

ISLAMIC CREDIT CARD USERS' SATISFACTION: A COMPARATIVE STUDY

By

Nuradli Ridzwan Shah Bin Mohd Dali

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*Marketing and Strategy Section
Cardiff Business School, Cardiff University, UK*

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In the name of God, the Merciful, the
Compassionate. (1)

Praise be to Allah, the Lord of the Worlds (2)

The Merciful, The Compassionate. (3)

Master of the Day of Judgment. (4)

You alone do we worship and You alone we seek
for help (5)

Guide us to the Straight Path. (6)

The path of those upon whom You have
bestowed Your blessings, those whose (portion)
is not wrath, nor of those who have gone astray.

(7)

(Al Quran- *Al Fatiha*:1-7)

ABSTRACT

Customer satisfaction (CS) is critical to success in banking. However, there is little agreement on which antecedents can be employed to achieve it. Moreover, in the context of Islamic banking, religiosity plays a major role in affecting customers' choice of bank and banking satisfaction. In response, this thesis developed an Islamic religiosity scale measurement and an integrated model of customer satisfaction for Islamic credit-card users. In particular, this thesis sought to investigate the role of religiosity and antecedents of Islamic credit-card users' satisfaction. Furthermore, it presented and discussed empirical findings from mixed methods approach employing semi-structured interviews of seven respondents and an online survey of 560 credit-card users in Malaysia. The study used confirmatory and structural equation modelling to examine the survey data. The findings of this thesis largely support the hypothesised relationships proposed in the theoretical model. Specifically, the results revealed that the functional service quality (FSQ), technical service quality (TSQ) and the religious and ethical service quality (RESQ) are crucial and differ in affecting customer satisfaction. The results also provide strong evidence that religiosity moderates between the antecedents and customer satisfaction. Most importantly, *Shari'ah* compliance and ethical dimensions (constructs in RESQ) are necessary determinants of Islamic credit-card users' satisfaction. This thesis contributes to the existing theoretical and practical knowledge by providing, for the first time, an Islamic religiosity scale measurement. Secondly, evidence is presented that religiosity plays a significant contribution towards the customer satisfaction model. Thirdly, the integration of FSQ, TSQ and RESQ creates a comprehensive Islamic customer satisfaction model. Fourthly, since the integrated model involves religious factors (i.e. *Shari'ah* compliance), religiosity contributes to the variation of customer satisfaction. The inclusion of *Shari'ah* compliance, ethical dimensions, technology and communication as first order constructs and FSQ, TSQ and RESQ as second order constructs contribute to the body of customer satisfaction and Islamic banking literature. The findings imply the need for the banks to lever on the key antecedents of customer satisfaction, which include *Shari'ah* compliance and ethical dimensions.

Keywords: Islamic Banking, Islamic Credit Cards, Customer Satisfaction, Religiosity, Functional Service Quality, Technical Service Quality, Religious and Ethical Service Quality, *Shari'ah* Compliance

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Nuradli Ridzwan Shah Bin Mohd Dali

ABBREVIATIONS

AGFI	Adjusted Goodness-of-Fit Index
AIC	Akaike Information Criterion
All	Respondents from ICC, CCC And Both
ASV	Average Shared Squared Variance
AVE	Average Variance Extracted
Both	Islamic Credit Cards and Conventional Credit Cards
CB	Conventional Banks
CB-SEM	Covariance Based SEM
CCC	Conventional Credit Card
CFI	Comparative Fit Index
CR	Composite Reliability
CS	Customer Satisfaction
Ethical Satis	Ethical Dimension Satisfaction
FSQ	Functional Service Quality 2 nd Order Construct
FSQ Satis	Functional Service Quality Satisfaction
GCC	Gulf Co-Operation Council
GFI	Goodness Fit Index
GOF	Goodness Of Fit Indices
IB	Islamic Banking
IBD	Islamic Banking Department
IBF	Islamic Banking and Finance
IBS	Islamic Banking Scheme
ICC	Islamic Credit Card
IFI	Incremental Fit Index
IS	Islamic Subsidiaries
MGISB	Mit-Ghamr Islamic Savings Bank
MSV	Maximum Shared Squared Variance
NFI	Normed Fit Index
OECD	Organisation for Economic Co-Operation and Development
OIC	The Organization of The Islamic Conference

Overall Satis	Overall Satisfaction
PCFI	Parsimonious Comparative Index
PLS	Partnership or Profit and Loss Sharing
PLS	Partial Least Squares
PNFI	Parsimonious Normed Fit Index
PS	Profit Sharing
RESQ	Religious and ethical service quality 2 nd Order Construct
RMSEA	Root Mean Square Error of Approximation
SD	Standard Deviation
SEM	Structural Equation Modelling
<i>Shari'ah Satis</i>	<i>Shari'ah</i> Compliance Satisfaction
SQ	Service Quality
SRMR	Standardised Root Mean Square Residual
TSQ	Technical Service Quality 2 nd Order Construct
TSQ Satis	Technical Service Quality Satisfaction
AGFI	Adjusted Goodness-of-Fit Index

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CHAPTER 1 : INTRODUCTION

Serving your customers' needs is meeting your customers' expectations (Parasuraman et al. 1988)

1. INTRODUCTION

Islamic Banking and Finance (IBF)¹ have been rising forces in global circles since their inception in the 1960s and 70s (Haron et al. 1994; Iqbal et al. 1998; Iqbal and Mirakhor 2007). It has become an alternative to the conventional banking system (Ariff 1989). The global total *Shari'ah*² compliant assets in the Islamic financial services market (comprising the total assets in IB, *takaful*³ and *sukuk*⁴) have increased by 25% from \$758 billion in 2007 to \$951 billion in 2008. In 2008, the bulk (84%) of these IBF assets is held in commercial (74%) and investment (10%) banks (McKenzie 2010). IB assets alone were expected to reach \$1.3 trillion by the end of 2012 (Mubasher 2013). These figures suggest that IB, which started as an experiment, has grown itself into a powerful and promising force globally.

Malaysia's position in the global economy was ranked at eighteenth in the year 2012 in the overall financial development index (World Economic Forum 2012). The positive economic indicators offered an excellent opportunity for IBF to prosper in Malaysia, attracting investment from across the world and especially from the Middle East⁵. Moreover, local higher education institutions have been supplying talented and highly skilled human capital workforce for the banking industry, well equipped with the requisite skills and knowledgeable in IBF and conventional banking. Linked to this workforce, Malaysia has become one of the most developed IBF markets in the world. This thesis, however, will focus on one component of IBF; that is Islamic banking; specifically the Islamic credit card (ICC).

¹ Combination of IB, Islamic capital and *takaful* market.

² Islamic canonical law based on the teachings of the *Al-Quran* and the traditions of the Prophet Muhammad p.b.u.h. (*Hadith* and *Sunnah*), prescribing both religious and secular duties and sometimes retributive penalties for law breaking.

³ A scheme of mutual support, which offers insurance to people against the dangers of falling into unexpected and dire need.

⁴ Similar characteristics to that of a conventional bond, but it is asset backed.

⁵ Kuo (2009) refers the Middle Eastern investors as petrodollar investors.

Ultimately, this thesis aims to empirically investigate; 1) whether the Islamic banking complies with the *Shari'ah* law as perceived by the customers; 2) whether religion has a significant impact on the perception of customers on IB; 3) whether customers' perceptions of IB's compliance with *Shari'ah* will have an impact on customer satisfaction; and 4) whether a comprehensive customer satisfaction model, integrating service quality dimensions and religious and ethical service quality dimensions, can be developed. This chapter aims to provide an introduction to the research context of Islamic banking, ICC and customer satisfaction in banking and the skeleton of the study. This chapter discusses the rationale for the study and concludes by indicating the direction of the overall thesis.

1.1 RESEARCH CONTEXT

This section will explain the present study context of Islamic banking, credit card (conventional and Islamic) and customer satisfaction.

1.1.1 Research Context of Islamic Banking (IB)

IB has spread not only in Malaysia but to most parts of the globe and has been widely accepted by Muslims and non-Muslims alike (Dusuki and Abdullah 2007; Keong et al. 2012). As IB is growing in the financial world, there is also a growing need for an in-depth understanding of the system itself. There has been variation in the definition of IB (Iqbal and Mirakhor 2011). Even though many consumers consider IB as interest-free banking, it is but one of the many distinctive elements of Islamic banks. This is mainly due to the extensive debate over an accepted universal definition that gives the general idea that Islamic banking is all about operating without charging any interest.

This is perhaps, the reason why several authors pointed out that it led to misconceptions, especially when the public awareness about Islamic banking remains relatively low (El-Gamal 2000; Ahmad and Haron 2002). This section contributes in attempting to reconcile the differences of definitions given by scholars and as a humble effort to provide acceptable definitions in Islamic banks and Islamic banking. A list of definitions of Islamic banks from the Islamic banking literature are given in Appendix 2, p.324.

The Islamic Banking Act 1983 of Malaysia defines Islamic banks as any company that carries Islamic banking business. The Organisation of Islamic Countries (OIC) defines Islamic banks as those focussing on adhering to *Shari'ah* rules and regulations and avoiding interest. However, Ahmad and Hassan (2007) do not emphasis on the prohibition of interest in their definition of Islamic banks and instead stress on the adherence to *Shari'ah* in general. While Haque (2010) emphasises on the implementation and materialisation of the economic and financial principles of Islam.

However, there have been misconceptions among the public, due to incomplete and often distorted knowledge (Ahmad 2006), that any loans given by the Islamic banks must be interest-free and that the Islamic banks are social or non-profit organisations/banks and that they are not allowed to make any profit. In reality, Islamic banks do aim for profit as long as the profit does not come from a loan or *Shari'ah*-prohibited transactions (Zaher and Kabir Hassan 2001). One unique characteristic of Islamic banks is the integration of ethical and moral values (Ahamed et al. 2013). It is also interesting to note the differences between Islamic banks and Islamic banking. Appendix 3, p. 324 provides several definitions of IB systems.

The definitions of the IB system are too broad and it is apparent to see that they might be creating misconceptions. However, two principal common components can be discerned from the definitions: that the IB system must conform to *Shari'ah* law and principles, and that it must avoid interest in any of its transactions. Some authors also argued that the foundations of IB is in fact guided by Islamic economics (Nasser and Muhammed 2013). The interpretation of *Shari'ah* requirements in *muamalah*⁶ has been translated into IB operations and there are some basic guidelines, which Islamic banks must adhere to. Citing El Hawary et al. (2004, p. 5) as quoted by Khan (2010) defines IB as a system that observes four principles, which are as follows:

- 1) Risk sharing: the banks and all the participants in a financial transaction must share the risk. This is associated with the prohibition of interest from lending, whether excessive or small, compounding interest or simple interest, or variable or fixed, as promulgated from *Shari'ah* perspectives.

⁶ Commercial transactions.

- 2) Materiality: This is associated with the financial transactions of the Islamic banks to be backed by assets.
- 3) No parties involved in IB should be exploited.
- 4) Prohibited products and sinful activities must not be funded by Islamic banks, such as involvement in companies producing alcohol, pork products, or companies related to gambling activities. Islamic banks can only finance lawful (*halal*⁷) things.

Therefore, the prohibition of interest is only one of several key elements of IB. Equally important are the Islamic spirit of helping, justice, fairness, and sharing, which must all be present at all operational levels of IB, in addition to a strict adherence to other prohibitions such as those towards uncertainty, gambling and dealing with banned products.

Based on the evaluation of previous definitions and the basic guidelines provided by El-Hawary et al. (2004), the following definitions of Islamic banks and Islamic banking are developed for the present study:

The definition of an Islamic bank:

“An Islamic bank is a business organisation that offers financial products, which are in accordance with the Shari’ah whereby a given risk is shared between the said organisation and its customers with the aim to promote cooperation, fairness and justice and characterised with the ethical values and social commitment as promulgated by Islam.”

The above definition would be the ideal state of any Islamic bank. In order to achieve the ideal state, Islamic banks must operate in a system that can accommodate its operation, which is defined as follows:

The definition of an Islamic banking (IB):

“Islamic banking (IB) is a Shari’ah-compliant banking system practised by conventional banks (offering IB products) and Islamic banks.”

The inclusion of conventional banks in the Islamic banking system is to reflect the IB system in Malaysia that allows conventional banks to participate in offering IB products. The above definitions will be used throughout the thesis by which they define the ideal state of an Islamic bank, and the banking system needed for one to operate.

⁷ Permissible or not prohibited according to Islamic law.

A close examination of the definitions of Islamic banks in the literature revealed that Islamic banking system is religiously motivated. Moreover, in the context of Islamic banking, religiosity plays a major role in affecting customers' choice of bank and banking satisfaction.

The selection of IB literature revealed that Islamic banks market their products and services based on consumers' motivation and value expressive attitudes and knowledge of the Islamic religion. Some Muslim consumers only consider their religious values as their main motivation factor in selecting a bank (Haron et al. 1994), while others consider other motivation factors too when selecting banking products and services (Dusuki and Abdullah 2007).

Previous studies in IB have shown a trend that the studies are progressively moving from IB selection behaviours towards customer satisfaction. However, there is still a limited amount of prior research on customer satisfaction and loyalty (post-purchase behaviour) specifically in relation to IB.

For instance, some authors have highlighted that there is a lack of post-purchase behavioural research looking at customer loyalty (Crosby and Stephens 1987; Cronin and Taylor 1992; Jones and Sasser 1995), in which loyalty is the outcome of customer satisfaction (Jagersma 2003; Hassan et al. 2008) or loyalty is based on satisfaction as the foundation (Evans et al. 2009).

Loyalty levels can be different from one customer to another depending on their share of profit/benefits with the company. There are six loyalty levels, which are known as: suspects, prospects, customers, clients, advocates and partners (Hill 1996, p. 61). The lowest level of loyalty is suspect and they move upwards to partners.

However, the highest level of loyalty through profit-sharing between customers and banks will only start whenever the level of customer satisfaction is higher. This thesis, in particular, is interested to study the post-behaviour of Islamic banking customers for a specific Islamic banking product, which is the ICC.

1.1.2 The Context of Credit Cards

The modern society uses credit card as a payment system. Physically it is a rectangle-shaped card with a capability to store data (Ahmed et al. 2010). There are three major types of payment system using cards i.e. credit, debit and charge cards. Credit cards allow debt accumulation and do not require deposits, unlike debit cards. Consumers need to deposit fund in their accounts with the bank prior to using the debit card.

In contrast, the charge card is a hybrid of both the credit and debit card. It requires the balance to be paid in full each month but no prior deposits are required. The unique feature of the credit card is that it allows the consumer to buy on credit and thus allows consumers to spend over any temporary liquidity shortfalls, at the cost of accepting a higher interest charge (Hamilton and Khan 2001; Bertaut and Haliassos 2005; Abdul-Muhmin and Umar 2007; Sprenger and Stavins 2008; Zinman 2009).

The credit card was first introduced in 1950 by Diners Club that allowed its cardholders to purchase goods and services from many different merchants. In the late 1950s, Bank of America began offering the first widely available general purpose credit card (Wood 2006). Evolving since the last five decades, the credit card is an essential mode of payment in modern societies. Islamic Banking, on the other hand, is relatively new in the credit card industry; having started offering the Islamic equivalent in the past ten years compared to the half a century old conventional banking credit card industry.

Conventional banks were the first to introduce credit cards to the customers. As their nature of business is interest-based, it allows any kind of transactions so long the business is legal. Unlike conventional banks, Islamic banks are not allowed to deal with interest or to engage in any business or trade of prohibited products such as liquor and pork. Credit card is defined throughout the chapters as:

“A document that its issuer (issuing bank) gives to a natural or legal person (card bearer) according to a contract between them. The card bearer becomes able, by virtue of this arrangement, to purchase goods or services from those who recognize the card without immediate payment of the price as commitment will thus fall on the issuer. Payment is made from the account of the issuer who will

afterwards charge the card bearer at regular time intervals. Some issuers used to impose usurious interest on the total outstanding balance that the bearers owe to them, after due date of payment, while others do not.”
(Islamic_Fiqh_Academy 2000)

This definition of credit card (Resolution No. 63/1/7) was used as the basis for the Council of the Islamic *Fiqh* Academy of the Organization of the Islamic Conference to issue a decree on whether the credit cards are permissible for usage or not.

The *Resolution No. 108 (2/12) On "Credit Cards"* by The Council of the Islamic *Fiqh* Academy of the Organization of the Islamic Conference held from 23rd to 28th September 2000 has issued the decree that the usage of the conventional credit cards is not permissible. The extraction of the council decisions is as follows:

Firstly: *It is impermissible in Shari 'ah to issue a Credit Card or use it if its conditions include imposition of usurious interest. This is so even if the card bearer has the intention to pay within the moratorium period that precedes imposition of interest.*

Secondly: *It is permissible in Shari 'ah to issue Credit Cards that do not carry a condition of imposing interest on the debt. Permissibility of this deal entails also two further considerations:*

A) Permissibility for the issuer to take from the bearer a specific amount of money at the time of issuing or renewal of the Card. Such amount constitutes the actual fee that the issuer deserves according to the services it provides to the bearer.

B) Permissibility for the issuer to take a commission on the goods or services purchased by the bearer, provided that such goods or services are sold at the same price whether in cash or credit.

Thirdly: *Using credit cards for cash drawing results in a loan from the issuer to the bearer and is permissible if it does not entail payment of usurious interest. The fixed amount of money to be taken by the issuer as a fee for the actual services, and has nothing to do with the loan amount or duration is not considered as usurious. However, any charge over and*

above this fixed amount is impermissible because it is usurious as indicated in Resolutions No. 13 (10/2) and 13 (1/3) of the Academy.

Fourthly: *It is impermissible to use credit cards for purchasing gold, silver or currencies (Islamic_Fiqh_Academy 2000).*

Instead of giving out loans and charging interests, the Islamic banks' practices are sales and purchase, profit-sharing, profit and loss contract, leasing or a combination of these contracts. These contracts are different from the conventional lending contracts. Despite the differences in the contracts used, the Islamic banking is still able to serve the consumer needs similar to what the conventional bank are currently offering, including the credit card facilities.

The development of Islamic credit cards industry is fast growing. The Eastern school of Islamic banking uses *Bai al Inah* principles in two separate contracts namely *Bai al Mutlak* and *Bai Bithaman Ajil*. The Bank Islam incorporates the *Qardul Hassan* principle in its Bank Islam Card (BIC) along with the *Bai al Inah*. The middle-eastern school of Islamic banking develops the credit cards contrary to the Eastern school of Islamic banking whereby *Ujrah* and *Tawarruq* are used as the basic principles instead of *Bay al Inah*. The following sub-sections will discuss the credit card industry followed by the ICC industry in Malaysia.

1.1.2.1 Credit Card Industry in Malaysia

In Malaysia, credit card issuers can be categorised into banks and non-banks. There are 25 credit card issuers in Malaysia. A majority of the credit cards are issued by local and foreign banks (88%) while other institutions (12%) offer the remainder. The credit card industry has so far shown a steady growth in Malaysia (Kang and Ma 2007). Statistics gathered from the Central Bank of Malaysia have revealed that the amount of credit lines approved for credit cards was RM125 billion since 1999 and that 325 million transactions were conducted in 2012 (Bank Negara Malaysia 2012).

The total amount of credit card purchases was RM98.3 billion and RM3.45 billion cash advance withdrawals were conducted (Bank Negara Malaysia 2012). The current outstanding balances for the year ending in 2012 was RM28 billion and 9.2% of this was overdue (Bank Negara Malaysia 2012). The total number of credit cards in circulation in 2012 was 7.5

million for principal cards and 1.0 million for supplementary cards (The total Malaysian population was 29.24 million in 2012, according to the World Bank).

It is fair to claim that the evidence presented above gives some indication that credit cards are popular among Malaysian consumers. Despite this popularity, an important question that needs to be asked is whether consumers will behave differently in the market place on how they spend if they have a credit card together with the religious factors. In addition, the OIC *Fiqh*⁸ Academy⁹ has passed a decree¹⁰ disallowing the usage and issuance of CCCs.

However, an ICC can only be issued if it adheres to certain rules (See Appendix 4 for details of the ICC issuance rules) such as the issuers are entitled to charge membership fees, renewal fees and replacement fees, as long as they do not involve interests and many more (AAOIFI 2010). Therefore, this study is interested in a specific sector, which is new in the credit card industry, and is a new phenomenon relevant to a specific faith market, i.e. the ICC.

1.1.2.2 *Fiqh* Issues on Islamic Credit Cards

Several issues could be discussed pertaining to the application of credit cards from the Islamic perspectives such as whether the Islamic banks could issue conventional credit cards and whether the Muslim consumers could use conventional credit cards.

1.1.2.2.1 Majority Opinions Disallowing IB to Issue CCCs

The use of conventional credit cards is not acceptable by the consensus of *Shari'ah* scholars as per the *Resolution No. 108 (2/12) On "Credit Cards"* by The Council of the Islamic *Fiqh* Academy of the Organization of the Islamic Conference (OIC) held from 23rd to 28th September 2000. The council has issued the decree that the usage of the conventional credit cards is not permissible. Based on the decree above, the conventional credit cards are not allowed because they involve a condition of interest to be charged even though the consumers have the intention to pay all the outstanding in order to benefit from interest free period.

