Chapter4

Research Results

4.1 Introduction:

Statistical techniques are very important and needed to assess the literature relevant to the study to conduct the research, hence the present chapter focuses on data analysis. In data analysis we have three objectives: (1) Getting feel for the data (the mean, the range, standard deviation, and the variance in the data), (2) Testing the goodness of data (the reliability and the validity of the measures), (3) and testing the hypotheses developed for the research using statistical tests. (Uma Sekaran, 2003; p: 306).

To achieve data analysis objectives, Statistical Package for the social Science (SPSS 16.0) was used, and deals with the results of statistical data analysis based on the responses have been collected to conduct this study as discussed in the previous chapter. In this chapter the first part, will deal with descriptive statistical data including the response rate, summary concerning the respondent profile and characteristics of constructs will be viewed and discussed. Secondly, exploratory measurement assessment including exploratory factor analysis, and scale reliabilities are covered. Third, additional statistical analysis using independent sample t-test and one-way ANOVA were examined.

Then correlations between the hypothesized constructs have been done. Subsequently will discuss and interpret the relationships between the dependant variable (customer satisfaction) and the four independent variable introduced in this study. Data analysis will cover the 280 survey questionnaire obtained out of total 287 questionnaires were distributed; and 7 questionnaires out of them were excluded due to incompleteness. Data scanning process using frequency distribution did not detect any missing data or excessive value due to strictly data entry. Descriptive statistics were used to analyze the respondent's file. An alpha level of 0.05 was used for all statistical tests.

In this study we add the variable of service value to the research model and focus on testing the effect of the moderating variable (service value) on the strength of the relationship between the an independent or predictor variable (Service quality) and a dependent or criterion variable (customer satisfaction) within a correlation analysis framework. Also we point out the different level of customer satisfaction through different group of ethnicity (Arab and non-Arab).

4.2 Summary of Statistics:

Respondent sample, descriptive statistics and stepwise regression analysis was used to interpret this section; with several useful techniques for displaying the collecting data (such as frequency and percentage table). The general profile of the respondent is shown in (Table 3). Essentially the table shows that the respondent of the study consisted of 51.1% male and 48.9% female, represented by ethnicity of 48.6% Arab and 51.4% non-Arab. Most of the respondents 157 were using Islamic banking

services, 117 of them were using conventional banking services and 6 of them were using Islamic and conventional banking service in the same time.

Whilst in term of religion, Table 3 indicates that a significant majority of 78.9% of the respondent were Islam, the remaining were 9.3% Buddhism, 6.4% Christianity, and 5.4% Hinduism. The Table also indicates that the respondent were highly educated and the sample comprised of a 47.5% with university degree, 27.9% with master degree, and 14.6% were PhD holder, and another 5.7%, 4.7% for diploma and professional certificate holder respectively. The reason for the high proportion of degree, master and PhD holders in the sample was most likely due to the survey distribution within the urban population area.

The Table also indicates that the respondents came from different income backgrounds; seven categories were noted, where 22.5%, 27.1% and 23.2% of the respondents were in the income category of Less than RM1000, RM 1001-3000 and RM 3001-5000, respectively and this group presumed to be younger aged respondents, juniors and students in several levels of high education, and 10.7%, 4.6%, 5.4% and 6.4% of them were in the category of RM 5001-7000, RM 7001-9000, RM 9001-11000 and 11000 and above. As a consequence we can suppose that respondents with higher education would likely to earn a higher income.

In term of respondents' age, 26.09% and 36.78% of the respondents were in the age category of 18-25 and 26-35, respectively. While 24.64% in 36-45, 8.92% in 46-55

and 3.57% were in 56 and above. The target population was composed of customers were occupying the following positions descending: students in various education levels 126, represent 45% of the sample, lecturer and teachers 47 with 16.8%,; managerial 42 with 15%; executives 22 with 7.9%; production staff 11 with 3.9%; sales personnel and self- employed 10 for each with 3.6%; and supervisor, others and unemployed were 5, 4, 3 with 1.8%, 1.4%, 1.1% respectively. While to determine the impact of one's length of stay in Malaysia, in this respect, the results in Table 1 shows that the majority of the respondents 56.8% had been resident in Malaysia. However, 8.2% of the respondent had been in Malaysia for five years, 11.8% for four years, 11.1% for three years, and 7.9 % , 4.3% for two and one year staying in Malaysia respectively.

