ethnic groups. The effect size, calculated using eta squared, was 0.063, which indicated a medium effect size.

Post-hoc comparisons using the Tukey HSD test indicated that only the mean score of Redemption Intentions for Malay ethnic ( $M = 4.40$ ,  $SD = 1.08$ ) was significantly different from Chinese ( $M = 3.83$ ,  $SD = 1.25$ ) and Indian ( $M = 3.59$ ,  $SD = 1.37$ ). There were no significant differences on mean scores across the Ethnic Groups for other variables under investigation.

The difference in Redemption Intentions across Malay, Chinese and Indian ethnic is likely due to cultural differences between the ethnic groups which affect their motivation to redeem coupon. For example, Chinese was found to be more concerned about “face saving” and their personal social status as compared to Malay (Lai et. al, 2010). According to Bonnici, Campbell, Fredenberger & Hunnicutt (1996), the worries about “losing face” is one of the main deterrents to coupon usage. This might be the reason why Chinese has lower coupon redemption intentions compared to Malay ethnic.



**Table 4.9 : Mean Differences in Consumer Correlates Across Ethnic Groups**

<b>Variable</b>	<b>Malay Group 1 (n=102)</b>	<b>Chinese Group 2 (n=114)</b>	<b>Indian Group 3 (n=26)</b>	<b>Others Group 4 (n=10)</b>	<b>Tukey Test<sup>a</sup></b>
<b>Attitudinal Variables</b>					
Attitude towards act of redeeming coupons	4.87	4.63	4.67	4.18	G1 G2 G3 G4
Subjective norms toward act of redeeming coupons	4.53	4.26	4.02	4.08	G1 G2 G3 G4
<b>Perception toward Coupon Characteristics</b>					
Coupon Value	5.00	4.84	4.81	4.35	G1 G2 G3 G4
Coupon Expiration Date	4.04	3.79	4.06	3.60	G1 G2 G3 G4
<b>Behavioural Variable</b>					
Redemption Intentions	4.40	3.83	3.59	4.14	G1*'' G2* G3'' G4

<sup>a</sup>Group highlighted with \* and '' are significantly different from each other at the 0.05 level

#### **d. Job Group**

There was a statistically significant difference at the  $p < 0.05$  level in the Redemption Intentions:  $F(7, 244) = 2.7$ ,  $p = 0.01$  for the eight job groups. The effect size, calculated using eta squared, was 0.074, which indicated a medium effect size.

Post-hoc comparisons using the Tukey HSD test indicated that only the mean score of Redemption Intentions for Job Group 1 (Managerial/Professional) ( $M = 3.55$ ,  $SD = 1.20$ ) was significantly different from Job Group 5 (Student) ( $M = 4.53$ ,  $SD = 0.88$ ),  $p < 0.05$ . There were no significant differences on other mean scores across the Job Groups for variables under investigation.

The differences in Redemption Intentions for Job Group 1 (Managerial/Professional) and Job Group 5 (Student) is likely due to the savings provided by coupon is perceived to be less worthy for Managerial/Professional. Managers and professionals who are constantly busy with work commitment are less likely to trade-off their time to obtain and redeem coupon. On the other hand, students have more spare time and higher financial constraints, coupon redemptions will provide them perceived valuable savings.

**Table 4.10 : Mean Differences in Consumer Correlates Across Job Groups**

Variable	Managerial/ Professional (Job Group 1)  (n=57)	Executive (Job Group 2)  (n=96)	Supervisor (Job Group 3)  (n=4)	Non- executive (Job Group 4)  (n=24)	Student (Job Group 5)  (n=30)	Retired/ Not working (Job Group 6)  (n=5)	Self- Employed / Business Owner (Job Group 7)  (n=15)	Others (Job Group 8)  (n=21)	Tukey Test <sup>a</sup>
<b>Attitudinal Variables</b>									
Attitude towards act of redeeming coupons	4.47	4.70	4.50	5.03	5.09	3.88	4.87	4.68	JG1 JG2 JG3 JG4 JG5 JG6 JG7 JG8
Subjective norms toward act of redeeming coupons	4.18	4.22	4.70	4.81	4.69	4.20	4.73	3.93	JG1 JG2 JG3 JG4 JG5 JG6 JG7 JG8
<b>Perception toward Coupon Characteristics</b>									
Coupon Value	4.78	4.87	4.75	5.13	4.98	4.35	4.48	5.27	JG1 JG2 JG3 JG4 JG5 JG6 JG7 JG8
Coupon Expiration Date	4.06	3.69	4.58	4.31	4.22	3.60	3.56	3.81	JG1 JG2 JG3 JG4 JG5 JG6 JG7 JG8
<b>Behavioural Variable</b>									
Redemption Intentions	3.55	4.07	4.65	4.32	4.53	3.76	3.96	4.37	JG1* JG2 JG3 JG4 JG5* JG6 JG7 JG8

<sup>a</sup> Group highlighted with \* are significantly different from each other at the 0.05 level

**e. Household Size**

There was a statistically significant difference at the  $p < 0.05$  for Coupon Value :  $F(4,247) = 2.6$ ,  $p = 0.036$  for the five household size. The effect size, calculated using eta squared, was 0.041, which indicated a small effect size.