The reason being, in the initial agreement between the bank and the customer, the customer must agree to pay interest if there is any unpaid balance. This clause is not acceptable by the

⁸ Islamic jurisprudence.

⁹ A council of Islamic scholars who sit in a round discussion table to issue decree relating to *Shari'ah*.

¹⁰ See resolution number 108 (2/12) on credit cards by The Council of the Islamic *Fiqh* Academy.

Shari'ah scholars. Another reason is due to the provision that in the event a customer use cash advances, they will have to pay interest on the cash advances; and this is not permitted by *Shari'ah* as well. However, if the banks manage to eliminate these two elements, the issuance of such credit cards is therefore permitted.

The Islamic credit cards can be at a disadvantage since there are scholars who permit the use of credit card as long as it does not involve the element of usury and contravene with principle of *Shari'ah* and furthermore the conventional credit cards have set foot in the industry for almost more than half a century. In regard to this, Mohd Dali & Abdul Hamid (2007) argued that if the credit card serves as a charge card, in which the holders only pay the principle amount plus the service charges, the transaction is permitted because it does not involve any element of usury.

However, a majority of the Islamic scholars disapproved the use of conventional credit cards; and this has indirectly promoted the development of the Islamic credit cards industry. The development of the Islamic credit cards however can be divided into geographical areas which are influenced by the four Islamic schools of thoughts. For example, most of the Malaysian Islamic scholars follow the *Shafii's*¹¹ school of thought, while most of the Middle Eastern Islamic scholars follow the *Hambali's*, *Hanafi's* and *Maliki's* school of thoughts. This will affect the interpretation of Islamic rulings and in turn, will affect the contracts used in the development of Islamic banking products.

1.1.2.2.2 Minority Opinions Allowing Consumers to Use CCCs

Other than disallowing Islamic banks to offer conventional credit cards, the decree above also prohibits Muslim consumers from using conventional credit cards for the same reasons. However, there are individual decree such as the one from Kahf (2002) that is in favour of credit cards, thus permitting Muslim to use them on a condition that the credit cards are paid in full, to avoid any interest payments. His opinion is based on the arguments that credit cards offer benefits to users such as the facility for payment of large purchases, they allow people who do not carry cash to buy things, and they are useful in Internet purchases and car rental collateral.

¹¹ One of the four school of thoughts of Islamic jurisprudence

The problem with conventional credit cards however, it is unacceptable on religious grounds because there will be an interest payments charged when the outstanding balance is not paid in full as stipulated in the credit card terms and condition. In religious terms, the consumers and the banks will be colluding in the commitment of sin, as the contract in paying interest is signed wherein a Muslim agrees to pay *riba* in the case of non-payment of the balance. However, the decree allowing the usage of credit cards by Kahf was intended for consumers who do not have any other alternative to credit cards.

For example, if there is no *Shari'ah* compliant credit cards being offered and available in a given country during a particular time and at that same time, Muslim consumers need to use credit cards to purchase products that require a substantial amount of money or to purchase products via the Internet, the Muslim consumers are then allowed to subscribe to conventional credit cards. Therefore, allowing the use of conventional credit cards at that particular time and place is justified as long as the consumers pay all of the stipulated balance on time in order to avoid interest charges.

However, cash advance facilities from conventional credit cards are not allowed as they involve interest charges once a withdrawal is made and there is no apparent way to avoid getting involved with such charges. Apart from that, the extension of credit with the purpose of making profit is not a *qardhul hasan*¹² loan, thus it is unacceptable in religious terms for both the creditor as well as the borrower. Therefore, Kahf (2002; 2003) only allows the usage of conventional credit cards under the condition that the purchase is settled in full, similar to a charge card.

Usmani (Undated) supports Kahf with the decree that the interest charged on card users upon a late payment is non-Islamic. The interest charged on a late payment constitutes *riba*, and if this element is taken out, then the card becomes Islamic. In contrary, 'Uthaymeen (2002) argues that a contract of this type is not permissible because it involves *riba* and it also means committing to paying interest if payment is delayed. Usmani quoted in Bakshi (2006) permits the use of credit card by a purchaser and declares that it is allowed by *Shari'ah*; however, the following actions must be taken by the consumers in order to avoid interest payment (Bakhshi 2006):

¹² *Qardhul Hasan* refers to benevolence loans where no interest will be charged on the principal.

- i) Authorize the card issuer to directly debit your bank account for payments to avoid the possibility of default which may, in some cases, carry the risk of interest;
- ii) If the system of direct debit is not arranged, one must always be careful to pay the bills within the stipulated time without fail, so that the interest may not be imposed;
- iii) The annual fee paid by a cardholder to the card issuing company is not considered as interest; rather it is a fee charged for certain services rendered by the company for the benefit of the cardholder. This would explain why it is charged regardless of the actual amount spent by the cardholder.

Without being affected by the debates about the permissibility of the credit cards, the researcher has developed a moderate opinion over the issue, in that the usage of the conventional credit cards should be allowed for consumers if there is no alternative (no Islamic credit cards offered). In addition, if the necessary actions are taken to ensure the outstanding balance is fully paid to avoid any interest payment either by instructing direct debit by the respective bank or making the payment manually.

However, if there are alternatives where the Islamic credit cards are available, the permission to use conventional credit cards is uplifted. The Muslim consumers must subscribe to the Islamic credit cards instead of the conventional credit cards since there is a guarantee that the Islamic credit cards are free from the elements of interest. Ideally, the researcher believes that the Islamic credit cards can fulfil the same services as the conventional credit cards; therefore, a stricter point of view (i.e. disallowing the usage of conventional credit cards) can be applied.

On the supply side, the researcher disapproves if the Islamic banks are to offer conventional credit cards since it will involve interest elements revolving balance and cash advances. Thus, the Islamic banks will have to offer credit cards, which are free from these two problems by creatively creating contracts, which are based on sales and purchase, agency fee, guarantee fee or the combination of the contracts. As long as the contracts used for the credit cards are not based on lending and borrowing contracts, which entail interests, the credit card will be acceptable by *Shari'ah*.

As in the case of Malaysia, AmBank Al-Tasrif Credit Card, which was introduced on 30th September 1996 was initially formulated based on the *Shari'ah* principle of *bai' bithaman ajil*¹³ (Borhan 2006). Later, the Ambank changed the *Shari'ah* principle to *bai' al-inah*¹⁴, which governs instalment payments over a fixed period. According to al-Zuhayli (1997), *Bai' bithaman ajil* is also known as *Bai' al-Nasihah*¹⁵ and *bai' al-'inah* as they share a common element, i.e. deferment of payment.

On the other hand, BIC also claimed to be the first Islamic credit card, which is purely based on *Shari'ah* contract, to be offered to Muslims and non-Muslims beginning 2002. The BIC asserted itself to be completely free from any *riba*¹⁶ or *gharar*¹⁷. It was also the first credit card in Malaysia to use the SMART chip technology that adopts an optimum security level in a credit card. In the operations of BIC, there are three main *Shari'ah* contracts being used, namely *Bai' al Inah*¹⁸, *Wadiah*¹⁹ and *qardhul hassan*²⁰ (Yassin 1997). However, *Bai' al Inah* contracts used in the Islamic credit cards was abandoned by Bank Islam since 2010 as a response to minimise these contracts in banking products.

1.1.2.3 Islamic Credit Card Industry in Malaysia

The emergence of ICCs in Malaysia started in 1996. A bank named AmBank Malaysia Berhad was the first to introduce an alternative credit card in 1996. Bank Islam Malaysia Berhad later followed suit in 2002. Bank Simpanan Nasional (BSN) then introduced its ICC in 2006 and followed by Maybank Islamic, CIMB Islamic Bank, Bank Rakyat, HSBC

¹³ *Bai bithaman ajil* is referring to the sale of goods on a deferred payment basis at a price, which includes a profit margin agreed to by both parties

¹⁴ A contract which involves sell and buy back transactions of an asset by a seller to the customer. The seller will sell the asset on cash basis but the customer will buy back the asset on deferred payment at a price higher than the cash price

¹⁵ *Bai al-Nasihah* refers to credit sales.

¹⁶ *Riba* means interest

¹⁷ *Gharar* means the uncertainty and ambiguity in transactions, which comes from events whose happening or not happening, is subject to chance and as a result is unknown to the parties of a transaction at the time of the contract.

¹⁸ *Bai al Inah* refers to an instantaneous sales and purchase conducted by two parties. The bank will sell a product to a customer on credit and buy back the product instantaneously with cash at a lower price.

¹⁹ *Wadiah* refers to a contract of safekeeping and in the Islamic bank operation; customer will deposit their money in the bank for safekeeping. The bank do not have to pay any interest for the deposit however the bank has the option to give *hiba* (undetermined gift)

²⁰ A loan extended on a goodwill basis and the borrower is only required to repay the principal amount borrowed. However, he may pay an extra amount at his absolute discretion, as a token of appreciation

Amanah in 2008 and RHB Islamic in 2010. By January 2011, eight Islamic banks were offering ICCs, as shown in the following table.

Table 1-1: The Establishment of ICC in Malaysia

No.	Islamic Banks Offering ICC	Year
1	AmIslamic Bank	1996
2	Bank Islam	2002
3	BSN	2006
4	Maybank Islamic	2008
5	CIMB Islamic Bank	2008
6	Bank Rakyat	2008
7	HSBC Amanah	2008
8	RHB Islamic Bank	2010

The trend in the ICC issuance shows that Islamic banks are too cautious in offering ICCs to their consumers. The majority of Islamic banks issued ICCs in 2008, which is more than 10 years after the introduction of the first ICC in Malaysia. Prior to 2008, two banks, namely Ambank and Bank Islam dominated the ICC industry. The reason for the late entrance of other Islamic banks into the ICC market was probably the complexity of the formulation of ICC products and the reservations felt by the *Shari'ah* committees of the respective banks towards the consumption of debt-based products.

The introduction of the ICC system in Malaysia in the last decade has created a niche market in the credit card industry. Even though it is still a relatively small market compared to conventional credit cards (CCCs), it has attracted the attention of banks, consumers and researchers (Jamshidi and Hussin 2012; Amin et al. 2013; Jamshidi and Hussin 2013).

However, the introduction of these cards has led to many questions on why banks need to issue them in the first place, and why should consumers use an ICC instead of the existing CCC? How do ICCs operate? What are the differences between ICC and CCC? Why do Malaysian customers favour one over the other? Are ICCs specially designed to target religious consumers only? Does religion have any effect on the selection of ICCs? Is the consumer aware of ICCs? Finally, are the users of ICCs satisfied with the services rendered?

Although there are many questions that need to be answered, there is little empirical research in customer satisfaction of ICC holders' satisfaction, either from the perspective of the banks

or from that of the consumers in a Malaysian context. In addition, the study also embarks to identify if different levels of religiosity have different impacts towards satisfaction. This will be one of the study's contributions in providing first contextual study that take into consideration customers' satisfaction and religious factors in the banking sector.

1.1.3 The Context of Customer Satisfaction in Banking

Customer satisfaction is one of the prerequisites for the sustenance and growth of firms and for success in the business world (Jun and Cai 2001). A successful marketing strategy must be consumer-oriented (Cleveland et al. 2011), focusing on the family as the basic economic unit as well as being market-oriented in its pricing, evaluating individual customer and customer segment needs. Banks, which apply successful consumer-oriented marketing strategies within an Islamic environment, will survive (Shook and Hassan 1988; Obaidullah 2005).

Competing banks might offer the same types of products or services, but all these banks cannot provide the same quality of services (Berry et al. 1988). If an Islamic bank wants to achieve the benefits resulting from good customer-satisfaction practices, the bank needs to understand how customers are satisfied and how customers assess the bank's performance. Moreover, with prior knowledge of the nature of customer assessment, the bank can focus its efforts on the factors that affect customer satisfaction.

Apart from the challenge of knowing how the customers assess their services, the bank needs to perform in accordance with these better than its competitors (Fornell 2007; Hassan et al. 2008). Winning customers' hearts via customer satisfaction and service quality must be at the top of banks' priorities. These are the two biggest challenges in order to understand customer satisfaction in the context of the IB industry. Firstly, knowing customers' assessment of satisfaction and secondly, to perform better than the competitors in the said assessment.

However, it is difficult to understand in what ways and how customers become satisfied, since the service industry is intangible, [showing] heterogeneity, perishability and inseparability of production and consumption (Parasuraman et al. 1985; Parasuraman et al. 1988; Arasli et al. 2005a). An examination of the existing customer satisfaction models enables us to understand and comprehend these existing models, which are currently

available, their antecedents and the measurement used, so that this study can then fill any gaps identified. There are also a number of studies in the banking and marketing literature that attempted to understand customer satisfaction (Naser et al. 1999; Muslim and Zaidi 2008; Masood et al. 2009; Osman et al. 2009; Haque 2010a; Khattak and Rehman 2010; Sadek et al. 2010).

Customer satisfaction studies started in the early 80s and have continued up until the present time, and are not obsolete because of the dynamic nature of the banking industry and consumers (Erol and El-Bdour 1989; Muda and Jalil 2007). The dynamic evolution of the banking system and consumers consumption culture affects customer-satisfaction research, which is evolving too (Malhotra et al. 2005). A considerable amount of literature has been published on customer satisfaction in the context of banking (Amin et al. 2013; Salma and Shahneaz 2013; Vijay Anand and Selvaraj 2013). A list of studies on customer satisfaction is presented in Appendix 5, p. 326.

The review of the customer satisfaction literature in the context of the banking industry suggests four main implications for future research. They are in terms of the research intensity between conventional and Islamic banking, the measurement models used, the competing models preferred and the inclusion of Compliance with *Shari'ah* dimension to determine whether the Islamic banks are able to fulfil the *Shari'ah* requirements from the customers' perspectives.

- 1) Most studies in the field of customer satisfaction only focus on conventional banking. Studies in the context of IB are limited to eight (Naser et al. 1999; Muslim and Zaidi 2008; Masood et al. 2009; Osman et al. 2009; Haque 2010a; Khattak and Rehman 2010; Sadek et al. 2010). This provides evidence that the Islamic banking context is under-researched in customer satisfaction literature.
- 2) To date, various methods have been developed and introduced to measure customer satisfaction involving functional service quality (FSQ) and technical service quality (TSQ) which will be discussed in detail in chapter two. A majority of the studies employed Servqual (functional service quality) or modified Servqual to measure banking service-quality (Newman and Cowling 1996; Han and Baek 2004; Arasli et

al. 2005a; Muslim and Zaidi 2008; Wong et al. 2008; Kanning and Bergmann 2009; Kumar et al. 2009; Ladhari 2009; Osman et al. 2009; Sadek et al. 2010).

However, criticism of Servqual (Blanchard and Galloway 1994b; Gounaris 2005) has led to the creation of alternative models. Examples of the models are Servperf (Cronin and Taylor 1992; Angur et al. 1999; Abdullah et al. 2004), Bankserv (Avkiran 1994) and other models (Levesque and McDougall 1996; Stafford 1996; Johnston 1997; Bahia and Nantes 2000; Lassar et al. 2000; Aldlaigan and Buttle 2002; Cui et al. 2003; Malhotra et al. 2005; Mukherjee and Nath 2005; Petridou et al. 2007; Guo et al. 2008).

In addition, Gro nroos (1982) developed a two-dimensional model in which he included technical quality (Gro nroos 1982, 1990) and functional quality. This thesis integrates these two service quality dimensions in the overall model developed in chapter four. In order to accommodate all possible service quality dimensions, a specific discussion on all possible service quality dimensions is provided in chapter two.

- 3) One criticism, which is evident in much of the literature on Servqual, is that Servperf is claimed to be superior only where the performance of the service quality is measured (Cronin and Taylor 1992; Angur et al. 1999; Abdullah et al. 2004; Osman et al. 2009). This thesis employed the performance measurement as suggested by Cronin & Taylor (1992).
- 4) The generalisation of much of the published research on the use of the Servqual model is problematic in the context of IB. As a result, the Carter model is gaining acceptance in the measurement of customer satisfaction in IB as it incorporates an additional dimension, Compliance with *Shari'ah*, to Servqual's five dimensions (Muslim and Zaidi 2008; Osman et al. 2009; Haque 2010a; Sadek et al. 2010).

As Compliance with *Shari'ah* is a religious requirement, this thesis seeks to identify if different religiosity levels will have different impacts towards Compliance with *Shari'ah* and finally towards satisfaction as well. The discussion of religiosity in consumer behaviour literature is presented in chapter three while the religiosity scale development for the IB context is explained in chapter five. The development of Islamic religiosity for the IB industry will be also one of the key contributions of this thesis.

It is important to highlight that none of the studies mentioned above were conducted in the context of ICC especially its possible antecedents of satisfaction and its relationship with religiosity, warranting a comprehensive ICC satisfaction model integrating all service quality dimensions to be developed. Therefore, it provides a strong rationale for this study to be conducted.

1.2 RATIONALE FOR THE STUDY

All service providers that provide high service quality are deemed to have certain characteristics in common. Examples of the characteristics are high staff morale, low staff turnover, high repeat purchase levels, long customer retention levels, relatively low cost of sales, high numbers of referrals and recommendations and middle to high processes compared to their competitors, and relatively high profit levels (Daffy 2001, p. 5; Transit Cooperative Research Program 1999). These can only be attained if customers are satisfied with the company's exceptional customer service (Shamma and Hassan 2013).

In addition, satisfied customers are likely to become repeat customers who will spread positive word of mouth and be willing to try other product lines (Naser et al. 1999). This section provides evidence that even though customer satisfaction research is important, yet it is under-researched and should be the utmost priority in the Malaysian IB industry and thus provide a strong rationale for this study to be conducted. Descriptive statistics in the area of customer satisfaction are given to support the arguments in the published papers.

1.2.1 Customer Satisfaction is Under-Researched in the Malaysian Banking Industry

Previous studies in marketing and service literature have proven that service quality and customer satisfaction are important for organisation competitiveness, and are essential determinants in allowing an organisation to differentiate itself from competitors (Gounaris et al. 2003). A report published by the Malaysian Investment Development Authority (MIDA) in 2011 stated that the banking industry attracted the largest amount of investment (RM2.3 billion) in the financial sector, followed by the capital and insurance sectors. As customer satisfaction research in the banking industry is important as a significant marketing agenda, it is also beneficial to see whether it has received adequate attention in the Malaysian banking

industry. Appendix 6 provides the number of studies conducted in different countries, showing that customer satisfaction research is indeed important in several countries.

The table in Appendix 5 summarises customer satisfaction research conducted in 31 countries in which a majority of the studies were conducted in the United States, the United Kingdom and Canada comprising of 19, 10 and 7 studies respectively, involving more than 100,000 respondents. This shows that developed countries place an emphasis on customer satisfaction in the service industry. As for Malaysia, only four studies have been conducted thus far, accumulated a mere 889 respondents.

This further implies that in certain countries, such as Malaysia, customer satisfaction studies have been under-researched. Furthermore, the models used in developed countries cannot be directly replicated considering the differences in culture, politics and the surrounding environment of the respective countries (Sangeetha and Mahalingam 2011).

1.2.2 Customer Satisfaction Research is the Utmost Priority in IB Industry

This research is likely to be beneficial to IB institutions, to banking and marketing literature and to consumers. For instance, IB institutions can use this research to help identify their customers' priorities, their customers' tolerance bands, their banks' performance in comparison to customers' priorities and competitors' performance in terms of continuous growth (Hill 1996, p. 21). The ability to measure what the customer wants will enable banks to retain satisfied customers, promote their credit card products and gain higher levels of income.

An increase in customer satisfaction is also important for the economic growth of a country, as it will facilitate the nation's production and investment due to an increase in consumption (Fornell 2007). Reichheld and Sasser, quoted in Levesque (1996), conducted a study in a retail bank in 1990, which revealed that an increase in customer satisfaction by 5% increased the retail bank's profit by 85%.

In addition, a satisfactory service experience/service quality appears to be one requirement for the continued interest in a product that leads to loyalty (Aldlaigan and Buttle 2002; Baumann et al. 2007). The implications of low customer satisfaction in the buyers' market can be devastating to companies. Customers switch banks or defect if they are not satisfied

(Foscht et al. 2009). Furthermore, the cost of retaining a loyal customer is cheaper than finding a new one (Jones and Sasser 1995; Timm, 2005); in fact, it has been calculated to be five or six times cheaper than finding a new customer (Timm, 2005).