4.3 Analysis of Measures:

Factors or data analysis is a set of multivariate statistical methods that used in purpose to define the underlying structure in data Matrix, basically to identify the separate dimensions of the structure then to determine the extent to which each variable is explained by each dimension. In this study the exploratory data analysis (EDA) was performed on the 28 statements including the independent and dependent variables to determine whether the data could be condensed or summarized into smaller set of factors (Malhotra. 2004) also coefficient alpha and reliability were done. The dimensions of the scale were examined by factor analysis.

Table 3: The respondent profile

Demographic variables	Characteristics	Frequency	Percentage %
Gender	Male	143	51.1
	Female	137	48.9
Age	18-25	72	25.7
	26-35	103	36.8
	36-45	69	24.6
	46-55	26	9.3
	above 56	10	3.6
Education level	Diploma	16	5.7
	Degree	133	47.5
	Master	78	27.9
	PhD	41	14.6
	Professional Certificate	12	4.3
Occupation :	Managerial	42	15.0
	Lecturer/ Teacher	47	16.8
	Executive	22	7.9
	Supervisor	5	1.8
	Sales Personnel	10	3.6
	Student	126	45.0
	Production stuff	11	3.9
	Self-employed	10	3.6
	Unemployed	3	1.1
	Others	4	1.4
Income level:	Less than RM 1000	63	22.5
	RM 1001-3000	76	27.1
	RM 3001-5000	65	23.2
	RM 5001- 7000	30	10.7
	RM 7001-9000	13	4.6
	RM 9001- 11000	15	5.4
	Above RM 11000	18	6.5
Religion	Islam	221	78.9
	Buddhism	26	9.3
	Christianity	18	6.4
	Hinduism	15	5.4
Ethnic	Arab	136	48.6
	Non-Arab	144	51.4
Years of living in Malaysia	One year	12	4.3
	Two years	22	7.9
	Three years	31	11.1
	Four years	33	11.8
	Five years	23	8.2
	Five years and above	159	56.8
Type of customers' Bank	Islamic	157	56.1
	Conventional	117	41.8
	Both	6	2.1

4.3.1 Factor analysis:

Factor analysis represents specific computational techniques, in order to revise whether the items tapping into the same construct as well as measuring the construct (Hinton, 2004). The process begins with the construction of a set of variables based on the relationships in the correlation matrix. To test the data validity, the extraction method (Principle Component Analysis) approach was used; the method transforms a set of variables into a new set of composite variables or principle components that are not correlated, with each other (Cooper & Schindler, 2008; p562). Varimax with Kaiser Normalization was used to test the rotation between factors and variables. Extracted variables should be used and explained according to factor loading (correlation coefficient between the factor and the variables). While Hinton (2004) suggested the minimum factor loading by 0.4, but for this research we choose factor loadings greater than 0.5 necessary for significance (Hair et al. 2006); for this reason the factor with absolute loading above 0.50 were retained.

The items of each core, relational, tangible dimensions were extracted into one factor for each of them. Items in customer expertise were extracted into one factor, and customer satisfaction items also extracted into one item. Two dimension of service quality were deleted because of cross loading, one of them is the fifth dimension in relational dimension and the second the eighth dimension in tangible dimension, after this step the service quality dimensions reduces to 15, (4 for core, 4 for relational, 7 for tangible).

4.3.2 Reliability analysis:

Reliability can be defined as the degree to which measures are free from error and therefore yield consistent results; reliability analysis is important to get validity associated with the scores of the scale. In this research Cronbach's alpha coefficient was in performed to assess the reliabilities of the measurement scales with an acceptable level of coefficient alpha should be equal or greater than 0.5 for an item to be retained in a scale; Cronbach's alpha according to (Cooper and Schindler, 2003) is the most accepted and the most utilized for multi-item scale. The first reliability test was done for the first 50 respondent (pilot test); and the results reflected high reliability (shown in Appendix 1). Subsequently reliability analysis was conducted for all the measurements used in the study, for the 17 dimensions of service quality, the reliability analysis of SERVQUAL model reflected high reliability scores of Cronbach's Alpha of 0.930, and also a Cronbach's Alpha of 0.883 for the measurement of customer satisfaction, however the measurement of customer experience shows a bit lower reliability score of Cronbach's Alpha of 0.816.A summary of reliability score is shown in table (4).