Post-hoc comparisons using the Tukey HSD test indicated that only the mean score of Coupon Value for Group 1 (Single member household) ( $M = 4.50$ ,  $SD = 1.29$ ) was significantly different from Group 5 (5 or more members) ( $M = 5.02$ ,  $SD = 1.01$ ). There were no significant differences on other mean scores across the Household Size for variables under investigation.

Bigger the household size, the more positive their perception toward coupon value. This could be explained by the consumption volume of big households which normally substantial as compared to smaller households. The economic savings provided by coupons are bigger due to their consumption volume. However, the savings provide by coupons maybe deemed insignificant by small households which have relatively low consumption level.

**Table 4.11 : Mean Differences in Consumer Correlates Across Household Size**

<b>Variable</b>	<b>1 Group 1 (n=55)</b>	<b>2 Group 2 (n=32)</b>	<b>3 Group 3 (n=37)</b>	<b>4 Group 4 (n=48)</b>	<b>5 or More Group 5 (n=80)</b>	<b>Tukey Test<sup>a</sup></b>
<b>Attitudinal Variables</b>						
Attitude towards act of redeeming coupons	4.59	4.83	4.94	4.66	4.68	G1 G2 G3 G4 G5
Subjective norms toward act of redeeming coupons	4.22	4.38	4.50	4.40	4.30	G1 G2 G3 G4 G5
<b>Perception toward Coupon Characteristics</b>						
Coupon Value	4.50	5.05	5.09	4.85	5.02	G1* G2 G3 G4 G5*
Coupon Expiration Date	3.74	3.99	3.90	4.19	3.83	G1 G2 G3 G4 G5
<b>Behavioural Variable</b>						
Redemption Intentions	3.69	4.23	4.42	4.11	4.03	G1 G2 G3 G4 G5

<sup>a</sup>Group highlighted with \* are significantly different from each other at the 0.05 level

#### 4.1.10 Frequency and Percentage of Different Coupon Types Used

Descriptive statistics- Frequency was conducted to determine the uses of the five different coupon types by the respondents. The results revealed that among the 252 respondents, 57.5% (n=145) of them redeemed coupon delivered through Free Standing Insert. Supermarket/Hypermarket Loyalty Programme also commanded the same uptake rate of 57.5% (n=145) as Free Standing Insert. 55.2% or 139 of the respondents redeemed coupon from Newspaper/Magazine cut out/ rip-off page; 39.3% (n=99) from E-coupon, while only 14.7% (n=37) redeemed M-coupon.

According to the earlier coupon studies, perceived ease to obtain and redeem a coupon will directly impact on the coupon redemption intentions and redemption rate. As such, conclusion can be made that in the Malaysian context, Free Standing Insert and Hypermarket/Supermarket Loyalty programme are the coupons perceived by most of the consumers as easiest to obtain and redeem, followed by Newspaper/Magazine cut out/rip-off page, E-coupon and lastly M-coupon.

**Table 4.12 : Frequency and Percentage of Different Coupon Types Used**

Coupon Type / Distribution Vehicle	Frequency	Percentage (%)
Free Standing Insert	145	57.5
Newspaper / Magazine Cut Out / Rip-Of-Page	139	55.2
Hypermarket / Supermarket Loyalty Programme	145	57.5
E-coupon	99	39.3
M-Coupon	37	14.7

#### **4.1.11 Product Category and Coupon Usage**

Frequency in descriptive statistics was being used to examine the popularity of coupon redemption for different product categories.

The results revealed that Fast Food was the most popular product category for coupon usage, followed by Personal Care Product, Household Cleaning Product, Canned Food / Drinks and Others category.

**Table 4.13 : Product Category and Coupon Usage**

Product Category	Frequency	Percentage (%)
Fast Food	187	74.2
Personal Care Product	107	42.5
Household Cleaning Product	70	27.8
Canned Food/ Drinks	35	13.9
Others	19	7.5

n = 252

#### **4.1.12 Examination of the relationship between Attitudinal Variables, Coupon Characteristics Variables and Redemption Intentions**

In order to test the four hypotheses developed, hierarchical multiple regression was conducted to assess the relationship between each of the four independent variables (attitude and subjective norms toward the act of redeeming coupon, perceived coupon value and coupon expiration date) to the dependent variable, redemption intentions.

Preliminary analyses were conducted to ensure no violation of assumptions of normality, linearity, multicollinearity and homoscedasticity.