The Malaysian investment performance 2011 report, published by MIDA, also revealed that IB was a major contributor to investments in banking, amounting to RM1.9 billion. This is approximately 91% of the total amount invested in the banking sector in 2011 (MIDA 2011). However, the ratio of customer satisfaction studies between conventional banks and Islamic banks revealed a pressing need to contribute to the contextual gap. The breakdown of studies and the number of samples studied in the banking context are shown in Appendix 6:

One-third of customer satisfaction studies were conducted in the banking context, and the number of samples studied in the conventional banking was high compared to the total number of samples (approximately 63%). However, the number of studies on IB - represented by 1722 samples - was very low in comparison to conventional banking (approximately 1.8% only). Therefore, it is vitally important for a bank to direct its efforts towards customer satisfaction. This creates an opportunity for this research to fill in the contextual gap. However, to do so, there are two main challenges that need to be addressed.

1.2.3 Deepening the Understanding of the Customer Satisfaction Concept for ICC

There have been only a few studies, which investigated the factors contributing to customers' satisfaction of both conventional and ICC users. Nevertheless, there are several studies that have conducted research into ICCs. For instance, Choo, Lim and Sanusi (2005) studied consumers' selection of ICCs among public and private employees. Mansor and Nordin (2004) addressed the relationship between demographic factors and the usage of Islamic credit cards. Even though these studies have contributed in providing basic knowledge on ICCs, more thorough and in-depth studies are required, especially in the area of customer satisfaction and that includes religious elements (Sureshchandar et al. 2002).

1.2.4 Development of an Integrated Customer Satisfaction Measurement Tool for the IB Industry

There is no specific tool or guidance for measuring customer satisfaction and religiosity, especially in IB, except for Carter's model, which includes the compliance with *Shari'ah*

dimension in addition to Servqual's five dimensions. Carter shows that compliance with *Shari'ah* has a significant positive impact on customer satisfaction (Muslim and Zaidi 2008; Osman et al. 2009). Thus, there is a need to develop a comprehensive model of consumer satisfaction that will include functional, technical and religious elements. However, as was mentioned earlier, the mixed findings evident in prior studies regarding the impact of religion on bank selection has led to the question of whether a different level of religious commitment has a different impact on customer satisfaction.

1.2.5 Religious Obligations

The primary objective in the development of suitable banking products is to deliver, elevate and satisfy basic human needs (Hassan et al. 2008). Customer satisfaction is seen as the equivalent of an investment of future assets where in the long run it will increase sales and profit (McQuitty et al. 2000). In most customer evaluations of retail banking services, the focus has been on the service expectations versus perceived service performance. Above all, IB has an additional, important sacred task, which is to satisfy God.

A venerable Islamic scholar, Imam al-Haddad, wrote regarding attaining God's satisfaction in the year of 1069 AH (1658 C.E) in one of the two treaties compiled and translated by Al-Badawi (2002) in which God's satisfaction is derived from being obedient to Him and His wrath to being disobedient. Those who obey are promised the gardens of heaven and those who disobey are to be cast into Hellfire.

1.3 RESEARCH OBJECTIVES

As the IB sector is emerging in Malaysia, the competition between credit card issuers in securing customers is becoming increasingly intense. Thus, it is vitally important for a bank to direct its efforts towards customer satisfaction. However, in the context of IB, customer satisfaction research is limited because it is a new concept in the banking industry and the system is complex because it involves notions of individual religiousness. In addition, there is also the persistent issue concerning different Islamic scholars that either disapprove or allow the use of credit cards.

Therefore, in order to understand the reasons why credit-card users would be satisfied with Islamic or conventional credit card issuers, a comparison of customer satisfaction models

should be identified and assessed. This study therefore has two main objectives. Firstly, it aims to develop a religiosity measurement for IB and an integrated model for ICC users' satisfaction. Secondly, the study aims to analyse the impact of customers' religiosity on their satisfaction in the context of the Malaysian ICC industry.

1.4 RESEARCH QUESTIONS

Six research questions will be handled with great interest. Research questions 1, 2 and 3 must be answered to achieve research objective 1, while research questions 4, 5 and 6 must be answered to achieve research objective 2.

Research Question 1: What are the current issues in the ICC industry in Malaysia?

Research Question 2: What are the antecedents to customer satisfaction in the context of ICC users? What are the existing models available to measure customer satisfaction?

Research Question 3: How does religion affect consumer behaviour? How is religiosity connected to customer satisfaction? How do we measure someone's religious devoutness? What is the existing religiosity/devoutness scale available?

Research Question 4: What are the credit card users' perceptions of the ability of their banks to comply with *Shari'ah*?

Research Question 5: Does religiosity has a significant impact on the perceptions of credit card issuers?

Research Question 6: Can *Shari'ah* compliance affect customer satisfaction?

In achieving its research objectives and answering the research questions, this study has employed a mixed method methodology. The research methodology will be explained in the following section.

1.5 RESEARCH METHODOLOGY

This study is not a simple study because customer satisfaction does not arise from service quality alone; but it also deals with religious factors. Indeed, the subject area becomes more complex when integrating market perspectives and religious factors. This study has employed mixed methods comprising both qualitative and quantitative strands. Specifically,

a sequential mixed model design is chosen whereby the qualitative method will become an indicator that religion plays an important factor in affecting customer satisfaction. The quantitative method will follow this idea through.

This research has a theoretical lens (its research framework) which overlays the two strands. The two strands are initiated by semi-structured interviews and then followed by an online survey. In the first strand (qualitative), semi-structured interviews were conducted with ICC users to investigate and to provide an indication as to whether religion affects credit card users' satisfaction.

In the second strand (quantitative), two surveys were developed (religiosity scale and integrated customer satisfaction model). The integrated customer satisfaction model survey obtained a sample of credit card users in order to rate the performance of their credit card issuers. This type of survey is known as a market standing survey (Hill 1996, p. 26; Hill and Alexander 2006). Emails and messages via online social media were sent to respondents redirecting them to an online survey. Respondents are selected only if they own a credit card. The survey was conducted over a period of four weeks, commencing on the 7th of November 2011 and lasting until the 8th of December 2011.

The data from the survey is analysed using descriptive analysis, confirmatory factor analysis (CFA) and structural equation modelling (SEM). Descriptive analysis is used to give the overall picture of the respondents' demographic profiles. Confirmatory factor analysis (CFA) is conducted to evaluate whether the sub scales actually fall into the right group. This is to address the construct validity issue of a good scale measurement. Cronbach alpha tests are also conducted to address the issue of the reliability of the scale measurement. The final analysis involves Structural Equation Modelling, which aims to identify the interrelations between the latent variables.

Moreover, a cross-group comparison between the Islamic credit card users and conventional credit card users is conducted to identify the major differences between the ICC and the CCC users. Firstly, it would be beneficial if the service quality dimensions that affect their customer satisfaction could be identified to prioritise the most significant antecedents of customer satisfaction according to their credit card possession. Moreover, the banks could

strategise their marketing and promotional activities targeting to their customers' needs and expectations.

Secondly, the group comparison should be able to identify if religiosity has any significant impact towards different credit card users groups. The results from the group comparison will provide a big contribution to knowledge, industry and the policy makers in regulating the financial industry involving Islamic banking and conventional banking.

1.6 CONTRIBUTIONS OF THE PRESENT RESEARCH

This study intends to contribute to both the theory and practice by providing a thorough comparison analysis of CCC and ICC customers' satisfaction in a specific context (i.e. Malaysia). In particular, the present study:

1. *Expands the limited existing research of ICC customer satisfaction in a new context (i.e. Malaysia is using a dual banking system).*
2. *The Development of Two New Models*
 - a. Contributes to the religiosity literature by developing a measurement scale to measure Islamic religiosity in Islamic Banking context.
 - b. Develops a comprehensive ICC customer satisfaction model and make an important contribution to the limited literature on ICC satisfaction by integrating new dimensions and variables into well-accepted general models (i.e. Servqual and Technical models) and applying them in a new context. This study has successfully integrated three different models assessing different aspects of service quality, i.e. functional (process), technical (outcome) and religious and ethical service quality dimensions.
3. *Determines whether Islamic Banks Complies with Shari'ah law and its Relationships with Satisfaction.*
 - a. Examines whether different types of credit card users have different perceptions of satisfaction.

- b. Examines whether different religious groups will also have a different perception of satisfaction.
- c. Compares whether *Shari'ah* compliance will have a significant impact on satisfaction for ICC and CCC products.

4. Determines whether Religion Has a Significant Impact on IB.

- a. Demonstrates that religion plays a significant role whereby highly religious people will prefer ICC (pre-purchase behaviour).
- b. Demonstrates that religion plays a significant role whereby the ability of the banks to comply to *Shari'ah* is positively affecting customer satisfaction (post-purchase behaviour).

5. Customers' Perceptions of IB Complying With Shari'ah and Customer Satisfaction.

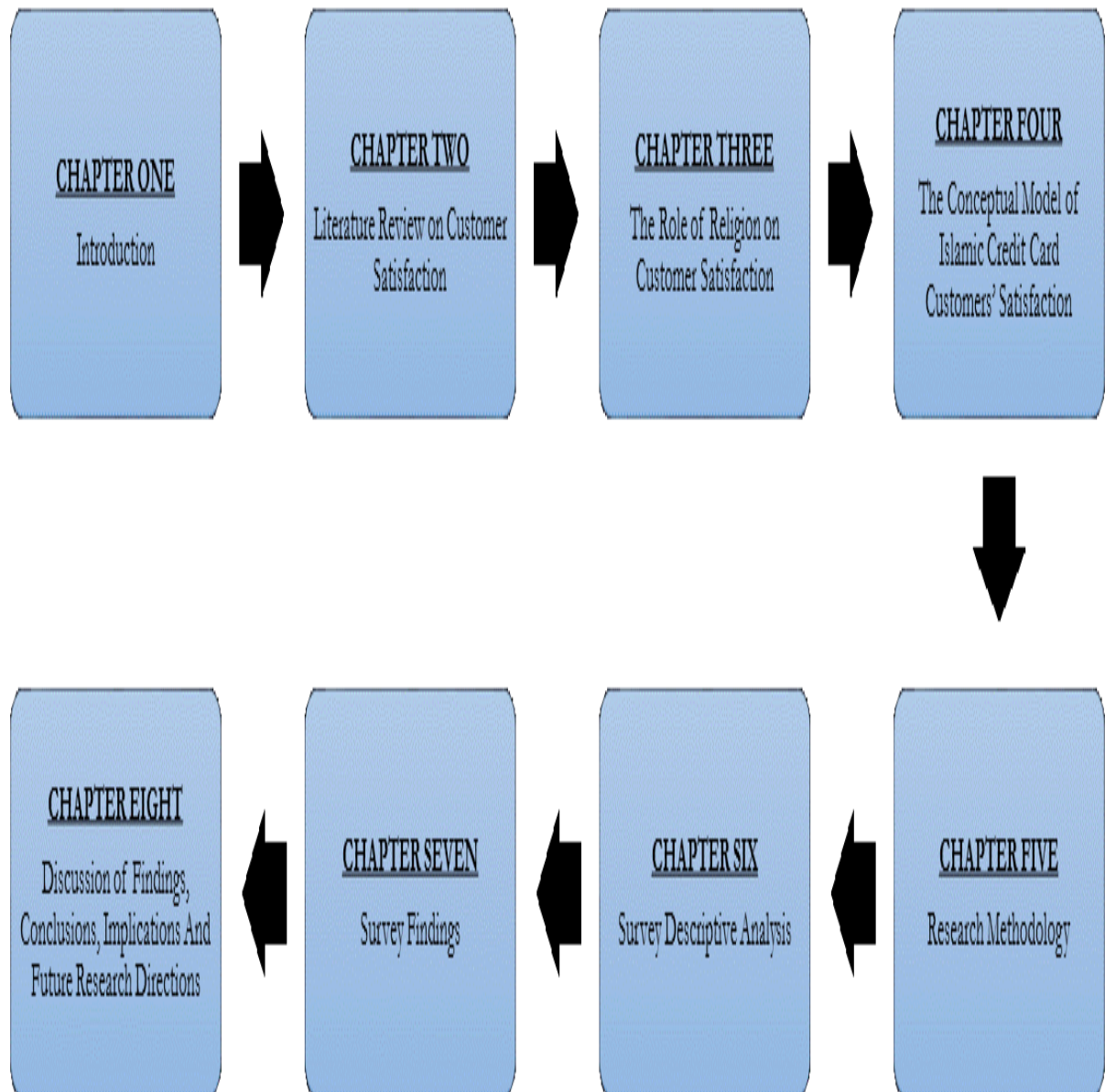
- a. Demonstrates that different groups of credit card users (ICC, CCC and customers who have both types of credit cards) have different perceptions of the banks' ability to fulfil *Shari'ah* rules and regulations.
- b. Demonstrates that different levels of religiosity also play an important role in influencing customers' perceptions of the ability of the banks to fulfil *Shari'ah* rules and regulations, which in turn positively affects customer satisfaction.

1.7 THE OVERALL THESIS STRUCTURE

Chapter two presents the readers with an overview of customer satisfaction in the study's context that is ICCs. A discussion on the underpinning theories of customer satisfaction, service quality and customer satisfaction and its conceptual operational research are offered in the same chapter. The study adds several dimensions to the customer satisfaction model to the chapter. In **chapter three**, the roles of religion in consumer behaviour literature are examined with religiosity. **Chapter four** exhibits the overall operational model in context. **Chapter five** demonstrates the research design and methodology. The study employed a sequential mixed methods research design. **Chapter five** also reveals the qualitative findings from semi-structured interviews, which provide an early indicator that religion affects the

behaviours of credit card users. **Chapter six** describes the profile analysis of the respondents. **Chapter seven** reports the findings from the quantitative analysis using confirmatory factor analysis and structural equation modelling. The final **chapter eight** ends with the thesis's conclusion and suggestions for future research. The thesis layout is depicted in Figure 1.1, below.

Figure 1-1: Thesis Layout



1.8 CHAPTER SUMMARY

This chapter has given an explanation of Islamic banking, ICC and customer satisfaction contexts and the rationale why this study are important to be conducted. This chapter has also provided the overall thesis direction by providing its research objectives, research questions and methodology being employed. Customer satisfaction is vitally important for the Islamic banks as they can be used to attract new customers and to retain existing customers. However, there is a gap in the existing marketing and banking literature.

Currently, it does not indicate that the consumers perceived that IB complies with *Shari'ah*. Secondly, there is a gap in the literature on whether religion has a significant impact on the perception of customers on the IB. Thirdly, it does not provide an answer on whether customers' perceptions of IB's compliance with *Shari'ah* will have an impact on customer satisfaction. Lastly, it does not provide a comprehensive customer satisfaction measurement regarding compliance with *Shari'ah* and religiosity, or their relationships with satisfaction in the context of the IB industry.

Instead of looking at IB products as a whole, this research suggests the use of a specific IB product as the focus of research. This research has chosen ICCs because there are a limited number of studies in this area. Furthermore, the demand for credit cards is high in comparison to other products, such as home financing, overdrafts and personal financing.

Islamic banks could focus on several factors, which are influencing the choice of credit cards by ensuring that the customers are satisfied. In the following chapter, a comprehensive review of the antecedents to customer satisfaction will be presented, and the models used by previous scholars will be discussed further.

CHAPTER 2 : LITERATURE REVIEW ON CUSTOMER SATISFACTION

For Islamic banks it not so much a matter of competing on price, but rather in stressing the unique quality of the services they provide (Wilson 2002).

2. INTRODUCTION

With respect to the first research objective of this thesis of developing a comprehensive Islamic Credit Cards (ICC) customer satisfaction model, this chapter attempts to answer as well as to provide an understanding about customer satisfaction. The aim is to identify the existing customer satisfaction models available in the literature and to identify the antecedents to customer satisfaction in the context of ICC. In order to assist readers in understanding the concepts related to customer satisfaction, the first objective of this chapter is to introduce the subject of customer satisfaction in the context of present study by analysing and dissecting the underpinning theory of customer satisfaction. This will be explained in sections two and three of the chapter. The second objective of this chapter is to highlight and clarify issues related to problems in measuring levels of customer satisfaction faced by researchers.

Two main issues that remain elusive are the possible antecedents of customer satisfaction and disconcerted methodological issues as discussed in chapter three, especially when dealing with an Islamic banking context. This chapter aims to connect the missing links between these issues so that the proposed customer satisfaction model used by the study is logical and coherent in answering the research questions. These will be explained in section four. A review of the generic models used to measure customer satisfaction in different contextual settings is presented in section five. The operationalisation of the three factors, which are functional service quality (FSQ), technical service quality (TSQ) and religious and ethical service quality (RESQ), will be explained in section six. Moreover, a snapshot of the development of the three factors is explained in Figure 2.6 to fit the study's context. The ultimate success of this thesis will be evident if the integrated model developed by the study can be systematically tested. These three factors are expected to cover in detail the factors/antecedents that influence Islamic banking customers' satisfaction in general and ICC users' satisfaction in particular.

2.1 CUSTOMER SATISFACTION IN THE STUDY'S CONTEXT

The literature on customer satisfaction flourishes and practitioners make considerable progress in dissecting customer databases to find less or more favourable customers. However, the expected customer defection rates, as customers switch to other competitors, remain an elusive goal. The severity of this reality is underscored by anecdotal and empirical evidence suggesting that many apparently satisfied customers still switch to a competitor.

In the context of the banking industry in Malaysia, satisfied customers of Islamic banks can easily switch to conventional banks if not all importunate customer satisfaction variables are taken into account. Previous studies have suggested that customer satisfaction is an industry-specific and culture-specific concept (Gounaris et al. 2003). A theory across cultures can only be generalised if the model has undergone appropriate adjustments of its parameters according to the research contexts (Farley and Lehmann 1994).

Measuring satisfaction in general seems impossible because fulfilling or meeting one's desire without specifying or attaching it to a reference or context means that it is potentially infinite (Fornell, 2007). Thus, the validity of the approach of replicating the existing customer satisfaction model in the ICC context necessitates careful examination.

Previous studies in the banking industry (Parasuraman et al. 1988; Yavas and Benkeinstein 2007; Poolthong and Mandhachitara 2009), in the hospitality sector (Tomes and Ng 1995; Carman 1999; Sower et al. 2001; Mostafa 2005), in the auto industry (Bounman and van der Wiele 1992), in the hotel and tourism industry (Knuston et al. 1990; Saleh and Ryan 1991; Stevens et al. 1995; Frochot and Hughes 2000), and in the airline industry (Prayag 2007), have produced examples where researchers have developed context-specific measurement scales for understanding the concept of customer satisfaction in specific areas.

This is strengthened by the evidence presented by Donthu and Yoo (1998) in which they applied Hofstede's (1980) cultural dimensions to study the effect of culture on overall service expectations. Verifying Gounaris' (2003) statement above, the impacts of the cultural dimensions were seen as significant for certain service quality expectations and the dimensions affecting customers' expectations vary considerably.

Likewise, the findings in Lipin et al's (1994) study also provided a strong indication of the significant impact of national culture on credit card usage in different countries. They discovered that American consumers were willing to pay more for the delayed payment offered by credit cards. Unlike them, European consumers preferred debit cards to credit cards, as they were not willing to pay extra money for their purchases.

Furthermore, the researchers realised that Asian consumers in Taiwan and Japan behave in different ways. For instance, quite the opposite to Taiwanese consumers who spent heavily with credit cards, most Japanese consumers had credit cards, but barely used them. These two studies, by Donthy and Yoo (1998) and Lipin et al. (1994) corroborate the notion that customer satisfaction is an industry-specific and culture-specific concept.

For this reason, customer satisfaction should be measured based specifically on industry or culture specific factors and these differ from one nation to another. This implies that credit card industry players such as banks, policy makers, central banks and merchants have to measure credit card users' satisfaction using a unique measurement according to the present context.

Moreover, learning from the American credit card industry revealed that the intensity of customer satisfaction can also vary across different types of credit card users and payment behaviours (Chandrashekar et al. 2007). For instance, JD Power and Associates, a global marketing information services company, discovered in their six years of longitudinal credit card studies (since 2006) that credit card users can be categorised into two distinct groups: transactors and revolvers (Block 2007; JD_Power_&_Associates 2012).

The term transactors refers to credit card users who usually pay off their outstanding balance each month while revolvers represents the credit card users who typically carry a credit balance on their credit cards (J.D Power and Associate, 2010). They ascertained that revolvers tend to be less satisfied than transactors are. This implies that the credit card users can be categorised according to their payment behaviour in the context of the American credit card industry - but would this apply in the context of Malaysia and ICCs as well? Likewise, will belonging to different levels of religiosity groups affect customer satisfaction intensity?

Given the contextual issues above, customer satisfaction is shown to be industry or culture specific and its intensity differs according to different groups. Therefore, one can expect that in the context of Islamic banking and specifically for ICCs, the same issues would apply. Customer satisfaction in the ICC context is unique because it is characterised by religious and ethical factors (Sangeetha and Mahalingam 2011).

For instance, many verses in the *Holy Quran*²¹, specifically forbid Muslims to be involved with any interest transactions. To some extent, we have understood the need for the uniqueness of customer satisfaction models due to the influence of the prevalent industry, religion and culture; and subsequently, this chapter will review the previous studies that have taken the initiative to unravel the scientific issues related to customer satisfaction in the context of ICCs.