Correlation and regression analysis are related in the sense that both deal with relationships among variables; the correlation coefficient is a measure of linear association between two variables, this analysis could be done using Pearson Coefficient; this coefficient will indicate both the extent and direction of the relationship between the variables

Table (4) Factors loading and reliability

Factor code	Factors loading					Cronbach's Alpha
	Service Quality			Customer expertise	Customer satisfaction	
	1	2	3			
SQ-CD1	.756					.850
SQ-CD2	.628					
SQ-CD3	.668					
SQ-CD4	.575					
SQ-CD5	.606					
SQ-RD1		.732				.834
SQ-RD2		.764				
SQ-RD3		.581				
SQ-RD4		.715				
SQ-TD1			.410			.860
SQ-TD2			.488			
SQ-TD3			.670			
SQ-TD4			.490			
SQ-TD5			.548			
SQ-TD6			.672			
SQ-TD7			.632			
SQ-TD8			.647			
C_ex1				.718		.815
C_ex2				.742		
C_ex3				.575		
C_ex4				.549		
CS1					.793	.883
CS2					.861	
CS3					.776	

4.4 Hypothesis testing:

The research hypothesized relationships were analyzed using Pearson Correlation and multiple regressions. Pearson correlation used to describe the strength and direction of the linear relationship between independent and dependent variables (Pallant, 2001).

Table (5) represents regression results between 6 independent variables and the dependent variable of customer satisfaction without applying the service value moderator into the regression in purpose of observing the change in the strength of relationship before and after applying the hypothesized moderating variable in the model. The independent variables in the table (core, tangible and relational dimensions of service quality, customer expertise, service value and Arab ethnic) explained about 55% of the variance in customer satisfaction and it considered to be strong at $R^2 = 0.548$ table shows the F value is significant at 55.101 level.

Table (5) regression result for independent variables and dependent variable of Customer satisfaction

Model	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	Sig.
CD -SQ	.251	.238*	0.000
RD- SQ	.278	.283*	0.000
TD-SQ	.339	.301*	0.000
C_ex	.070	.067	.115
SV	.077	.094	.024
Eth.	-.011	-.007	.858
Dependant variable: customer satisfaction R^2 = .548 Adj R^2 = .538 F- value = 55.101 *, **, *** Significant at 1% , 5%, and 10% respectively			

According to the results in table 5, hypothesis H1 with sub- hypothesis H1a, H1b, H1c were supported; also H2 and H4 were supported.

We can consider the three service quality dimension and service value as independent variables are statistically significant. According to the results H1 and H2 were supported, in the absence of service value moderator, Ethnicity shows insignificance relationship with customer satisfaction with .858 > 0.05 as shown in table (5).

In the next table we will interpret the results of regression in the presence of service value moderator in the relationship between service quality and customer satisfaction. The suggested model that states service value is expected to interact with service quality to determine the level of customer satisfaction. Table (6) represents the regression results for service quality and service value with customer satisfaction.

Table (6)
Regression result for Service quality and Service value with Customer satisfaction

Model	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	sig
1 (Constant)	2.762		
CD-SV	.009	.049	.733
RD-SV	.061	.322*	**.033**
TD-SV	.003	.016	.923
Dependant variable: customer satisfaction R^2 = .145 Adj R^2 = .136 F- value = 15.660* *, **, *** Significant at 1% , 5%, and 10% respectively			

The independent variables explained about 15% of the variance in the customer satisfaction and it considered to be weak at R^2=.145, F- value is significant on of 15.660 levels. And we can consider the relational dimension of service quality is statistically significant at *p* .033 < 0.05. According to this finding, H3 and sub-hypothesis H3b were supported, but the sub hypothesis H2a, H2c not supported because of *P* values were more than 0. 05.