Attitude was entered in Step 1, explaining 30.9% of the variance in Redemption Intentions. After entering the Subjective Norms in Step 2, the total variance explained by the model as a whole was 33.2%,  $F(2,249) = 61.861$ ,  $p < 0.001$ . Subjective Norms explained an additional 2.3% of the variance in Redemption Intentions, after controlling for Attitude,  $R^2 \text{ change} = 0.023$ ,  $F \text{ change}(1,249) = 8.400$ ,  $p < 0.005$ . This also means that the Attitudinal Characteristics (Attitude and Subjective Norms) under this study were responsible for the 33.2% variance in Redemption Intentions.

In Step 3, Coupon Value was entered and the total variance explained by the model as a whole was 37.8%,  $F(3,248) = 50.250$ ,  $p < 0.001$ . Coupon Value explained an additional 4.6% of the variance in Redemption Intentions, after controlling for Attitude, Subjective Norms,  $R^2 \text{ change} = 0.046$ ,  $F \text{ change}(1,248) = 18.388$ ,  $p < 0.001$ .

In Step 4, Coupon Expiration Date was entered and the total variance explained by the model as a whole became 39.3%,  $F(4,247) = 40.007$ ,  $p < 0.001$ . Coupon Expiration Date explained an additional 1.5% of the variance in Redemption Intentions, after controlling for Attitude, Subjective Norms and Coupon Value,  $R^2 \text{ change} = 0.015$ ,  $F \text{ change}(1,247) = 6.150$ ,  $p < 0.05$ . At this stage, we can also calculate the variance explained in Redemption Intentions by the Coupon Characteristics (Coupon Value and Coupon Expiration Date), that is the sum of  $R^2 \text{ change}$  in Step 3 and Step 4, which was 6.1%.

In the final Model, all four variables made statistically significant contribution to Redemption Intentions, with the Coupon Value recording the highest beta value,  $\beta = 0.284$ ,  $p < 0.001$ , followed by Attitude,  $\beta = 0.212$ ,  $p < 0.05$ ; Subjective Norms,  $\beta = 0.155$ ,  $p < 0.05$  and Coupon Expiration Date,  $\beta = 0.130$ ,  $p < 0.05$ .



**Table 4.14 : Summary of Hierarchical Multiple Regression Analysis for Variables Predicting Redemption Intentions**

Variable	Model 1			Model 2			Model 3			Model 4		
	B	Beta	Sig.	B	Beta	Sig.	B	Beta	Sig.	B	Beta	Sig.
<b>Attitude</b>	0.636	0.556	0.000	0.459	0.401	0.000	0.267	0.233	0.005	0.242	0.212	0.010
<b>Subjective Norms</b>				0.228	0.216	0.004	0.180	0.171	0.020	0.164	0.155	0.033
<b>Coupon Value</b>							0.329	0.295	0.000	0.316	0.283	0.000
<b>Coupon Expiration Date</b>										0.113	0.130	0.014
<b>F</b>	112.006*			61.861*			50.250*			40.007*		
<b>R<sup>2</sup></b>	0.309			0.332			0.378			0.393		
<b>R<sup>2</sup> Change</b>	0.309			0.023			0.046			0.015		
<b>F for change in R<sup>2</sup></b>	112.006*			8.400**			18.388*			6.150**		

a. Predictors : (Constant), Attitude

b. Predictors : (Constant), Attitude, Subjective Norms

c. Predictors : (Constant), Attitude, Subjective norms, Coupon Value

d. Predictors : (Constant), Attitude, Subjective Norms, Coupon Value, Coupon Expiration Date

e. Dependent Variable : Redemption Intentions

\* Significant at  $p < 0.001$ , \*\* Significant at  $p < 0.05$

#### 4.1.13 Results for the Propositions / Hypotheses Developed

**Table 4.16 : Summary of Results for the Propositions / Hypotheses Developed**

Propositions / Hypotheses			Result
P1	There are differences between psychological-based segments on their attitudinal characteristics toward the act of redeeming coupon	Attitude	Supported
		Subjective Norms	Not Supported
P2	There are differences between demographic-based segments on their attitudinal characteristics toward the act of redeeming coupon	Attitude	Not Supported
		Subjective Norms	Not Supported
P3	There are differences between psychological-based segments on their perception on coupon characteristics	Coupon Value	Not Supported
		Coupon Expiration Date	Not Supported
P4	There are differences between demographic-based segments on their perception on coupon characteristics	Coupon Value	Supported on Household Size only
		Coupon Expiration Date	Not Supported
P5	There are differences in the uptake rate of coupon based on the coupon types (distribution vehicles)		Supported
P6	There are differences between psychological-based segments on coupon redemption intentions		Supported
P7	There are differences between demographic-based segments on coupon redemption intentions		Supported on Household Income Group, Ethnic Group and Job Group only
H1	There is a positive relationship between Attitude towards the act of redeeming coupon and Redemption Intentions		Supported
H2	There is a positive relationship between Subjective Norms toward the act of redeeming coupon and Redemption Intentions		Supported
H3	There is a positive relationship between Perceived Coupon Value and Redemption Intentions		Supported
H4	There is a positive relationship between Perceived Coupon Expiration Date and Redemption Intentions		Supported