2.1.1 Islamic Credit Card Research

A systematic search performed on the topic of ICC provides evidence that empirical studies on ICC user satisfaction are very uncommon in the IB literature. A systematic database search utilises five databases: Scopus, Web of Science, ProQuest, EBSCOhost and EconLit, because these databases are linked to the field of study. The search included articles available until January 2011. Because the focus of this research is on ICCs, the terms Islamic or *Shari'ah* credit cards were included in the title, summary, or keyword. More specifically, the central search topics were credit card, credit card satisfaction, ICC, and *Shari'ah* credit card.

Table 2-1: Search Result of Credit Card, Credit Card Satisfaction, ICC, and *Shari'ah* Credit Card in Five Databases.

Database	Scopus	Web of Science	ProQuest	EBSCOHost	EconLit
# of articles					
Credit card	2462	1083	19898		348
Credit card satisfaction	138	20	4893	-	-
Islamic credit card	2	-	538	-	1
<i>Shari'ah</i> credit card	-	-	36	-	-
<i>Shariah</i> credit card	-	-	18	-	-
"Credit card"	2290	777	964	922	281
"Credit card satisfaction"	-	-	4	-	-
"Islamic credit card"	-	-	5	-	1
" <i>Shari'ah</i> credit card"	-	-	-	-	-

²¹ See *Surah Al-Rum*, verse 39, *Surah An-Nisaa*, verse 161, *Surah Al-Baqarah*, verse 188, *Surah Al-Baqarah*, verse 275 until 280.

Note: “-“ means that no article was found

Table 2-1 represents the number of papers found according to the search terms in each database. The searches using *credit card* as a keyword led to a plethora of studies on credit cards but very few articles dealing specifically with ICCs, especially when the keywords search for the last five rows were conditioned for exact matches. The figures in Table 2-1 reflect that there is a structural gap between the number of studies conducted for credit card satisfaction and those studies dealing with conventional credit cards and with ICCs.

The researcher believes that there is one possible reason contributing to the lack of studies conducted in this area. This is the lack of knowledge about the structure of ICCs. The ICC product structure is complicated because the products underlying the contracts are a blend of different, complicated contract structures such as *wadiah*²², *kafalah*²³, *ujrah*²⁴ and *tawarruq*²⁵. These complex product structures perhaps inhibit the participation of researchers who generally have limited knowledge of *Shari'ah* to venture into an in-depth study of ICC.

Moreover, the ICC industry is novel because it was recently introduced less than a decade ago compared to other IB products and CCCs and therefore most of the studies into ICCs focus on product development and pre-purchase behaviours. Even though the structural differences imply that ICCs have yet to catch the attention of researchers in the academic industry, on the other hand, it also provides a vast area of scientific exploration opportunities. Specifically, the topics found with the search term of ICC and cross referenced articles are: ownership and behaviour (Abdul-Muhmin and Umar 2007; Abdul-Muhmin 2008), instruments and structure (Noor and Azli 2009), mobile credit card (Amin 2007, 2008), patronage factors (Amin 2012) and E-commerce (Zainul et al. 2004; Muhammad et al. 2011).

Because of the paucity of relevant literature, the researcher has to source customer satisfaction and service quality literature from other contextual settings as a basis for developing a customer satisfaction model for the ICC context. This is to ensure that the measurement developed is established from a sound theoretical lens. A list of the customer

²² Safe keeping

²³ Normally referred as *Kafalah bi al-dayn*, is a guarantee for a debt owed by a party.

²⁴ Contracts that are based on fee based.

²⁵ Buying a commodity with deferred payment and selling it to a person other than the buyer for a lower price with immediate payment.

satisfaction studies from other contextual settings consulted during this process is presented in Appendix 8 (p. 335). The next section will discuss the basic theory of customer satisfaction as well as introducing the reader to an alternative theory, which has been pioneered and supported by Islamic economists.

2.2 UNDERPINNING THEORIES OF CUSTOMER SATISFACTION

The three major theories in customer satisfaction literature are: the disconfirmation paradigm (Aldlaigan and Buttle 2002), attribution theory (Mizerski et al., 1979; Weiner, 2000), and equity theory (Aldlaigan and Buttle 2002). The disconfirmation paradigm, advanced by Engel, Kollat and Blackwell (1968) and Howard and Seth (1969) as a result of a seminal laboratory study by Cardozo (1965), is a departure from the consistency theory.

According to Charles Osgood and Percy Tannenbaum's (1955) consistency theory, actual product performance and expectations do not match, therefore customers will feel some degree of tension. In order to relieve this tension, customers will make adjustments either to their expectations or in their perceptions of the product's actual performance. Linked to consistency theory, disconfirmation theory authors tied expectation to customer satisfaction.

Oliver (1981) was the first to introduce the expectancy-disconfirmation model for studies of customer satisfaction in the context of the retail and service industry. This theory postulates that customers achieve satisfaction as an outcome of subjective comparisons between their perceptions and expectations. The customers are asked to compare between their perceptions and expectations using a 'worse than/better than expected' scale. The resulting perceptions are conceptualized as a psychological construct called subjective disconfirmation.

The expectancy disconfirmation model asserts that customer satisfaction is a direct function of subjective disconfirmation. That is, the size and direction of the disconfirmation determine, in part, the level of satisfaction. When confirmation occurs, customers are believed to remain neither satisfied nor dissatisfied. Both expectations and perceptions also have been found to influence customer satisfaction and subjective disconfirmation under various circumstances (Churchill and Surprenant, 1982).

Customer satisfaction will increase when the ratio of performance to expectation increases (Evans et al. 2009, p. 130). Parasuraman et al. (1988) are considered to be the pioneers of the Servqual model (Gap model) applying the disconfirmation theory and as such their work became the root of a plethora of marketing studies in many different contexts and cultural settings (Sureshchandar et al. 2002).

These concepts are primarily cognitive and interact with other cognitions of an emotional nature (Oliver 1980; Oliver 1993). Cognition is an internal mental process explaining how people perceive, think, remember, solve problems and speak (Feist and Rosenberg 2009). However, some other researchers believe that customer satisfaction is an affective response which deals with consumers' feelings (Diane et al. 1994; Giese and Cote 2000).

Others combine both concepts, i.e. cognitive and affective. For example, disconfirmation theory has been explicitly stated by Howard and Seth (1969, p. 147), where the notion of a revised post-purchase attitude (emotional) is the difference in a cognitive comparison between the received satisfaction and the anticipated satisfaction.

As for the attribution theory (Mizerski et al., 1979; Weiner, 2000), customers seek the causes of outcomes (Evans et al. 2009, p. 131). According to this theory, customers feel satisfied when they attribute favourable outcomes to themselves and negative ones to others (Oliver 1993). The customers' attributions are based on three dimensions: focus, controllability, and stability. On the other hand, Oliver (1997) stated that equity theory includes judgements of fairness, rightness or deservingness that customers make in reference to what others received (Jun and Cai 2001).

Customers are satisfied if they feel that they have received fair treatment in the exchange process in terms of their inputs (time, effort and money) and outputs. The lower the ratio of input to output, the more likely the customers will be satisfied. Nevertheless, the main problem faced, as discussed in the previous section, is the importance of ensuring customer satisfaction surveys are carried out according to industry and culturally specific contexts. Closely akin to these, the basic theory of customer satisfaction must also reflect the context within which it is applied. Therefore, the following section will explain how customer satisfaction surveys should be articulated from the Islamic perspective.

Unlike conventional theories, customer satisfaction in the Islamic perspective offers a different point of view. Both modern and traditional Islamic theories of economics were put forward challenging the existing capitalist theories such as the theory of rationality, profit maximisation and others (Chapra 1974, 2000). Not only Islamic theorists, but Fornell (2007), the founder of ACSI, went against traditional economic theory of firms, productivity, economic assets and sellers' power because the modern economy shifts according to the relationships/alliances of customers' demand and investors' capital movements. The major differences between conventional and Islamic economics are rooted in their theoretical foundations and principles.

The Islamic economics puts much consideration onto spiritual aspects whereas conventional economic systems mainly acknowledge monetary or material rationality. Even though there are advocates of non-materialism in conventional economics, they tend to be marginalised. Hence, the objective of conventional economics is profit maximisation while the objective of Islamic economics is *falah*²⁶ maximisation (Arif 1985) and for that reason, profit for a company or cost for the consumer might be lower or higher in the Islamic economic system in comparison to the conventional economic system.

This is because the time horizon for conventional economics is limited to one's lifetime while the Islamic economic time frame goes beyond into the afterlife in which sometimes costs can be insignificant for the participants/consumers in the Islamic conception of economics (Mersha 1992). As a consequence, a Muslim consumer is considered as irrational in a rational market according to conventional economic theory (Kartajaya and Sula 2006). Instead, they argue that the Muslims are a part of an emotional market because their consumption patterns are not solely motivated by profit or cost motives.

Nevertheless, in contrast, Islamic theorists have argued that Muslim consumers are rational because an Islamic utility model has two periods, i.e. during lifetime and after death. Therefore, satisfaction is beyond only material expectations, and most importantly, Islamic banks and their customers strive to achieve God's satisfaction by being obedient to Him. In the context of the banking industry, this could be done by avoiding interest as promulgated in the divine revelations.

²⁶ Success in the world and the days hereafter by obeying the divine rules and regulations.

Nevertheless, this is not a reason for Islamic banks to fail to deliver excellence in their service quality and customer satisfaction. This is because customer satisfaction is not an alien concept from the Islamic perspective - there are several verses in the *Al-Quran*, which relate to the importance of Muslims to live in excellence²⁷.

Based on a number of verses in the *Holy Quran* verses, Islam indeed encouraged Muslims to be preeminent in doing righteous deeds, and this can be translated into the IB operational system by providing high service quality to ensure customer satisfaction. The following section will explain two important and related concepts, i.e. service quality and customer satisfaction, and the definitions of both constructs will be examined as expressed in the previous literature to harmonise them according to the present study's context.

2.3 SERVICE QUALITY AND CUSTOMER SATISFACTION

In this section, the author attempts to group definitions of customer satisfaction and service quality together in order to show the differences between these two concepts. This is necessary to avoid confusion between consideration of these two concepts, which are virtually and conceptually similar but are actually different in their methods and aims. Therefore, the concept of service quality and that of customer satisfaction will be defined according to the study's context in order to set the limits and boundaries of the current study.

Customer satisfaction and service quality are two important concepts for banks to optimise in order to achieve high profits (Naser et al. 1999; Muslim and Zaidi 2008). However, a range of academics and practitioners understands these two concepts differently. For example, although the expectancy model (customer satisfaction) and Servqual (service quality) employ different measurement methods, their conceptual thesis is virtually identical (Giese and Cote 2000). However, customer satisfaction is the essential variable in the expectancy model, while Servqual pursues service quality as its essential variable (Giese and Cote 2000).

Even though the differences have been identified conceptually and empirically (Parasuraman et al. 1994; Dabholkar et al. 1996; Shemwell and Yavas 1999; Sureshchandar et al. 2002), these two concepts will still need to be defined according to the study's context because the

²⁷ For example see *Surah Al-Mulk*, Verse 2 and *Surah An-Nabl*, Verse 128.

theoretical foundations of Islamic banking contest conventional theory, as discussed earlier in the chapter. Thus, there is an exigency that the study defines these two concepts, particularly in determining the line of differences in the formation of customer satisfaction model in the specific context of the study. This will accommodate the religious factor that influences Islamic banking customers' satisfaction levels.

Moreover, some authors believe that customer satisfaction is a function of service quality (Anderson and Sullivan 1993), while others believe the opposite, seeing service quality as a function of customer satisfaction (Parasuraman et al. 1988). The implication of this is a wide range of different definitions for both concepts and, if not taken seriously by researchers and especially by practitioners, the situation can lead to misinterpretations, inaccuracy and lack of precision in measurement.

Therefore, these two related concepts need to be understood beforehand in order to measure customer satisfaction in the context of Islamic banking. The following sections elucidate the concept of service quality followed by that of customer satisfaction.

2.3.1 The Concept of Service Quality

Prior to the growth of the service industries, the literature was devoted to the concept of the quality of tangible goods (Fornell 2007). The definition of quality is in conformance to manufacturing standards. However, in the modern world, where buyers have more power in the market along with the growing importance of the services industries, one can erroneously define quality as goodness, or luxury, or weight. The definition of service quality wallowed in a sea of confusion in the 90s (Rust and Oliver 1994, p. 23).

This meant that 'quality' was used inconsistently in phrases such as good quality, bad quality, or quality of life, which might not reflect the exact meaning of the phrases (Reeves and Bednar 1994). As the word 'quality' is difficult to define (Reeves and Bednar 1994), the term 'service quality' can be even more difficult to define (Cronin and Taylor 1992; Jun and Cai 2001) and measure (Zeithaml 1988; Jun and Cai 2001). It is difficult to define for several reasons especially when it has a relation with religion, in which judgements are dominated by unique preferences (Reeves and Bednar 1994).

Service quality is difficult to define because services are 1) intangibles and derive from performance and experience rather than objects, 2) heterogeneous because their performance varies and, 3) inseparable because the production and consumption of many services are inseparable (Zeithaml et al. 1990, p. 16). Moreover, the definition of service quality is highly related to industry or contextual specifics and in the case of Islamic banking, religion plays a significant role which increases its abstractions.

Furthermore, the differences between goods quality and service quality mean that the former commonly stems from management perspectives while the latter comes from customers' perspectives (Lam and Zhang 1999). Therefore, this section attempts to provide a clear understanding of service quality in the contextual setting because it is important to ensure effective management (Rust and Oliver 1994). The various definitions of service quality given in Table 2-2 suggest some commonalities.

Firstly, service quality is a derivative of customers' perceptions and expectations regarding a specific service over time (Lehtinen and Lehtinen 1982; Parasuraman et al. 1985). It is also important to highlight that some authors have also used this as the expectancy disconfirmation conceptualisation of customer satisfaction. Secondly, service quality is multi-dimensional (Groenroos 1984). For example, some authors have divided service quality into process and outcome (Blanchard and Galloway 1994b; McDougall and Levesque 1994; Mentzer et al. 1999; Lassar et al. 2000; Kang and James 2004).

Process refers to how the service is being delivered to customers while outcome refers to the actual service delivered to the customers. Other authors have categorised service quality as functional and technical quality (Groenroos 1984; Mentzer et al. 1999; Kang and James 2004; Wisniewski and Wisniewski 2005). An examination of the terms used revealed that FSQ is also referred to as the process and TSQ is referred to as the outcome of service quality. In addition, there are other researchers who have categorised service quality into tangible and intangible service quality (Tomes and Ng 1995).

Table 2-2: Definitions of Service Quality

Authors	Definitions
Lehtinen & Lehtinen (1982) as quoted in (Guo et al. 2008, p. 306)	“Service quality stems from the comparison of what consumers feel service firms should offer, to perceptions of the performance of firms providing the services”.
Gronroos (1984, p. 37)	“There are two distinct constituents of service quality, technical and functional. Technical quality focuses on the technical aspects of service and procedures while functional quality focuses on the manner the services are being delivered”.
Montgomery as quoted in Parasuraman et al. (1985, p. 42)	“Is the extent to which products meet the requirements of people who use them”.
Parasuraman et al. (1985, p. 42)	“The degree and direction of discrepancy between customer’s perceptions of service and expectation”.
Rust & Oliver (1994, p. 13)	“Affecting service satisfaction at the encounter-specific level”.
Galloway & Wearn (1998) quoted in (Sahney et al. 2004, p. 144)	“Is like beauty – it lies in the eyes of the beholder; in other words, it is person-dependent and has different meaning for different people”.
Donthu and Yo (1998, p. 179)	“The difference between perceived service performance and expected service level”.
Othman and Owen (2001, p. 2)	“What the customer says it is”.

Nevertheless, the practicality of the above definitions in the Islamic banking context was called into question because of the non-inclusion of religious and ethical service quality (RESQ). This is an implicitly new service quality construct, apart from the ordinary TSQ and FSQ constructs and intangible in nature, which influences customer satisfaction. Therefore, in consideration of the importance of RESQ in the Islamic banking industry (See the previous discussion in chapter one), the incorporation of this construct is argued in this study to be a contextual necessity and crucial in formulating an accurate conceptual definition of service quality. The following section will provide a critical review of the customer satisfaction concept in line with the present research context.

2.3.2 The Concept of Customer Satisfaction

The definition of customer satisfaction is closely related to the definition of service quality, however they are different concepts (Parasuraman et al. 1994; Dabholkar et al. 1996; Shemwell and Yavas 1999; Sureshchandar et al. 2002). For example, Kabodian (1996) has obtained and compiled 153 answers from various perspectives, such as from entrepreneurs, executive directors and business leaders, about what customer satisfaction is. It is interesting to point out that they understand customer satisfaction concept differently based on their individual experiences and the needs of their respective industries.

Moreover, as mentioned earlier in the chapter, some authors believe that service quality is mainly a cognitive concept, while customer satisfaction is a combination of both cognitive and affective (Janda et al. 2002; Spreng et al. 2005). Therefore, this section aims to provide a better understanding of the concept of customer satisfaction according to the study's context. Rust and Oliver (1994: p.11) stated that satisfaction:

“Is derived from the Latin *satis*, which means enough, and *facere*, which means to do or make. A related word is satiation, which means enough or enough to excess. These words imply that satisfaction is filling or fulfilment”

Table 2-3: Definition of Customer Satisfaction

Authors	Definitions
Howard and Sheth (1969) quoted in Bei and Chiao (2001, p. 126)	“As a related psychological state to appraise the reasonableness between what a consumer really get and gives”.
Oliver (1980, p. 461)	Is a summary of cognitive and affective reaction to service incident were satisfaction or dissatisfaction results from experiencing a service quality encounter and comparing that encounter with what was expected.
Churchill and Suprenant (1982, p. 493)	“Resulted from purchasing and consuming a product, which was made by a consumer to compare the expected reward and the actual cost of purchase”.
Johnson and Fornell (1991, p.282)	“Is normally achieved when the customers’ perceived performance is greater than the customers’ expectation. If the customers’ perceived performance is smaller than their expectation, the customers will end up with dissatisfaction”.
Hill (1996, p. 2)	“Customers’ perception that a supplier has met or exceeded their expectation”.
Levesque and McDougall (1996, p. 13)	“Is considered as a composite of overall customer attitudes towards the service provider that incorporates a number of measures”.
Oliver (1997, p.13)	”The consumer's fulfilment response. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfilment, including levels of under - or over fulfilment”.
Anderson and Fornell (1994, p. 245) quoted in (Barcellos 1998)	They categorised customer satisfaction into two different conceptualisations, which are transaction specific or brand specific. Transaction specific is related to customer experience in using a product or service for a specific transaction while brand specific is related to the customer continuous experience using a specific product or service in a period.
Naser et al. (1999, p. 134)	“The full meeting of one's expectations”.
Bei and Chiao (2001, p. 126)	“Is a function of perceived service quality, product quality and perceived price fairness”.
Timm (2005, p. 90)	“Is like an election held every day, and the people vote with their feet. If dissatisfied, they walk to another provider – a competitor”.

Most of the previous definitions treat customer satisfaction as meeting, fulfilling or exceeding customers’ expectations (See Table 2-3 above). Specifically, customer expectations are

compared with customers' perceptions of the actual performance provided by the service providers (Parasuraman et al. 1985).

In other words, customer satisfaction is the after-effect of the service provider's ability to deliver an excellent quality of service (Lam and Zhang 1999) within the concept of ideal expectations where these are all in the customer's mind, but are constrained to what the customers believe is possible (Ennew et al. 1993). In short, some scholars believe that customer satisfaction is a function of service quality measures (Anderson and Sullivan 1993; Bei and Chiao 2001; Fornell 2007).

However, research also found that customer satisfaction does not entirely come from service quality, but can also result from other aspects such as religious and ethical service quality dimensions, customers' lives, expectations, experience, culture, values and norms. This is supported by Rust and Oliver (1994) who believe that customer satisfaction results from perceived service quality, value, performance and non-quality dimensions, relevant prior expectations and the disconfirmation of those relevant expectations (Tomes and Ng 1995).

On the other hand, Bitner (1990) postulates that service quality is a function of customer satisfaction over time. However, ideally, higher service quality increases customer satisfaction (Cronin and Taylor 1992; Anderson and Sullivan 1993; McDougall and Levesque 1994; Rust and Oliver 1994; Etgar and Fuchs 2009). The ordering of customer satisfaction precedes service quality ($SQ \Rightarrow CS$) thus nurturing a long-term relationship between the customer and the service provider (Parasuraman et al. 1985; Parasuraman et al. 1988; Cronin and Taylor 1992; Anderson and Sullivan 1993; Oliver 1993; Jun and Cai 2001; Spreng et al. 2005).

Giese and Cote (2000), in their comprehensive review of customer satisfaction definitions, outlined two major characteristics of customer satisfaction as being: 1) an affective response 2) pertaining to a particular focal aspect of product acquisition by comparing performance to a standard determined for a particular time-specific and limited duration.