Table (7)
Regression result with the moderator of service value

Model	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	Sig.
C_ ex	.219	.208*	.000
Eth.	.163	.109**	.046
CD-SV	.012	.064	.651
RD-SV	.064	.334**	.023
TD-SV	-.001	-.005	.975
Dependant variable: customer satisfaction R^2 = .200 Adj R^2 = .186 F- value =13.720* *, **, *** Significant at 1% , 5%, and 10% respectively			

In table (7) we test the relationship between the dependent variable of customer satisfaction and the independent variables of customer expertise, ethnicity, and service quality dimensions with service value as a moderator in regression analysis to show the variance in the model. The result shows that variables explain about 20% of the variances in customer satisfaction, and considered to be weak at R^2= .200, table shows the F- value is significant at the 13.720 level. Ethnic-Arab variable is statistically significant where the *p* value of .046 is < 0.05; and based on this result H5 was supported, customer expertise is statistically significant with *p* value of 0.00 is < 0.05; H4 was supported. Also H3 and sub-hypothesis H3b were sported too; where the relational dimension of service quality with the service value shows p value of .023 is < 0.05.

4.4 Summary of Research Results:

In this part of the study, the research results would be discussed ,demographic differences in the target sample explained and try to examine possible significant group differences

and customer satisfaction constructs. Customers' perception of service quality differs in terms of gender, ethnicity, education and income (Urban and Pratt, 2000).

One –way analysis of variance was utilized to determine the significant differences in term of gender, age, education, income, occupation, and years of staying in Malaysia with respect to their responses on customer satisfaction measures. Subsequent to findings; significant differences in some of the demographics variables, Post Hoc Test (Scheffe) were used to determine the particular groups which differed significantly within a significant overall one-way analysis of variance.

Below is a break down for the demographic variable finding:

Age: respondent belonging to different age groups expressed their differences towards customer satisfaction with the bank, Appendix (8) shows 0.055 of significant association between the second group (26-35) and the fifth group of (56 and above).

Education: there were significant education group differences across only two levels of education, where the analysis shows .028 of significance between diploma and professional certificate holders towards customer satisfaction. Appendix (6).

Income: the study finds significant income groups, showing different responses toward customer satisfaction. The first one shows .015 significance between (Less than RM 1000) and (RM 5001- 7000) groups, the second shows .013 significance between (RM 1001-3000) and (Above RM 11000) groups, third one shows .019 significance between(RM 3001-5000) and(RM 5001- 7000) groups , appendix (5).

Occupation: the present study shows no significant occupation group difference among different levels of jobs toward customer satisfaction. Appendix (2)

Years of stay in Malaysia: the study shows significant groups in term of years of stay in Malaysia, the first one is .091 significance between two years and five years of staying, the second indicate to .030 significance between four years and five years of staying in Malaysia .appendix (1).

Table (8) shows the conclusion of Post-Hoc differences in customer satisfaction with demographic.

Table (8) Post-Hoc differences in customer satisfaction with demographic

Factor	F- value	Post hoc
Age	3.052*	Between 2 groups
Education	5.718*	Between 2 groups
Monthly household	4.744*	Between 3 groups
Years of stay in Malaysia	2.731*	Between 5 years and 2 years, and 5 years and 4 years
Type of bank	2.121*	No group
Occupation	1.612	No group
*, **, *** Significant at 1% , 5%, and 10% respectively		

In conclusion:

The constructs of service quality, customer satisfaction and value are discussed. Instruments are identified and exploratory research is undertaken among customers of Malaysian banks to determine whether value plays a moderating role between service quality and satisfaction. The results show in table (5) that the 3 service quality dimensions and service value are positively correlated to customer satisfaction; while the

regression results showed in table (6) that the correlation between service quality and customer satisfaction with moderating the service value reflect weak interpretation of the variance in customer satisfaction and only one of the three dimensions of service quality which is the relational dimensions considered to be significance towards customer satisfaction. Six hypotheses with 6 sub-hypothesis were examined and according to data analysis H1, H2, H3, H4, H5, H6 were supported, H3a and H3c not supported.