In short, three facets repeatedly show up from the definitions provided by numerous authors. Firstly, the most common had to do with the disconfirmation theory where a comparison is made with prior expectations (Johnson and Fornell 1991; Hill 1996). Secondly, the idea of

comparing with the ideal version of the service (Bei and Chiao 2001), and lastly the total cumulative customers' experience is taken into account (Levesque and McDougall 1996). A comparison between the service quality concept and the definitions of customer satisfaction above shows that they are virtually identical.

The difference between service quality and customer satisfaction can be simplified by defining service quality as meeting customer expectations while customer satisfaction means exceeding the customers' expectations, affected by cognitive and affective responses pertaining to a service received.

In an ideal Islamic banking situation, Muslim consumers will consider spiritual aspects as distinguished from a monetary or material rationality context (Othman and Owen 2002; Osman et al. 2009; Sadek et al. 2010). These consumers will perceive the ability of the Islamic banks to adhere to *Shari'ah* rules and regulations as an important antecedent to customer satisfaction (Amin et al. 2013). To ensure accurate and theoretically justified assessment, the present study proposes the following definition of ICC customers' satisfaction:

Customer satisfaction with Islamic credit cards is the cognitive and affective response pertaining to the service and non-service qualities performance provided by Islamic banks, which confirm their perceived expectations, ideal performance and past experience in terms of technical (outcome), functional (process) and religious and ethical service quality (religion and ethical), and is determined at a specific time, but is not limited to a lifetime duration.

With the conceptualisation of the customer satisfaction definition in the context of IB as a guideline, a customer satisfaction model can be developed.

2.4 CUSTOMER SATISFACTION MEASUREMENT

It's commonly said that you cannot manage what you do not measure (Lovelock 1996). This is shown (in the area of service quality) by the foundations stated in the early conceptual work of European researchers (e.g. Gro'nroos, 1983; Lehtinen and Lehtinen, 1982). Oliver (1980) also mentions it in the customer satisfaction theory. Most of the current studies of service quality leading to customer satisfaction can be credited to Parasuraman et al. (1988)

who pioneered the Gaps Model (Brown et al. 1994) utilising disconfirmation paradigm theory.

Some of the models are standardised, unique and aimed at a specific context but their main objective is to measure customer satisfaction (Bounman and van der Wiele 1992; Park and Choi 1998; Mentzer et al. 1999; Shemwell and Yavas 1999; Prayag 2007). For instance, Frochot and Hughes (2000, p. 166) state that a customer satisfaction model with reference to Servqual in “its original form, cannot be replicated to service contexts other than the one upon which it was developed”.

Furthermore, the measurement has to be compared to a standard in which the literature is categorised into four different sub-standards. These comparison standards are a) expectation (Servqual), b) product norms (Servperf), c) equity²⁸ and d) ideally²⁹ (Park and Choi 1998). However, there are two elusive issues when dealing with measurement issues, which are explained in the following section.

2.3.3 Issues in Measuring Customer Satisfaction.

Two main debates on the issues in measuring customer satisfaction were selected based on their importance towards the present study. These are the possible antecedents of customer satisfaction and methodological issues. There are also some other issues that were highlighted by other studies that are worthwhile for research but they will not be touched in great detail in this study in order to maintain a focused approach.

2.3.3.1 The Conceptualisation of Customer Satisfaction Antecedents

Firstly, the debate centres on the possible antecedents of the customer satisfaction model. The implications of measuring the wrong antecedents for customer satisfaction provide inaccurate results and reduce predictability. The consequences of this would be disastrous for banks because they will have been measuring customer satisfaction in the wrong directions. Therefore, all antecedents should be identified from initial encounters through to the final consumption of the product by the customer (Oliva et al. 1992).

²⁸28 Refers to a normative level of product performance given the price paid by consumers.

²⁹29 The optimal product performance a consumer would ideally hope for, or what is personally desired from a product by a consumer.

For example, Grönroos (1984) argued that customer perceptions of service quality are divided into dimensions (functional and technical quality). Lehtinen and Lehtinen (1991) divided service quality into three-dimensions (physical, interactive and corporate). Parasuraman et al. (1988) developed five dimensions of service quality (tangibility, reliability, assurance, responsiveness and empathy). Lassar et al. (2000) treated satisfaction as multidimensional (overall satisfaction, functional satisfaction and technical satisfaction).

Others also include religious and ethical service quality (RESQ) in assessing elements of customer satisfaction such as religious needs (Rust and Oliver 1994; Toms and Ng 1995). Therefore, there is no consensus on the number or nature of the key antecedents. For instance, some of the studies' findings are against the Servqual five-factors structure in which some have found 6, 7, 9, 10 and 12 factors (Engelland et al. 2000).

Customer satisfaction surveys conducted by the industry in the context of credit cards also show that the antecedents that influence customer satisfaction are different across different countries. For instance, J.D. Powers and Associates (2010) reported that there are six factors that contribute to the satisfaction of card users in the USA. These factors are interaction, benefits and features, rewards programmes, billing and payment processes, fees and rates and problem resolutions.

In contrast, a study conducted in the Turkish Republic of Northern Cyprus (TRNC) in 2006 revealed the most important factors affecting satisfaction. They are high education levels, the status of government workers, the opportunity of not carrying cash, spending money when in need of cash, the banks consumers frequently work with and the payment in instalment opportunities which the credit cards provide (Veliâ Safakli 2006).

This study overcomes the problems of determining the factors affecting customer satisfaction in the Islamic banking context by integrating all possible antecedents to customer satisfaction including technical, functional and religious and ethical service quality dimensions.

2.3.3.2 Servqual (P-E) or Servperf (P) Only?

The second debate is whether to use service quality disconfirmation³⁰ or service quality performance³¹ for the banking context (Cronin and Taylor 1992; Cronin and Taylor 1994; Carman 1999). Parasuraman et al. (1988) developed Servqual, which is based on disconfirmation theory (P-E). Cronin and Taylor (1992) have offered to discard the expectation in disconfirmation theory because, they argued, the result of performance measurement is more reliable and valid. They named this new model Servperf.

Both research groups have argued for their perspectives (Cronin and Taylor 1994; Parasuraman et al. 1994). Servperf was tested empirically and found to be superior to Servqual in terms of its reliability (Al-Mutawa and Ibrahim 2013), convergent and discriminant validity, but to be lacking in diagnosis ability (Fogarty et al. 2000; Brady et al. 2002; Jain and Gupta 2004). Nevertheless, many have also proven that Servqual (Muslim and Zaidi 2008) or modified Servqual (Awan et al. 2011) in Islamic banking, are empirically acceptable (Ladhari 2009).

As for the current research context, this study will employ Servperf after taking consideration that the banking users' might be having problems in differentiating the service quality performance and expectation for the banking products and services such as credit cards.

2.4 CUSTOMER SATISFACTION MODELS IN REVIEW

This section highlights the dilemma involved in whether to use a measurement model based on a national index of customer satisfaction. The alternative is brand / product specific. In addition, the models used by previous researchers in the banking industry will be introduced. It is crucial to have an accurate measurement of customer satisfaction. However, making the measurement precise enough so that the outcomes can be used to improve customer satisfaction is even more important (Mey and Mohamed 2010).

Given the cautions arising from the previous literature, this study conceptualises customer satisfaction by reviewing the competing customer satisfaction models. In order to

³⁰ P-E

³¹ Without having to subtract the expectation.

comprehend how the model in this study is developed, the conceptualisations of competing models are categorised in their generic forms. Customer satisfaction models can be divided into two major groups, which are:

- 1) The national customer satisfaction index models. The national customer satisfaction index measures the customer satisfaction of a nation instead of a specific product or transaction. It measures customer satisfaction across varieties of products and product categories (Fornell, 2007).
- 2) The product or brand specific models. It focuses on a single brand or a single product in an industry rather than comparing customer satisfaction across different products on a national basis. In the banking context, there are approximately fourteen competing customer satisfaction models (Sangeetha and Mahalingam 2011). These models are listed as follows:
 - i. The Servqual model, developed by Parasuraman et al. (1985) and Carter model developed by Othman and Owen (2001).
 - ii. The Technical and Functional quality model developed by Groenroos (1984).
 - iii. Service quality attributes from the customer's perspective by Mersha (1992).
 - iv. Importance-performance analysis and service quality developed by Ennew, Reed, and Binks (1993).
 - v. The customer service quality scale by Avkiran (1994).
 - vi. The service quality model by Blanchard and Galloway (1994b).
 - vii. Service quality based on satisfaction by Johnston (1997).
 - viii. Technology in delivery of perceived service quality by Mathew, McClure, and Joseph (1999).
 - ix. Banking Service Quality (BSQ) by Bahia and Nantel (2000).
 - x. The service quality model by Sureshchandar et al. (2002).
 - xi. Systra-service quality by Aldlaigan and Buttle (2002).
 - xii. The automated service quality model by Al-Hawari Hartley, and Ward (2005).
 - xiii. The service quality scale by Karatepe et al. (2005).
 - xiv. The customer expectation and perceived service quality model by Ehgie (2006).

The models proposed by these authors have been analysed thoroughly by Sangeetha and Mahalingam (2011). They found that the models they analysed have common themes. However, the items involved in the operationalisation in different countries and cultural contexts vary considerably. They proposed that a different measurement model for IB must be developed as a specific example. In addition, the results from the application of the Gap model in different countries revealed mixed results for the dimensionality of Servqual, the order of importance and the identification of Gaps in the dimensions.

A comparison between brand or product specific models and national index models shows that both models are quite similar. As the aim of this study is to evaluate customer satisfaction of credit card users in the Malaysian banking industry, and it does not involve assessment of cross-national product satisfaction, the study chooses to use the brand or product specific model. The operationalisation of the model is presented in the following section.

2.5 OPERATIONALISATION OF CUSTOMER SATISFACTION MODEL

The section will give special attention to three specific models that will be integrated by the study into a single comprehensive customer satisfaction model for the Islamic banking industry in general and the ICC industry in particular. The integrated model will take into account factors that affect customer satisfaction, including existing dimensions such as the technical (TSQ) and functional (FSQ) ones.

Most crucially, the model will also include a dimension that often receives little attention from researchers in the banking and marketing literature but which has a nexus with customer satisfaction and thus will be one of the contributions of this thesis, named here as religious and ethical service quality (RESQ).

This study operationalises service quality and customer satisfaction based on what it is supposed to measure from a consumer perspective. The concepts are divided into Functional Service Quality (FSQ), Technical Service Quality (TSQ), and Religious and Ethical Service Quality (RESQ), each of which will be explained in the following sub-sections.

2.5.1 Functional Service Quality (FSQ)

FSQ can be defined as the process or how the service is provided (Groönroos 1982; Groönroos 1984; Groönroos 1990; Mentzer et al. 1999; Lassar et al. 2000). It comprises the manners and/or care of the personnel delivering the service (Lassar et al. 2000). Several authors have used Servqual as FSQ (Lassar et al. 2000; Kang and James 2004). Servqual was developed by Parasuraman et al. (1985) and originated from the findings of twelve focus groups.

They developed a questionnaire comprising twenty-two items that were grouped into five variables. The FSQ dimension is based upon five service quality Servqual instrument (RATER), i.e. reliability, assurance, tangible, empathy and responsiveness. They are explained in the following table.

Table 2-4: Five FSQ Dimensions (RATER)

Service Quality Dimensions	Service Quality Measurement
Reliability (5 items)	“The ability to perform the promised service dependably and accurately or consistency of performance” (Lassar et al. 2000).
Assurance (4 items)	“The knowledge and courtesy of employees and their ability to inspire trust and confidence”.
Tangibles (4 items)	“The appearance of physical facilities, equipment, and personnel”.
Empathy (5 items)	“The level of caring and individualised attention the firm provides to its customers”.
Responsiveness (4 items)	“The willingness to help customers and provide prompt service”.

Source adapted from Parasuraman et al. (1988).

A review of the direction of relationships of beta coefficients revealed that almost all the reported β are positive for the five dimensions. This is supported by empirical evidences reported by many studies. For example, positive significant results were found for tangible dimension ranging from 0.155 to 0.93 (Angur et al. 1999; Lam and Zhang 1999; Prayag 2007; Muslim and Zaidi 2008). As for reliability dimension, empirical evidences also revealed positive results ranging from 0.048 to 0.63 (Parasuraman et al. 1988; Levesque and McDougall 1996; Angur et al. 1999; Lam and Zhang 1999).

Responsiveness and Empathy dimensions were also significantly positive, ranging from (0.127 to 0.67) and (0.12 to 0.67) respectively (Muslim and Zaidi 2008; Rosenbaum and Wong 2009). The overall results show that all the dimensions have a positive relationship

with service quality. Specifically in the context of banking industry, the results are similar to previous studies that are also positive, as shown in the table overleaf.

Table 2-5: RATER Results in Banking Satisfaction

No	Authors/Country/ (Year Conducted)	Sample	R.	A	T	E	R
1.	(Parasuraman et al. 1988)/USA	200	+	ns	ns	ns	ns
2.	(Vandamme and Leunis 1993a; Levesque and McDougall 1996)/Canada	325	+	na	na	+	na
3.	(Angur et al. 1999)/India	143	na	na	+	+	-
4.	(Angur et al. 1999)/India – Servperf	143	-	na	+	-	+
5.	(Lassar et al. 2000)/ USA & South America	65	ns	ns	ns	+	ns
6.	(Han and Baek 2004)/Korea	740	+	na	+	+	+
7.	(Arasli et al. 2005c)/Cyprus	260	+	+	ns	na	+
8.	(Arasli et al. 2005b)/Cyprus – Turkish	138	+	+	ns	+	na
9.	(Arasli et al. 2005b)/Cyprus – Greek	130	+	+	ns	+	na
10.	(Muslim and Zaidi 2008)/Malaysia	440	+	+	+	+	+
11.	(Ladhari 2009)/ Canada	193	+	+	ns	+	+

Notes: + indicates a positive result; - indicates a negative result and n/a indicates that variables were not investigated, ns indicates that variables were not significant.

R=Reliability

E= Empathy

A=Assurance

R=Responsiveness

T=Tangible

As shown in Table 2-5, most of the dimensions are positive. Nevertheless, some studies also revealed that some dimensions are not significant, such as the Tangible and Assurance dimensions. As for this study, the hypotheses for credit card users using FSQ are:

H 1: The reliability (R) dimension positively affects FSQ.

H 2: The assurance dimension (As) positively affects FSQ.

H 3: The tangible (Tan) dimension positively affects FSQ.

H 4: The empathy (Emp) dimension positively affects FSQ

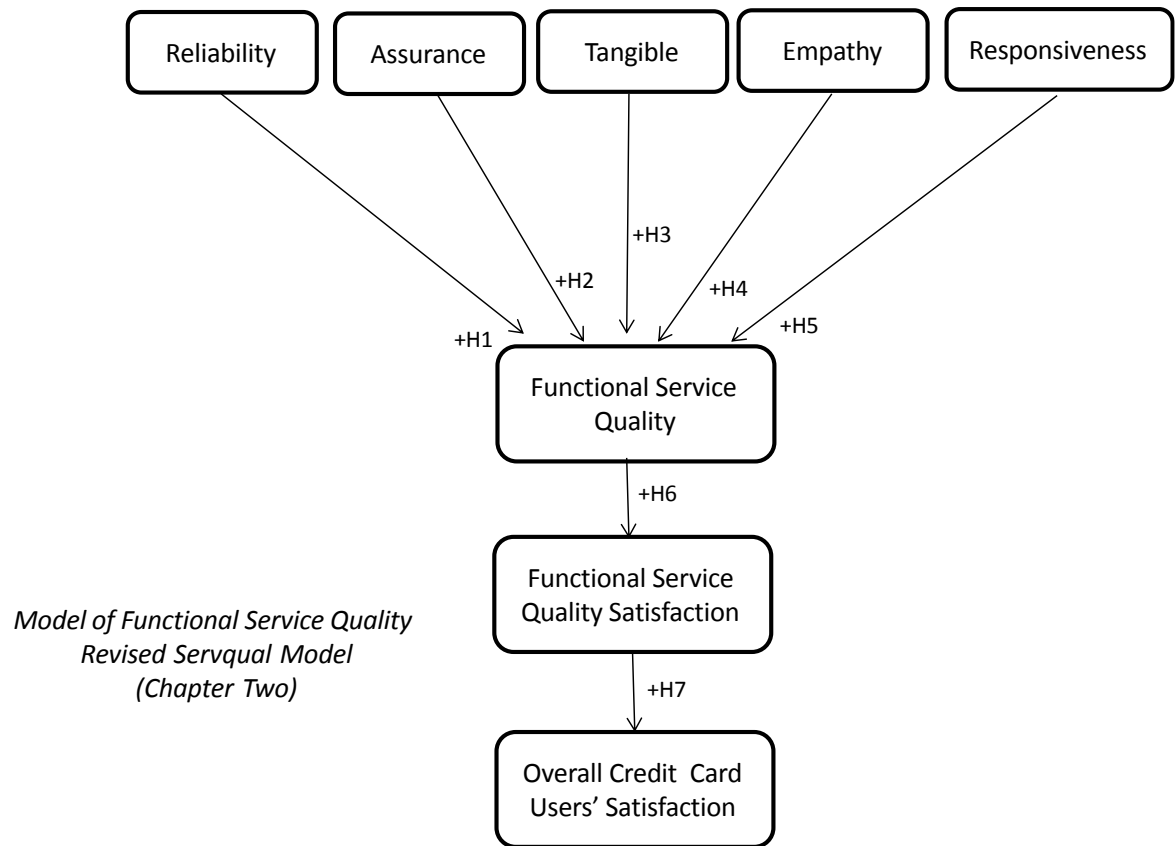
H 5: The responsiveness (Res) dimension positively affects FSQ.

H 6: FSQ positively affect FSQ Satisfaction

H 7: FSQ Satisfaction positively affects overall customer satisfaction.

The hypotheses are shown in the following figure:

Figure 2-1: Research Hypotheses for FSQ



As the above hypotheses contemplate functional quality, the next section discusses technical quality, which complements the processes involved in service quality.

2.5.2 Technical Service Quality (TSQ)

Servqual is again criticised because the model did not consider technical quality as one of its dimensions. Groönroos (1982) developed a two-dimensional model in which he included technical quality (Groönroos 1982, 1990) and functional quality. Both FSQ and TSQ positively affect the overall image of a company (Lassar et al. 2000). Even though, empirically, they are not replicated as many times as Servqual, the FSQ and TSQ models have been replicated in other contexts and industries (Guo et al. 2008).

TSQ is defined as the outcome dimension, or as what service is provided (Groönroos 1982; Groönroos 1984; Mentzer et al. 1999; Aldlaigan and Buttle 2002; Kang and James 2004).

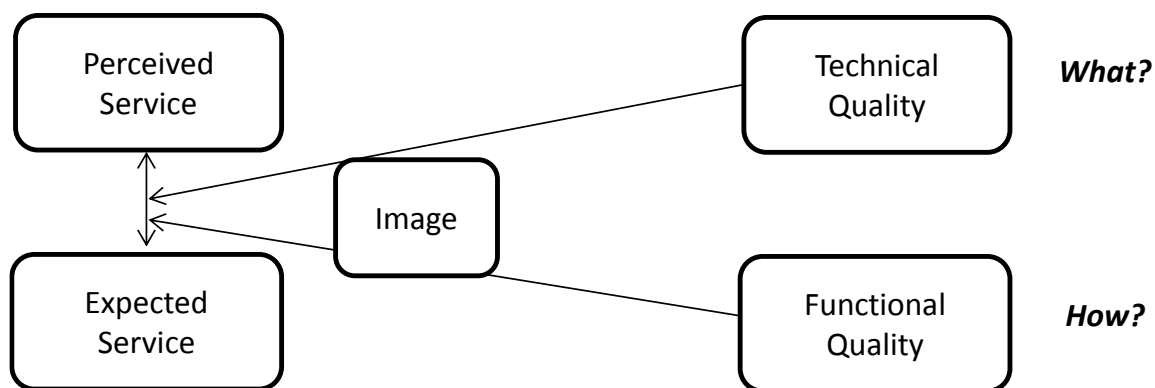
Specifically, TSQ deals with the effectiveness of the service providers (Lassar et al. 2000). Some examples of TSQ items are the ATM services, website and the Internet and telephone banking services of Islamic banks (Aghaei et al. 2013).

There are five dimensions in TSQ: employees' technical ability, employees' knowledge, technical solution ability, computerised systems and machine quality (Aldlaigan and Buttle 2002). Staff behaviour, skill levels and the performance of the service were found to be important from consumers' points of view (Mersha 1992).

All of these dimensions are hypothesised to affect customer satisfaction in the IB industry especially employees' technical ability and employees' knowledge regarding the technicality of the Islamic products offered by the IB. A model combining FSQ and TSQ is suitable for companies such as banks, manufacturing firms, medical service firms and pharmaceutical firms, which have high technical specifications (Lassar et al. 2000).

The banking industry is also a technical industry because its operational activities involve computerised software, Internet technology and high-security cash machines (Al-Hawari et al. 2005). The antecedents are general and abstract in nature compared to those in Servqual, which are more specific. Groenroos's (1984) model has two antecedents in answering how the service process is perceived (FSQ) and what the outcome of the service quality (TSQ) is. The two dimensional model is shown in the following figure:

Figure 2-2: Technical and Functional Model by Groenroos (1984)



There have also been attempts by researchers to integrate the Servqual and Gronroos models in customer satisfaction research. For instance, Kang and James (2004) employed both the FSQ and the TSQ model to the Korean cellular phone industry. They found that both dimensions influenced service quality.

In addition, TSQ has lower significant effects in comparison to FSQ ($FSQ > TSQ$). Their study supported that Gronroos two-dimensional model is a combination of technical and functional models, in which Servqual's five dimensions were treated as FSQ.

Based on the review of the technical models, three out of the five TSQ constructs will be explained in this section. These constructs are Technical Solution Ability (TA), which refers to the ability of the bank in dealing with, handling and solving technical problems encountered by their customers.

The second construct is the Employees' Knowledge (EK) dimension, which refers to the level of the general and product knowledge of the employees. This dimension contains three items. The third construct is the Employee Technical Ability (ETA) dimension, which refers to the ability of the employees to solve technical problems.

The other two constructs, computerised systems and machine quality, are merged together. This merged construct is explained later in section 2.6 as a new construct named, technology (Tech). Another relevant construct in TSQ is communication, which is also explained in the same section. Therefore, five hypotheses are put forward to evaluate TSQ in this subsection. The hypotheses are as follows:

H 8: The technical ability (TA) dimension positively affects TSQ

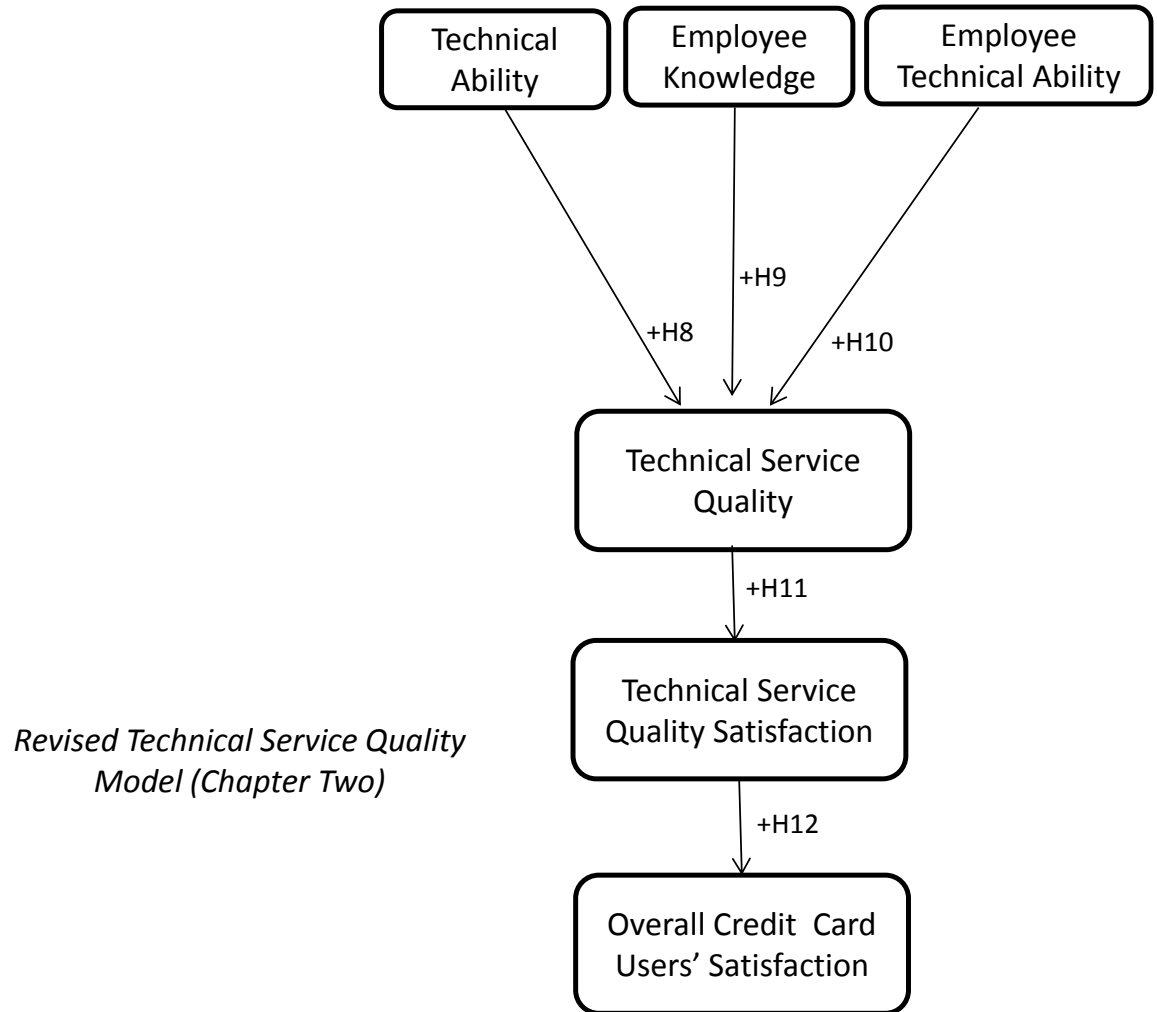
H 9: Employees' knowledge (EK) dimension positively affects TSQ

H 10: Employee technical ability (ETA) dimension positively affects TSQ

H 11: TSQ positively affects TSQ satisfaction

H 12: TSQ satisfaction positively affects overall customer satisfaction

Figure 2-3: Research Hypotheses for TSQ



2.5.3 Religious and Ethical Service Quality (RESQ)

After reviewing the models pertaining to customer satisfaction, one particular model developed by Othman and Owen (2001: 2002) is seen to be relevant to ICC satisfaction since it was developed for an Islamic bank in 2002. The RESQ can be defined as the non-service related consumers' perceptions that have an impact on satisfaction.

Sureshchandar et al. (2002) argued that the social image of an organisation depends on the banks' management of social responsibility. Their service quality dimension, i.e., social responsibility, is similar (but not quite identical) to Othman and Owen (2001: 2002). This study has employed RESQ with the exception of religious and ethical dimensions.

2.5.3.1 Compliance with *Shari'ah* as One of RESQ Dimensions

A study conducted by Naser et al. (1999) in Jordan revealed that Islamic banking customers ranked the religious reasons factor as the most important one. Religious attitudes also affected satisfaction of Islamic banking's online banking users in Pakistan (Butt and Aftab 2013). In addition, Othman and Owen (2002) developed an additional dimension of the Servqual model, which is related to the religious factor as an antecedent to customer satisfaction.

They replicated the Servqual model for a case study conducted in Kuwait Finance House. The antecedent is named as compliance with *Shari'ah*. It refers to customers' perceptions of the ability of the Islamic bank to comply with *Shari'ah* rules and regulations (Muslim and Zaidi 2008; Osman et al. 2009; Haque 2010a; Sadek et al. 2010).

Their model has been replicated in the context of IB in Malaysia by Muslim and Zaidi (2008) in which they investigated the differences between Muslim and non-Muslim deposit account holders' satisfaction. They found significant differences between the Muslim and non-Muslim customers' attitudes to the provision of interest-free and profit sharing investment products. In addition, the results revealed that compliance with *Shari'ah* was significantly positive ($\beta=0.242$; $p\text{-values}=0.000$).

Similar to Muslim and Zaidi (2008), Osman et al. (2009) used Carter to determine customers' banking preferences and satisfaction. They found that compliance with *Shari'ah* was the most important selection criteria. However, the order given to the service quality's importance when selecting a bank varied according to banks.

Sadek et al. (2010) have supported the view that compliance with *Shari'ah* is a significant factor for IB industry. They compared the customers of an Islamic bank and a conventional bank, looking at two banks in the UK. They selected customers from the Islamic Bank of Britain (IBB) and the Cooperative Bank as the respondents.

IBB customers ranked compliance with *Shari'ah* as the most important factor while this was not the case for the customers of conventional banks. In contrast, *Shari'ah* compliance was found to be not significant in the case of the Nigerian Islamic Bank (Badara et al. 2013) and for the Participating Banks in Turkey (Okumus and Genc 2013).

Unlike Carter, this study did not conceptualise compliance with *Shari'ah* dimension as a process of service quality (FSQ) as developed by Othman and Owen (2002). Rather, compliance with *Shari'ah* is conceptualised as a non-service related quality (RESQ) or social responsibility (Sureshchandar et al. 2002). Therefore, this dimension is conceptually appropriate to be placed under RESQ rather than FSQ.

In this study, RESQ has two dimensions, which are compliance with *Shari'ah* and ethical dimensions (ethical dimensions are discussed in chapter 5). The compliance with *Shari'ah* dimension refers to items showing that Islamic banks operate on Islamic law and principles.

Ideally, 1) the bank is following *Shari'ah* rules, 2) no interest is paid nor taken on savings or loans, 3) there is a provision for Islamic products and services, 4) there is a provision for interest-free loans and 5) there is a provision for profit-sharing investment (*mudharabah*) products (Othman and Owen 2002).

Items 3, 4 and 5 are intended to assess the product range offered by the Islamic banks. The items are similar to the service portfolio items in the BSQ model developed by Bahia and Nantes (2000). Bahia and Nantes argued that Servqual suffers from a lack of content validity because the service portfolio dimension is not measured in Servqual (Lee et al. 2009). The ability of the banks to comply with *Shari'ah* rules and regulations will increase the image of the banks in the eyes of their customers.

This is in line with the reason why Islamic banking customers select banking products based on religious motives (please refer to chapter 1, p. 15). Therefore, the items assessed are perceptions about the ability of an Islamic bank to comply with *Shari'ah*. This model is suitable for research in the context of ICC users' satisfaction. The hypotheses for RESQ are as follows:

H 13: Compliance with *Shari'ah* (SC) positively affects RESQ.

H 14: RESQ positively Compliance with *Shari'ah* Satisfaction.

H 15: Compliance with *Shari'ah* Satisfaction affects overall satisfaction.

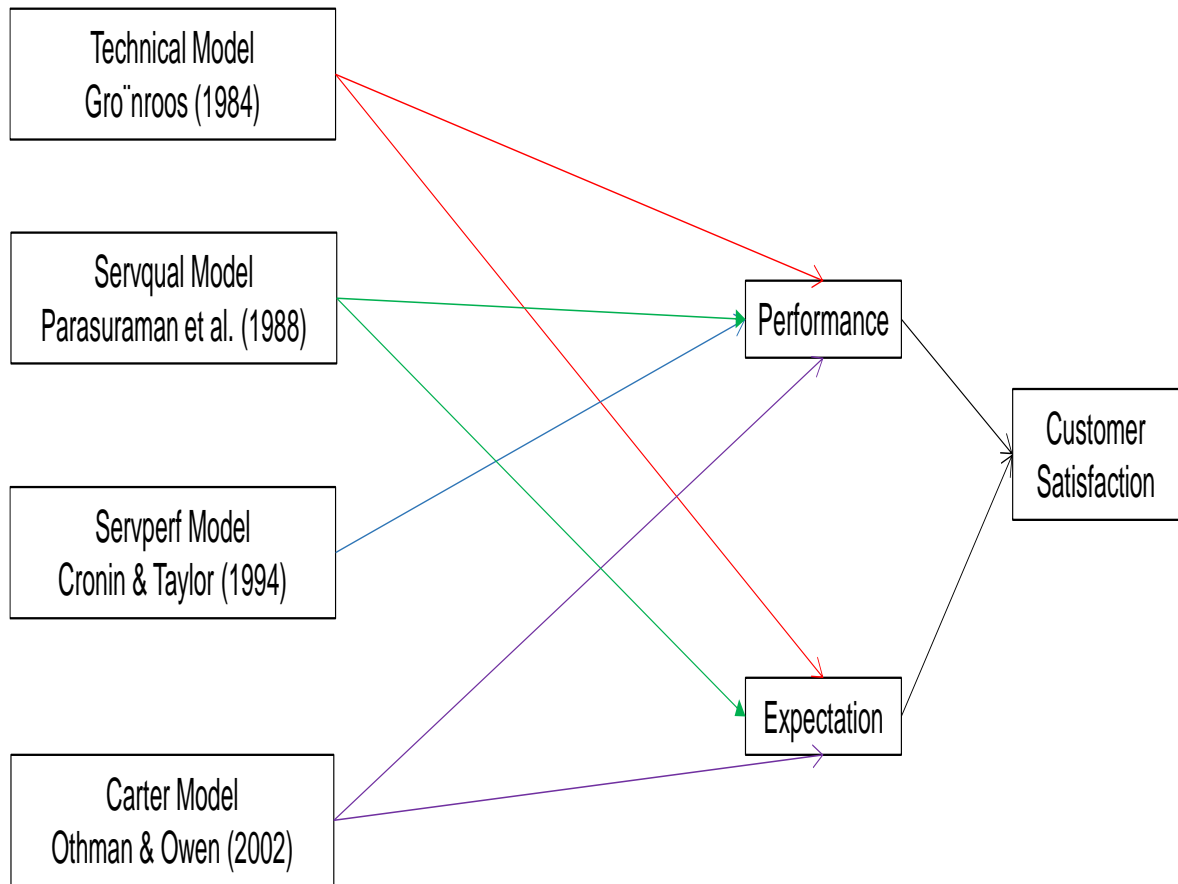
Figure 2-4: Research Hypotheses for RESQ



2.5.4 Snapshot of Customer Satisfaction Models Development

Based on all the models discussed above, a summary of the development of the customer satisfaction models is illustrated in the following figure, overleaf. The figure depicts the development of customer satisfaction model based on Technical Model, Servqual Model, Servperf Model and Carter Model. These models, when integrated together with systematic re-modification, will be partly comprehensive and appropriate for this study to evaluate the customer satisfaction models in the context of IB. The fully integrated model is discussed in chapter 4.

Figure 2-5: The Development of Customer Satisfaction Models



2.6 ADDITIONAL SERVICE QUALITY DIMENSIONS

The debate on service quality dimensions among scholars with regard to the dimensions discussed in chapter three revealed that general and specific dimensions were used as the theoretical background for service quality antecedents. For instance, the two dimensions in Gro'nroos's (1984) model representing technical and functional quality, the three dimensions by Lehtinen and Lehtinen (1991) and the five Servqual dimensions by Parasuraman et al. (1988) all revealed that some dimensions were overlapping.

The differentiation between the conceptual theories among the authors can be revealed by looking at how to conceptualise service quality. Gro'nroos (1984) and Lehtinen and Lehtinen (1991) viewed service quality dimensions at an abstraction level or a general one whereas Parasuraman et al. (1988) and many other researchers have viewed the dimensions on specific levels.

Kang and James (2004) for example, integrated Servqual and Gro'nroos into a single measurement instrument. They integrated the Servqual dimensions as constructs leading towards functional quality. A further analysis of customer satisfaction studies in the banking industry literature (See Appendix 1, p. 317 for the list of studies) has revealed that there are seventeen additional dimensions to service quality in this specific field, of banking quality and satisfaction. These dimensions are extracted and presented in Table 2-6, representing the total number of additional dimensions found and their respective authors.

Table 2-6: Additional Service Quality Dimensions Other than the Servqual 5 Dimensions

Additional Service Quality Dimensions	# of papers	Authors
Staff Conduct, Human elements of service, Access to teller services.	7	(Avkiran 1994), (Levesque and McDougall 1996), (Guo et al. 2008), (Sureshchandar et al., 2002), (Stafford 1996), (Aldlaigan and Buttle 2002), (Johnston 1997)
Technology, Systemisation, ATM, Technical quality.	5	(Guo et al., 2008), (Sureshchandar et al., 2002), (Aldlaigan and Buttle 2002), (Stafford 1996)
Communication, Relationships.	4	(Hassan et al. 2010), (Avkiran 1994), (Johnston 1997), (Guo et al., 2008)
Rates and charges	3	(Stafford 1996), (Levesque and McDougall 1996), (Petridou et al., 2007)
Convenience, Comfort	3	(Stafford 1996), (Kumar et al., 2009), (Johnston 1997)
Core service	2	(Sureshchandar et al., 2002), (Levesque and McDougall 1996)
Credibility, Reputation	2	(Avkiran 1994), (Naser et al. 1999)
Bank atmosphere, Cleanliness	2	(Stafford 1996), (Johnston 1997)
Confidentiality, Security	2	(Naser et al. 1999), (Johnston 1997)
Social responsibility	1	(Sureshchandar et al. 2002)
Service transactional accuracy	1	(Aldlaigan and Buttle 2002)
Feature performance	1	(Levesque and McDougall 1996)
Problems encountered	1	(Levesque and McDougall 1996)
Satisfaction with problem recovery	1	(Levesque and McDougall 1996)
Holding mortgage and loan	1	(Levesque and McDougall 1996)
Compliance with <i>Shari'ah</i>	1	(Othman and Owen 2001)
Service portfolio	1	(Petridou et al. 2007)

The additional variables that might contribute to customer satisfaction are presented in the above table. It shows that three dimensions have been identified by more than four studies as important in terms of banking service quality.

These dimensions are staff conduct, technology quality and communication. The staff conducts and technology qualities are antecedents to customer satisfaction while communication can be an antecedent or a moderator to customer satisfaction.

2.6.1 Staff Conduct Dimension

Staff conducts is a driver to customer satisfaction for Islamic banking industry in other countries such as Pakistan (Shahzad 2013) and Indonesia (Abduh et al. 2012). In a customer satisfaction study conducted by Avkiran (1994, p. 11), the author defined good staff conduct as “civilized conduct and presentation of branch staff that will project a professional image to the customers.”

The study was conducted in the context of a major bank in Australia and employed rigorous empirical reliability and validity testing. The findings revealed that four factors emerged from the factor analysis (varimax and orthogonal rotated matrix). The four service quality dimensions identified were staff conduct, credibility, communication, and access to teller services dimensions. An examination of the items loaded in the staff conduct dimension reveals that eight items are loaded in the group; and these are listed as follows:

1. Willingness of branch staff to help me is [HELP]
2. Promptness of service from branch staff is [PROMPT]
3. Politeness of branch staff is [POLITE]
4. Neat appearance of branch staff is [NEATNESS]
5. Ability of branch staff to apologise for a mistake is [APOLOGY]
6. Expression of genuine concern if there is a mistake in my account is [CONCERN]
7. Branch staff greeting me when it's my turn to be served is [GREET]
8. Respect for privacy of my financial affairs when I am standing at the counter is [PRIVACY]

All of the items loaded above 0.5 except for Privacy (item no 8). Therefore, that item can be omitted from this research leaving seven items in the staff conduct dimension. Another customer satisfaction study in banking conducted by Stafford (1996) revealed that seven service quality dimensions emerged as a result of factor analysis.

One of the dimensions related to staff conduct was access to teller services. Another important finding in her study was that female customers might perceive service quality as being more important than male customers do.

However, the Cronbach alpha for the two items in the access to the teller services' dimension is not promising since it is only 0.65, which is considered low. Even though the two item factor loadings are acceptable (at above 0.5), the low reliability result has made the researcher decided to omit the two items from use.

Johnston (1997) conducted a similar study using 18 potential dimensions that could become factors of satisfaction or dissatisfaction for banking service quality and its importance. The study revealed that the majority of the satisfying dimensions fell under intangible service quality such as commitment, attentive, friendliness, care, courtesy and responsiveness. All the five satisfiers found above can be categorised within the staff conduct dimension. The author has given the following definitions for the satisfiers:

Commitment

“Staff’s apparent commitment to their work, including the pride and satisfaction they apparently take in their job, their diligence and thoroughness” (Johnston 1997, p. 116).

Courtesy

“The politeness, respect and propriety shown by the service, usually contact staff, in dealing with the customer and his or her property. It refers to the ability of staff to be unobtrusive and not interfering when appropriate” (Johnston 1997, p. 116).

Attentive/helpfulness

“The extent to which the service, particularly contact staff, either provide help to the customer or give the impression of being interested in the customer and show a willingness to serve” (Johnston 1997, p. 116).

Care

“The concern, consideration, sympathy and patience shown to the customer. This includes the extent to which the customer is put at ease by the service and made to feel emotionally (rather than physically) comfortable” (Johnston 1997, p. 116).

Responsiveness

“Speed and timeliness of service delivery. This includes the speed of throughput and the ability of the service to respond promptly to customer service requests, with minimal waiting and queuing time” (Johnston 1997, p. 116).

All five of these satisfiers are classified in a matrix as opportunities for the bank to become excellent, and they are all related to the staff conduct dimension except for responsiveness, which might overlap with one of the Servqual dimensions. Therefore, the remaining four items from Johnston’s (1997) study can be included in the staff conduct dimension.