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Chapter 5

Conclusion and Recommendations

5.1 Introduction:

This chapter will present the conclusion of the findings of the research, and also discuss on the limitations and implication of the study and highlighting some suggestions for future studies concerning the same area of the research.

5. 2 Summary of findings:

Ethnicity shows significance in the regression with customer satisfaction in correlation with service quality and value and specifically the relational dimension; this finding comes in line with the finding of Ghuloum (2010) which revealed that there is no ethnic difference observed in the satisfaction score between Qatari and Arab expatriate patients in Qatar, but a significant difference was observed between Arab and Spanish psychiatry patients in all the domains of satisfaction.

Such a result can also interpret why that Arab bank customer can evaluate the bank service by looking to the direct interaction and communicating with the bank employee, who could give an individual interest to the customer , the result could highlight that the

Arab customer is highly appreciate the way that the staff of the bank deal with him or her such as giving enough attention and time to him; which is lacking in banks located in his country because of cultural reasons as mentioned in the review of the problem statement, more over the banks in the middle east are not customer focus. The research conducted by Hart, Rampersad, Lopez & Petroski (2008) showed in the research data analysis how the customer representing multiple ethnicities differ in their perceptions of the importance of key dimensions of service quality as well as how relevant these perceptions are for student.

The results also indicate that the H4 about customer expertise was supported, we can conclude that there is a positive relation between customer expertise and customer satisfaction.

while H6 was supported; and the study found that the respondent belonging to different age, education, income groups and years of staying in Malaysia groups expressed their differences towards satisfaction with the bank. On the basis of this, the study recommend that education levels, income levels, age and years of staying levels are important factors to determine customer satisfaction.

5.2 Limitation of the study:

The study has several limitations as follows:

1- The study is confined to Malaysian banking industry in general, it will be better if researcher conduct the study among specific different groups of banks, to compare customer satisfaction towards them ; like local banks vs. Arab bank branches in Malaysia.

2- The most important limit was the short time offered for the completion of the research.

3- This research conducted within Selangor and KL, it should be better if the researcher try to do it in different states in Malaysia so we can get more data to compare and then can journalize.

4- Researcher could get better result if we get larger responses than 300. Also using of convenience sampling may decrease external validity (Ryu et al., 2008).

5.3 Suggestion for the future Research:

For the future researches, researchers need to focus on doing customer satisfaction surveys in different directions using more specific groups in certain areas in different countries and cultures then try to compare the results to figure out more sufficient results about cultural dimensions affect customer perception towards service quality as one of the important factors that could influence customer satisfaction.

5.4 Implication and contributions:

The need to assess the impact of ethnicity on consumer assessment of the quality and degree of satisfaction with service provider, and based on the results of this study, the bank managers should look forward to offer translating service to the Arab bank customer as a new type of customer service, where a research by Liu (1999) indicates that language barriers constitute a significant problem. Hence English language as an important communication barrier is one of the greatest challenges that Arab students face; since misunderstandings can occur through verbal or nonverbal communication; and to ensure the right understanding to the bank products and services, which in turn could lead those customers to get more involved in the banking activities. Riedlinger (2008) mentioned that students face a variety of cultural differences that can put tension on their relationships with both faculty and peers, and one of these differences is the language.

Also banks management could offer a new option to the customer that he or she can choose the language of sms, emails, and phone calls through the communication process with customer service or marketing people and ordinary mail, and this could be as an added competitive advantage to the bank in order to increase customer satisfaction.

Also the bank managers should be aware about the close relations with the bank customers to better understanding to their needs, as highlighted in the research results that the individual attention and personalized service seems to be an important factor to build up loyalty and a long term relation between the bank and customers.

The theoretical contribution of this study was clear through developing the framework of the research, so we can consider this as adding to the existing studies about banking services in Malaysia. The study introduces the first contribution to investigate the relationship between the Ethnicity and customer satisfaction in the presence of service value moderator. Also in terms of practical contribution, I think this study would provide additional evidence on the importance of developing bank employee communication skills and continuously develop CRM in the bank, by collecting the right and each information about the bank customers; this could help to maintain the relationship. In Malaysia and elsewhere, the success of banks depends on bankers' ability to understand and satisfy customers' needs (Haron 1994).