Levesque and McDougall (1996) who empirically tested survey data from 325 respondents using factor and regression analysis and in doing so revealed that there are eight dimensions of customer satisfaction conducted another customer satisfaction study in retail banking. These dimensions are relational performance, core performance, features performance, competitive rates, skilled employees, problems encountered, satisfaction with problem recovery and holding mortgage and loan (Significant at $p=0.05$, R square 0.71).

The relational performance dimension as used by Levesque and McDougall is similar to Avkiran’s (1994) and Johnston’s (1997) findings related to the staff conduct dimension. The factor loaded four items into the dimension. These items are individual attention, being consistently courteous, always willing to help and understanding specific needs.

A study conducted by Levesque and McDougall (1996) used a different term for staff conduct. They labelled the dimension as relational dimension, which affects customer satisfaction. Their regression findings show that relational dimension is significant at the 5% level of customer satisfaction (0.31) and that *recommendation to a friend* is rated (0.43) (Lassar et al. 2000).

A comparative study conducted by Aldlaigan and Butler (2002) for four banks in the UK proposed an alternative scale for service quality measurement in banking, which they named SYSTRA-SQ. The new scale was developed using a mixed method approach. The service quality dimensions found to be important in the banking industry were service system quality, behavioural service quality, machine service quality and service transactional accuracy.

The behavioural service quality dimension is related to staff behaviours in conducting financial transactions for the banks' customers. There are four items in the dimension: courteous, friendly, helpful and positive attitudes. All the items loaded significantly for all four banks in the factor analysis.

A similar study conducted in China involving interviews with 18 financial managers and a survey over 259 corporate Chinese companies by Guo, Duff and Hair in 2008, revealed that the human capital (which can be considered as equivalent to staff conduct) dimension is a second order construct under functional service quality. There are seven items in the dimensions, and all the factors loaded significantly in the factor analysis. The items are as follows:

1. The employees understand the specific needs of their customers.
2. Employees are neat in appearance.
3. Employees provide their services at the time they promise to do so.
4. Employees are consistently courteous with customers.
5. Employees always try to establish a good relationship with customers.
6. Employees show hospitality to customers.
7. Employees are highly efficient.

A comparison between all the studies mentioned above in different countries revealed some similarities and some differences in the items that can be categorised under the staff conduct dimension. A summary of all the studies related to the development of the staff conduct dimension will justify the researcher's own staff conduct service quality dimension. The summary is given in Table 2-7 as follows:

Table 2-7: Summary of items in the Staff Conduct Dimension in the Banking Industry

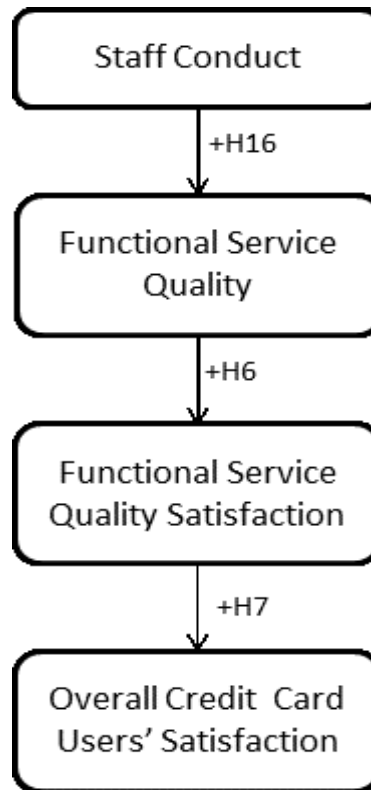
Items	(Avkiran 1994)	(Johnston 1997)	(Levesque and McDougall 1996)	(Aldlaigan and Buttle 2002)	Score
Polite/Courtesy	√	√	√	√	4
Help	√	√	√		3
Concern/Care	√	√		√	3
Prompt	√			√	2
Neatness	√			√	2
Friendly			√		1
Commitment/Efficient				√	1
Individual Attention		√		√	2
Positive Attitudes			√	√	2
Apology	√				1
Greet	√				1
Privacy	√				1

Based on Table 2-7, at least four items must be in the staff conduct dimension because they are found in three or more studies. These items are polite(ness), help, concern and prompt(ness). Supposedly, two items could be included in the study as the items in the staff conduct service quality dimension because helpfulness and promptness have been listed in other constructs in FSQ.

Functional quality has been discussed in chapter two whereby it is seen as the process dimension, or how the service is being delivered (See chapter two, p. 48). The Servqual (RATER) dimensions fit into functional quality. The inclusion of staff conduct in the FSQ will add another construct to the existing Servqual five dimensions RATER to become RATERS whereby S denotes staff conduct. Staff conduct was found to be positively significant in affecting banks' customer satisfaction in Iran (Aghaei et al. 2013). The following figure shows the relationship between the four items in staff conduct, as discussed in the previous section, with functional quality satisfaction, which later forms overall customer satisfaction.

Staff conduct is the formation of four staff conduct items and the items shown above are politeness, helpfulness, concern and promptness, which affect customers' functional quality satisfaction and overall satisfaction. However, since the items for st3 (helpfulness) and st4 (prompt service) overlap with the responsive dimension, these two items could be deleted. This could be done before or during the CFA measurement test. It is also important to take note that the above is only a partial model of overall customer satisfaction.

Figure 2-6: The Staff Conduct Dimension Affecting Customer Satisfaction



H 16: Staff conduct (St) dimension positively affects FSQ

The overall functional quality satisfaction dimensions, added with the staff conduct dimension and subsequently renamed to RATERs, includes six dimensions (five Servqual RATER dimensions plus the staff conduct (S) dimension).

2.6.2 Technology Dimension

Technology plays an important role in ensuring that the customers are satisfied with the services provided by the banks. Examples of technological advancements in the banking industry are ATMs, Internet banking and mobile and phone banking (Moutinho 1992; Moutinho and Smith 2000). Stafford (1996) and Jamal and Malik (2010) for example, have found that usage of ATMs plays an important role in customer satisfaction.

Stafford (1996) found that there are four items that have a higher alpha of 0.95, and these items loaded significantly in the factor analysis. These items are accessible ATMs,

convenient ATMs, working ATMs, and the number of ATMs (Guo et al. 2008). This is also supported by Moutinho and Smith (2000) who found that the relationship between the consumers' attitudes towards human tellers and ATMs and perceived satisfaction was positive, mediating the ease of banking facets with satisfaction.

Aldlaigan and Buttle (2002) found that there are two items, which together can be named machine service quality: reliable cash machines and that the cash machine *does what I want*. Guo et al., (2002) for example, found four items in the technology dimension.

These items are “use the latest technology in their services; the online services are reliable and secure, banks supply helpful information in their online services, and banks supply up-to-date information in their online services”. All these items are related to the most recent Internet technology. A summary of the items in the technology dimension found by the authors mentioned above are tabulated in the following table:

Table 2-8: Summary of items in the Technology Dimension in the Banking Industry

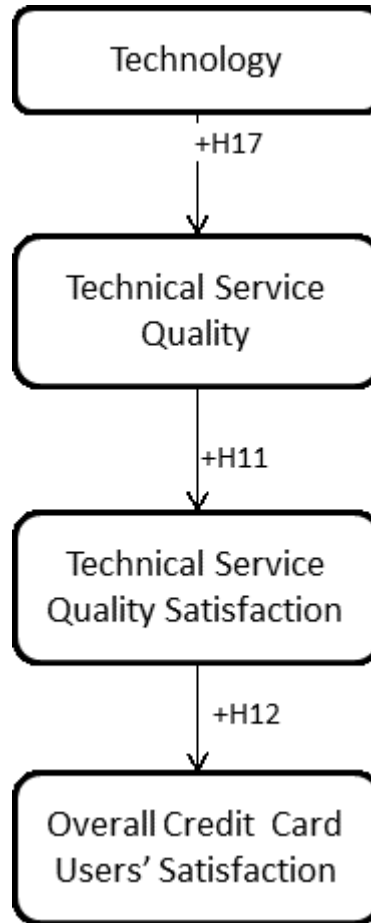
Items	Stafford (1996)	Aldlaiga n and Buttle (2002)	Guo et al. (2002)	Sureshchand ar et al. (2002)	Score
Accessible ATMs	√	√		√	3
Working ATMs	√	√		√	3
Convenient ATMs	√			√	2
Number of ATMs	√			√	2
Latest technology			√	√	2
Reliable Online Services			√		1
Helpful Online Info			√		1
Update Online Info			√		1

Based on Table 2-8, the technology dimension can be in the form of four items, which are accessibility, convenience, working ATMs, latest technology, online services and website. The eight items in the above table are reduced to four items to avoid any overlapping between the items in the technology dimension and within the other dimensions. The hypothesis for this dimension is as follows:

H 17: Technology (Tech) dimension positively affects TSQ.

In addition, the partial model of the Tech construct affecting customer satisfaction through TSQ is shown in the following figure:

Figure 2-7: Technology Dimension Affecting Customer Satisfaction



The figure above shows that the technology dimension affects technical quality, which will then affect overall customer satisfaction. The dimension is comprised of four items, which are: ATMs, the latest technology, online and website.

2.6.3 Communication Dimension

Communication plays an important role in service process delivery (Gounaris et al. 2003). Johnston (1997, p. 116) defines communication as “the ability of the service to communicate with the customer in a way he or she will understand. This includes the clarity, completeness and accuracy of both verbal and written information communicated to the customer and the ability to listen to and understand the customer.”

Lassar, Manolis and Windsor (2000) reported that Zeitham et al., (1990) pointed out that failure to anticipate customers’ expectations is one of the reasons customers might become

dissatisfied. In addition, ignorance of customers' expectations leads to a lack of direct interaction and communication with customers (Stafford 1996).

Marketers communicate different messages to customers based on the customers' motivations by applying positive and negative approaches, internal and external motivations, a Freudian theory of motivation, Jungian motivation, and mimetic or cognitive dissonance.

For example, in the tourism industry, communication was found to be ranked as second in importance after tangibles in Frochot and Hughes (2000). This is also supported by the findings of Abdullah et al. (2010) that reliable communication was significant and positively related to service quality in the Malaysian banking context. In the context of IB, communication can be targeted using a direct marketing approach.

This communication is targeted to reach like-minded customers. However, researchers have had mixed results in treating communication as an antecedent or a moderator variable in testing the significant quality/satisfaction relationship in a conventional banking setting.

For example, Lassar Manolis and Windsor et al. (2000) found that communication moderates the effects between functional quality and functional satisfaction in the context of private banking. It is noted that the other moderator variable (service failure) used by the authors, affects the functional quality of overall satisfaction and none of the moderator effects of technical qualities.

Avkiran (1994) found that communication is one of the factors that has affected satisfaction in an Australian trading bank. The dimension is defined as fulfilling the banking needs of customers by successfully communicating financial advice and serving timely notices (Lassar et al. 2000).

In comparison to Lassar, Manolis and Windsor (1990), Avkiran suggested that communication acts as a direct antecedent and not as a moderator. Avkiran (1994) found six factors in two sets of an orthogonal rotated factor matrix, and that communication has seven items in its factor.

The six factors are reduced to four factors namely staff conduct, credibility, communication, and access to teller services. The items in communication were also reduced to five only, and they are listed as follows:

1. Branch staff telling me about the different types of accounts and investments available is [ACCTYPES]
2. Branch staff's knowledge of the bank's services and products is [KNOWLEDGE]
3. Quality of advice given about managing my finances is [ADVICE]
4. Branch staff telling me when services will be performed is [SERVWHEN]
5. Branch staff helping me learn how to keep down my banking costs is [LEARN]

Johnston (1997) revealed that communication is a priority area in improving customer satisfaction. Similar to Avkiran, communication is treated as an antecedent to customer satisfaction.

A study by Guo et al. (2008) in China revealed that communication affected technical quality, which contradicts the findings of Lassar et al. (2000). Lassar et al. (2000) treat communication as a moderator variable. In addition, Guo et al. (2008) used six items and they were grouped in the communication dimension. The items are listed below:

1. Banks have account managers who take care of corporate customers.
2. Banks provide visiting services to corporate customers.
3. Banks provide a good channel of communication for customers.
4. Banks promote their corporate culture to customers.
5. Banks take the initiative to serve customers.
6. Banks provide customer-tailored services to customers.

Based on the literature, a summary of the items used in connection with communication by these authors is tabulated in Table 2-9.

In summary, three items are deemed important for communication. In addition, all the authors above used communication as antecedent to functional or technical quality except for Lassar et al. (2000) who treated communication as moderator. Lassar et al. (2000) found that the assignment of account executives would decrease functional quality.

Table 2-9: Summary of Items in Communication Dimension in Banking Industry

Items	(Lassar, et al. , 2000)	(Avkiran, 1994)	(Johnston, 1997)	(Guo, et al. 2008)	Score
Explain all types of a/c	√	√	√	√	4
Serve when		√		√	2
Good channel of communication			√	√	2
Knowledge		√			1
Advice		√			1
Learn		√			1
Cust Tailored				√	1
Promote Bank's Culture				√	1
Visiting Service				√	1

These mixed findings show that there is no agreement on two issues: whether communication affects functional or technical quality and whether communication should be seen as a direct antecedent or a moderator to customer satisfaction. The present researcher believes that communication is a function of technical quality in that it will have a positive relationship, which could be illustrated by the following figure:

Figure 2-8: Communication Dimension Affecting Customer Satisfaction



There are five items in the construct. However, com4 and com5 might overlap into other constructs. These items could be deleted in the CFA test. Therefore, the hypothesis for the communication dimension affecting customer satisfaction through technical quality satisfaction is as follows:

H 18: Communication (Com) dimension positively affects TSQ.

2.6.4 Ethical Dimension and Ethical Quality Satisfaction

Ethical banking is a new concept of banking, which is concerned with the societal movement toward more ethical, environmental and social responsibility (Avkiran 1994). Members of a wider society would like to be assured that their funds are channelled towards ethical and environmentally acceptable investments and loans. What slowly evolved from this starting point was an ethical banking strategy that built on banks' differences from their competitors, benefitting from an opportunity that was being ignored by some of them.

The key concept was a commitment to the responsible sourcing and distribution of funds (Wilson 1997). For example, a survey conducted by Sadek et al. (2010) revealed that the Co-operative Bank's (one of the ethical banks operating in the UK) customers chose *run on ethical values* as the highest rank for their banking selection.

Therefore, an ethical bank is also known as a social, alternative, civic, or sustainable bank. Despite their direction to invest in and loan to ethical and acceptable projects, conventional banks and ethical banks are similar in terms of their operational activities such as lending and borrowing. Thus, both types of banks, ethical and conventional, are regulated by the Banking and Financial act (BAFIA act 1989).

Similar to conventional banks, ethical banks communicate with their customers regarding their products and services. However, ethical banks can be seen to communicate uniquely with their customers about the nature of their operations (Harvey 1995). For example, the Co-operative Bank will not lend to oppressive regimes or companies making weapons. Another example is Triodos Bank, which gives a donation to the Soil Association for every organic savings account opened, and the Ecology Building Society that lends on energy-efficient homes (Harvey 1995; Wilson 2002).

Even though they are different in their approaches towards their customers, the ethical banks do share a common set of principles. The main principles of ethical banks are transparency and an emphasis on the social and environmental benefits that they offer to society besides offering financial products and services.

The ethical banks offer a range of banking products such as loans and credit cards, the same as conventional banks, except that they have added some value to their products for their customers. For instance, in the operation of the ethical banks' offering of credit cards, a small percentage of the customers' spending (around 0.25%) will be donated to charity.

However, this type of credit card offered by the ethical banks normally charges a higher interest on the balance outstanding. Based on the description of the general operation of the ICCs and ethical credit cards, the ICCs are deemed ethical too. This is because not only some of the card issuers donate to charities but the usage of the credit cards will also be monitored by the banks. The banks will monitor the consumers transactions in which some places are not allowed for transactions.

For instance, transactions cannot be done in places such as pubs, liquor stores, pornographic websites, casinos and other merchants who have been deemed by the Islamic banks to be unethical or prohibited/unacceptable by the *Shari'ah*.

Even Prince Charles has urged western banking to reflect on the aspects of IB which are environment friendly (Anonymous 2001). Conceptually, ICCs might be the some of the most ideally ethical cards to be offered. However, in reality, their complex natures (since no interest can be imposed) create issues that need to be resolved especially in the contracts that can be used to formulate these credit card operations.

A study conducted in Thailand revealed that CSR positively affects customers' perceived service quality and brand affect (Poolthong and Mandhachitara 2009). Customers demand that their pools of funds be invested in companies, non-profit organisations and governmental agencies that fulfil ethical obligations to society and the environment.

This requires the ethical banks to be very transparent in their annual reporting as a proof that they are as ethical as they have claimed. For instance, a survey conducted by Sadek et al.

(2010) comparing customers' satisfaction between two banks in the UK, namely Islamic Bank of Britain (Islamic bank) and the Co-operative Bank (an ethical bank), revealed that compliance with *Shari'ah* is ranked as most important for IBB customers whereas ethical operations are ranked as most important for Co-operative Bank customers.

The findings mentioned by Sadek et al. (2010), posed a question on whether banks' new market strategies should focus on a very niche market by targeting specific customers or continue to employ a traditional mass-market audience strategy. Nevertheless, a bank's operational branding such as IB for IBB and ethical banking for the Co-operative Bank can differentiate the market.

Sadek et al. (2010) used five items in their questionnaire to differentiate between Islamic banking and conventional banking users. The items represent questions on the ethical dimension. The study has adapted and modified the items in the ethical dimension. The five items will form the ethical dimension, which affects the customers' ethical quality satisfaction.

However, this study will combine the compliance with *Shari'ah* and ethical service quality dimensions forming the second order construct that is RESQ. The rationale combining this is to identify whether both RESQ dimensions will affect overall satisfaction through ethical quality satisfaction and *Shari'ah* compliance satisfaction. Therefore the following hypotheses are developed:

H 19: Ethical (Eth) dimension positively affects RESQ.

H 20: RESQ affects Ethical Quality Satisfaction.

H 21: Ethical Quality Satisfaction affects overall customer satisfaction.

In addition, the following figure shows how customers' perceptions of ethics would affect aggregate customer satisfaction through RESQ.

Figure 2-9: Ethical Dimension Affecting Ethical Quality Satisfaction



The four additional dimensions (i.e. technology, communication, staff conduct and ethical dimension) as discussed in this chapter affect customer satisfaction through either FSQ, TSQ or RESQ. The respective dimensions are integrated into a comprehensive model, which will be discussed in more detail in the next chapter.

2.7 CHAPTER SUMMARY

The main purpose of this chapter has been to answer the second research question of this thesis, which is to identify the antecedents to customer satisfaction in the context of ICC and to identify the existing customer satisfaction models that are available in the literature. This has been achieved via two objectives of the chapter.

Firstly, this chapter has introduced customer satisfaction in the study context and discussed the underpinning theory of customer satisfaction in the context of the study. The differences between service quality and customer satisfaction were identified according to the study context in order to set the limits and boundaries of the study. Although service quality and customer satisfaction are similar, they are in fact conceptually different. Service quality is

defined as meeting customer expectations, while customer satisfaction is defined as the cognitive and affective responses regarding service acquisition.

The discussion regarding the differences between conventional and Islamic theories was also presented. The underpinning theory of customer satisfaction evolves from three major theories i.e. disconfirmation paradigm, equity theory and attribution theory. However, an alternative theory from an Islamic perspective offers a new insight by incorporating religious and spiritual aspects, especially the idea that customer satisfaction is not limited to lifetime duration.

Secondly, this chapter has outlined that there are two major issues, which are the choice of possible antecedents and the question of whether to use performance minus expectation or performance only. In addition, there are two major generic models of customer satisfaction, that are used either to measure the national customer satisfaction index or to measure specific product or industry customers' satisfaction levels. As for competing models in the banking industry, there are approximately fourteen models available.

However, this research focuses on FSQ, TSQ and RESQ models and their relationships with satisfaction. The technical quality covers what service is provided and the functional quality refers to how the service is being delivered. Even though some of the Servqual dimensions are not significant for certain industries, the overall Servqual five dimensions are accepted as the antecedents to customer satisfaction as FSQ.

Therefore, a combination of FSQ and TSQ will encompass the processes and outcomes of the service as it is being experienced and evaluated by the customers. However, if these dimensions are integrated with RESQ, we will have a comprehensive customer satisfaction model for the IB industry. RESQ as a new measurement needs to be considered in the research context, complementing the existing customer satisfaction literature since it applies the *Shari'ah* compliance dimension that is related to religious factors.

This chapter has discussed how three concepts (FSQ, TSQ and RESQ) can be integrated in a customer satisfaction model. Since the integrated model involves religious factors (i.e. *Shari'ah* compliance), religiosity/devoutness or the level with which a person adheres to religious values might contribute to their customer satisfaction; and this will be discussed in more detail in the following chapter.

CHAPTER 3 : THE ROLE OF RELIGION ON CUSTOMER SATISFACTION

O mankind! We created you from a single (pair) of a male and a female, and made you into nations and tribes, that ye may know each other (not that ye may despise each other). Verily the most honoured of you in the sight of Allah is (he who is) the most righteous of you (*Al-Hujraat;13*).

3. INTRODUCTION

This chapter presents an overview of how the role of religion is connected to customer satisfaction. The main purpose of this chapter is to answer the third set of research questions of the thesis. Those questions are: (1) How does religion affect consumer behaviour? (2) How is religiosity is connected to customer satisfaction? (3) How do we measure someone's religiousness level? (4) What is the existing religiosity scale that is available?

The first objective of this chapter is to define the scope of the study with regard to the impacts of religion towards consumer behaviour. Secondly, the chapter aims to review the literature in the consumer behaviour sphere on the concepts of religiosity. Linked to the second objective, the third objective of this chapter is to discuss the concept of religiosity measurement from various perspectives. Hence, this chapter begins with a discussion on religion and consumer behaviour literature in section one.

The discussion then passes to the elucidation of the relationship between religiosity and consumer behaviour in section three. This chapter also highlights and ends with an exposition of the existing religiosity measurement concept before concluding with a recommendation to develop an Islamic religiosity scale measurement for the study. The present study has a specific contextual contribution to make on the impact of the religiosity of Malaysian Muslim consumers on their satisfaction with ICCs through their perceptions of the ability of the bank to comply with *Shari'ah* as discussed in chapter two, pg. 53.

3.1 RELIGION AND CONSUMER BEHAVIOUR

Religion has been identified as one of the critical elements in the cultural environment (Hunt and Vitell, 1986) since it affects the ways in which people, groups, or organisations in a society develop their perceptions and behaviours (Schwartz and Huismans 1995; Muhammad and Abd Ghani 2006; Krist et al. 2009; Muhammad 2009). Religion affects individual behaviour both directly and indirectly. It directly affects consumer behaviour through divine rules and prohibitions. It also indirectly affects consumer behaviours “through classification of all phenomena, development of codes of conduct, and establishment of priorities among these codes” (Muhammad and Abd Ghani 2006, p. 89). Sheth and Parvatiyar (1995) outlined three reasons why individuals comply with religious mandate and influences, in the forms of faith, self-efficacy and a fear of negative consequences.

Residing in 156 countries and the second largest religious population after Christians, Muslims account for approximately 23% of the world’s population (1.56 billion people). The total number of Muslims is significantly large. However, questions such as how God-fearing sentiment plays a significant role in the financial world confuse many. Is religion an influence on banking selection and preferences and do religious influences affect satisfaction? These questions originally initiated the researcher’s interest in identifying the possible implications of religion towards the behaviours of financial service users in Malaysia.

A Muslim must adhere to the rules and regulations (*Shari’ah*) covering all aspects of life, including financial dealing and transactions. Ideally, a Muslim must not use the conventional banking system because of its involvement with interest, which is prohibited in Islam, as discussed in chapter one. This is one example of how religion can affect financial service users’ behaviours and in particular, affect consumers’ banking selection, usage and satisfaction.

Muslim consumers are satisfied when they believe that God blesses their actions by ensuring that they are complying with *Shari’ah*. However, the reality is different from the ideal state. Religious commitment is multidimensional. Therefore, a consumer can commit to a religious faith but may not necessarily conform to all its rules and regulations, especially when dealing with money.

Consumers belonging to different religious groups hold differing sets of values and beliefs and these cannot be overlooked when understanding their consumption and satisfaction patterns (Fam et al. 2002; Jamal 2003). For example, Muslim consumers are discouraged to spend beyond their needs or engage in compulsive expenditures. Islamic religious beliefs might (or might not) affect Muslim consumers' consumption attitudes where debt consumption should be the last resort and should always be avoided. Islamic teaching discourages the usage of ICCs if consumers use it for luxuries, unnecessary or unplanned consumption (Ferdian et al. 2008). Therefore, Muslim consumers' behaviours using credit cards would likely be affected by their religious affiliations.

In this chapter, the focus is on the examination of the religious factors affecting customer satisfaction, apart from the service quality dimensions in the service sector. These factors can be explained as part of the application of values to consumer behaviour research (Evans et al. 2009). The authors defined values as enduring beliefs about desirable outcomes that transcend specific situations and shape one's behaviours.

These values can be categorized as cultural, consumption specific or product specific. The cultural values are general values such as love, happiness, etc., while consumption specific values are values that are related to consuming products, such as service quality, prompt service or convenient shopping, while product-specific values are related to products being consumed and the features inherent in this process such as ease of use, technology and durability (Evans et al. 2009).

Holbrook (1990) outlined eight topologies of consumption specific values as being: efficiency, excellence, status, self-esteem, play, aesthetics, ethics and spirituality. Efficiency and excellence can be categorised as economic values where they deal with the service quality of a product and service, such as Servqual (Sanchez-Fernández and Iniesta-Bonillo 2009).

The other values listed above are not included in the Servqual model except for aesthetics and play, which are likely to be less relevant in the context of ICC users' satisfaction. However, the other values such as status, self-esteem, ethics and spirituality might also have some impact on consumer behaviour in the context of the ICCs industry.

Table 3-1: Definitions of Religion

No	Author(s)	Definition of Religion	Context	Keywords	Category
1	Johnston (1975) quoted in (Kum-Lung and Teck-Chai 2010, p. 226)	“Religion is a system of beliefs and practices on how people respond and interprets what they feel is supernatural and sacred”.	Business Ethics	Beliefs, practice	Functional
2.	Durkheim (1976) quoted in Jordan et al. (2004, p. 129)	“A unified system of beliefs and practices relative to the sacred things”.	Sociology/ Psychology	Beliefs, practice	Functional
3.	Terpstra and David (1991, p. 73) quoted in Mokhlis (2009)	“A socially shared set of beliefs, ideas and actions that relate to a reality that cannot be verified empirically yet is believed to affect the course of natural and human events”.	International Business	Beliefs, ideology, practice, social	Functional
4.	Koenig, McCullough and Larson (2000, p. 18) quoted in Mokhlis (2009)	“An organised system of beliefs, practices, rituals and symbols designed (a) to facilitate closeness to the sacred or transcendent (God, higher power or ultimate truth/reality), and (b) to foster an understanding of one’s relation and responsibility to others in living together in a community”.	Religion	Beliefs, practices, rituals, symbols, social	Functional
5.	Johnson (2000, p. 259) quoted in Mokhlis (2009)	“A social arrangement designed to provide a shared, collective way of dealing with the unknown and un-knowable aspects of human life, with the mysteries of life, death and the different dilemmas that arise in the process of making moral decisions”.	Sociology	Social, beliefs, moral	Functional
6.	Rodero and Branas (2000, p. 267)	“Religion (Any attitude over the supreme institution) as the way to purchase an insurance contract to protect themselves against uncertainty – that is life after death”.	Economy	Practice	Functional
7.	Arnould, Price and Zikhan (2004, p. 517-518) quoted in Mokhlis (2009)	“A cultural subsystem that refers to a unified system of beliefs and practices relative to a sacred ultimate reality or deity”.	Marketing	Beliefs and practices	Functional
8.	Sheth and Mittal (2004, p. 65) quoted in Mokhlis (2009)	“A system of beliefs about the supernatural and the spiritual world, about God, and about how humans, as God’s creatures, are supposed to behave on this earth”.	Marketing	Beliefs and practices	Functional
9.	Ateeq-ur-Rehman and Shabbir (2010, p. 65)	“Religion can be defined as a strong belief in a supernormal power that controls human destiny or an institution to	Marketing	Beliefs	Substantial

No	Author(s)	Definition of Religion	Context	Keywords	Category
		express belief in a divine power”.			
10.	Freud’s quoted in Jordan et al. (2004, p. 109)	“Freud’s definition of religion in Psychology is an illusion created by the mind to fulfil it wishes”.	Psychology	Beliefs	Substantial
11.	Jung’s quoted in Jordan et al. (2004, p. 118)	“Religions stems from archetypes, which are situated in the collective unconscious mind”.	Psychology	Beliefs	Substantial
12.	Mark’s quoted in Jordan et al. (2004, p. 138)	“Religion is an illusion which human create because of class division”. (Marxist view)	Sociology	Ideology	Functional
13.	Weber’s quoted in Jordan et al. (2004, p. 132)	“The main cause of a religious outlook is our ideal interest; the psychological desire for a sense of meaning and purpose in our lives”.	Sociology	Ideology	Substantial
14.	Roland Robertson quoted in Haralambos and Holborn (1996, p. 446)	“Refers to the existence of supernatural beings that have a governance effect on life”.	Sociology	Beliefs	Substantial
15.	Gunn (2003, p. 200)	“Religion as belief, religion as identity, and religion as way of life ³² ”.	International Law	Beliefs, identity, way of life	Functional
16.	Assadi (2003, p. 4)	“Religion refers to, not only a belief bidding the spiritual nature of man to a supernatural being, but mainly a system of faith and worship”.	Marketing	Beliefs, faith, worship	Functional
17.	Reber, Allen, and Reber (2009, p. 676)	“A system of beliefs with either institutionalised or a traditionally defined pattern of ceremony”.	Psychology	Beliefs	Substantial
18.	Choi, Y., R. Kale, et al. (2010, p. 63)	“Religion is an organized system of beliefs, practices and symbols designed to facilitate closeness to the sacred or divine, an organized religion encourages its members to accept its tenets as part of their life, which influences them to commit cognitively and behaviourally to the principles of the religion”.	Marketing	Beliefs, practices, symbols	Functional
19.	Moschis and Ong (2011, p. 9)	“Religion refers to one’s beliefs about the absolute definitiveness and inherent truth qualities of a religion’s teachings and scriptures”. (Stark and Glock, 1968; Rindfleisch et al. , 2004)	Marketing	Beliefs	Substantial

³² Religion is associated with actions, rituals, customs, and traditions that may distinguish the believer from the adherents of other religions.

The challenge with many authors is that religion is an abstract and complex concept (Gunn 2003) and defining religion is more difficult than expected (Nazlida and Dick 2010) since it is a subjective belief, and might involve forced indoctrination and/or outright irrationality (Iannaccone 1992). However, it would be useful to understand the meaning of religion by comparing several definitions with an aim to develop a definition of religion in the context of the present study. Table 3-1 summarises the definitions of religion that are found in the literature.

The definitions listed in Table 3-1 do not provide a consensus, as the authors have given a meaning of religion from different perspectives, e.g. from functionalist (functional), or essentialist (substantial) points of views. A substantive definition of religion attempts to state what religion is, while a functional definition of religion would state what it does (Gill 1994; Burton et al. 2001; Mckinnon 2002).

This study attempts to categorise the definitions provided by several authors as listed in Table 3-1. They were categorised into functional and substantive definitions. Despite the difficulty of doing so, the study manages to categorise each definition provided by the author(s) as substantive or functional.

For example, a substantive definition will only define religion as a concept of beliefs without looking into the aspects of how religion actually affects individuals' behavioural patterns. For instance, Reber, Allen and Reber (2009, p. 676) define religion as “a system of beliefs with either institutionalised or a traditionally defined pattern of ceremony.” The essentialists' definitions of religion are sometimes too general in explaining religion as a belief.

However, the functionalists take a different approach where the authors will try to explain that religion will affect the individuals' consumptions, habits and practices in daily life. For instance, Choi, Y. et al. (2010, p. 62) define religion as “an organized system of beliefs, practices and symbols designed to facilitate closeness to the sacred or divine, an organized religion encourages its members to accept its tenets as part of their life, which influences them to commit cognitively and behaviourally to the principles of the religion.”

Their definition tries to explain the causal effects of religions towards individuals. In summary, some of the definitions only look at the concept of beliefs (studies nos. 9, 11, 14,

17, 19) and others only look at ideological (studies nos. 12, 13) aspects, while some touch on both beliefs and practice aspects (studies nos. 1, 2, 3, 4, 5, 6, 7, 8, 12, 15, 16, 18).

Gunn (2003) provided a meticulous discussion of the complexity of religion in international law in resolving the different interpretations of religions. In general, an individual commitment is made to a religious faith. However, Gunn sees religions from three different perspectives, which are beliefs³³, identity³⁴ and way of life³⁵. The definitions provided by authors in the previous table are grouped according to the classifications provided by Gunn (2003) and are listed in the following table.

Table 3-2: Keywords Analysis of Religion

	Beliefs		Way of Life			Identity		
Keyword	Ideology	Beliefs	Social	Moral	Practices	Rituals	Symbol	Identity
Definition	3,12,13	1,2,3,4,5, 8,9,10,11 14,15,16, 17,18,19	2,4,5	5	2,3,5,6,7 15,16,18	4	3,4,16, 18	15

Based on the keyword analysis of the definitions of religion by the different authors, they are grouped according to Gunn's classifications of religion. The concentration of the major keywords can be segregated into three themes, which are beliefs, the way of life (practices) and identity (affiliation).

A majority of the authors outlined beliefs and practices in their definitions of religion, which can be interpreted as beliefs that will be transformed into actions or practices. Thus, religion affects consumer behaviour principally influenced by the consumer's personality structure – his or her beliefs, values and behavioural tendencies (Nazlida and Dick 2010).

Hence, this research defines religion according to the view of it *“as a complete way of life, the way of thinking, ideology and way of actions that are not confined to beliefs and ritual only.”* The definition is therefore looking at religion in a total way. It will include all aspects

³³ Religion as *belief* pertains to the convictions that people hold regarding such matters as God, truth, or doctrines of faith.

³⁴ Identity religion is experienced as something akin to family, ethnicity, race, or nationality.

³⁵ Religion is associated with actions, rituals, customs, and traditions that may distinguish the believer from the adherents of other religions.

such as politics, economics, social aspects, law and governance. This is aligned with the Quranic verse³⁶ that requires Muslims to embrace Islam in total.

Specifically, this definition can be applied to Islam as Gleason (1997) quoted in Gunn (2003, p. 200) states, “Muslim believers stress that Islam is not only a religious doctrine but also a way of life. Islam does not make distinctions between doctrine and life, between thought and action, between word and deed. Islam demands total commitment of the individual for it is a living doctrine.”

However, this study admits that the definition of religion might be different depending on the religious affiliation or denomination of an individual, which will later affect the individual’s attitudes and behaviours. As the studies with religion, as a theme, stem from vastly different areas, such as sociology, psychology, economics, religion and marketing, it would be practical for this study to employ a systematic database search focussing on consumer behaviour.

3.1.1 Systematic Review of Religion and Consumer Behaviour

The researcher performed a database search using the following five databases: Scopus, Web of Science, ProQuest, EBSCOhost-Business Premier Source and EconLit. The search included articles available through January 2011. It includes items in the topic section of the database or in the keywords, title, or abstract of the article under consideration. Because the focus of this research is the impact of religion on customer satisfaction, the terms Religious Influence, Religious Banking, Religiosity, and Religious Motivation have to be included the title, summary, or keyword.

The researcher excluded life sciences, health sciences, physical sciences, medicine, engineering and arts and humanities subject areas and limiting the searches to economics, econometrics, finance, business, management and accounting subject areas. Since the research focus is consumer religiousness, the term consumer behaviour had to be included in the title, summary, or keyword. To obtain a comprehensive literature search, the searches utilise both *behaviour* (British English spelling) and *behavior* (American English spelling).

³⁶ See *Quran, Surah Al-Baqarah*, Verse 208.

The following table shows the keywords used during the search in the first column and the number of articles found in respective databases are presented in the following columns.

Table 3-3: Systematic Search Result of Religion and Consumer Behaviour

Database	Scopus	Web of Sciences	Proquest # of articles	EBSCOhost	EconLit
Religion	71,712	73,367	6,394	15,153	1,021
Religious	20,709	63,203	6,134	15,884	1,479
Religiosity	2247	14	3	576	147
Religious Motivation	448	726	11	32	4
Religious Influences	129	949	19	47	17
Religious Banking	27	6	-	7	2
Religious AND Consumer Behavior	23	12	68	32	7
Religious AND Consumer Behaviour	10	4	68	32	7
Religiosity AND Consumer Behavior	16	14	27	12	3
Religiosity AND Consumer Behaviour	5	6	27	12	3
Religious Motivation AND Consumer Behavior	-	-	1	-	-
Religious Motivation AND Consumer Behaviour	-	1	1	-	-
Religious Influences AND Consumer Behavior	8	-	2	4	-
Religious Influences AND Consumer Behaviour	3	1	2	4	-
Religious Banking AND Consumer Behavior		-	-	-	-
Religious Banking AND Consumer Behaviour		-	-	-	-

“-” means no articles were found

During the first stage of the literature search, the terms religion and religious produced a broad range and a large number of studies. Table 3-3 presents an overview of the number of articles found in each database. The table shows that the five databases include a large number of articles on religious studies in general.

Table 3-3 shows a strong structural decline in the number of articles from the general search terms of *religion* to the specific search terms of *religion* “and” *consumer behaviours*. The table shows that the area of *religion* and *consumer behaviours* research is seemingly under-researched. The decline after the “and” condition was the cut-off point for analysing the abstracts. There are approximately 445 articles found in the four databases, including by the use of both search terms i.e. *consumer behaviour/ behavior*.

In the second stage, the papers are filtered to avoid duplication and to weed out irrelevant papers, i.e. those out of topic and subject area. The search terms employing both English spellings for the EBSCOhost databases (Business Premier Source and EconLit) were identified to manage the problems of different British and American spellings because a comparison between the two search terms provided similar results. This has reduced the number of articles to 269. However, after a meticulous filtering process was conducted, 78 articles were identified in the final analysis, using the search terms of *religious*, *religiosity*, *religious influences* “AND” *consumer behaviour/behaviour*.

At the third stage, articles with similar topics were grouped together to identify the major topics and sub topics found under the terms *religious* and *consumer behaviour*. Religious affiliation, religiosity, and religious influence were the major topics shown repeatedly in the systematic review process. Several sub-topics emerged from the review process. There are five studies focussing on economic behaviour (Iannaccone 1992; Sander 1992; McKee 1993; Hamdani and Ahmad 2002; James and Sharpe 2007).

Meanwhile there are three studies on relationship marketing (Macchiette and Roy 1992; Andeleeb 1993; Sheth and Parvatiyar 1995) In addition, there are five studies on passive and active consumer topics (Richard Ettenson 2006; Sandikci and Ekici 2009; Farah and Newman 2010; Karababa and Ger 2011).

In addition, three studies look at advertising (McDaniel and Burnett 1991; Rice and Al-Mossawi 2002), and eight studies are concerned with ethnicity and culture. Other topics are new-product adoption (three studies), self-regulation (one study), business ethics (11 studies), charity (one study), banking and finance (five studies), iconography (one study), the environment (three studies), food (three studies), entrepreneurship (one study), tourism (one study) and subjective wellbeing (one study).

The lack of empirical research regarding the impact of religion on consumer behaviour has created a surge of recent studies conducted in several countries. Examples of the studies were conducted in countries such as Korea (Choi et al. 2010), Japan (Sood and Nasu 1995), United States (Sood and Nasu 1995; La Barbera and Gurhan 1997; Scott et al. 2001), Malaysia (Mokhlis 2006; Muhammad and Abd Ghani 2006; Wan-Ahmad et al. 2008; Mokhlis 2009;

Muhammad 2009), Latin America (Branas-Garza et al. 2009) and Britain (Andrew 2005). These studies try to link consumer behaviour with religious affiliation, religious influence and religiosity (religious commitment) which will be discussed in the following sections.

3.2 RELIGIOSITY AND CONSUMER BEHAVIOUR

Islam promotes fairness and justice and thus prohibits the practice of taking and giving interest from the process of lending and borrowing. In this example, any Muslim who adheres to the rule must avoid transactions that deal with interest such as those practiced by the conventional banking system.

However, questions remain unanswered as to whether an individual who is affiliated with religious beliefs will adhere to the rules and regulation of the religion, especially when it deals with interest. For example, the prohibition of interest is also noted in Christianity and Judaism. However, do Christians and Jews adhere to the prohibition of interest?

Specifically, for this research, the following questions are important: Do Muslims adhere to the prohibition of interest? Are they willing to prevent their money from generating any interest returns? Will profit motives triumph over religious motives? Do people commit to their religious principles?

If religiosity is multidimensional, can one commit to a dimension while not committing to another dimension? The aims of this section are therefore to provide a clear understanding of religiosity and to review its relationship with consumer behaviour in the literature.

3.2.1 The Concept of Religiosity

Religiosity is normally left aside in determining consumer behaviours even though religions do affect consumers' behaviours in many parts of the world (Wilkes et al. 1986; Delener 1990; McDaniel and Burnett 1990; Delener 1994; Mokhlis 2006) and attitudes (Hosein 1997; Weaver and Agle 2002) through a set of rules and regulations (Weaver and Agle 2002).

It is also used as an explanatory variable to account for differences in the consumption habits of consumers in different parts of the globe (Moschis and Ong 2011). This will depend on an individual commitment to adhere/comply, or not to adhere/comply to/with the rules and regulations.

Worthington Jr. (1988; 2003) added an important element in committing to rules and regulations. He added that an individual had to use their religious values, beliefs or practice daily. This implies that religiosity requires a consistent adherence to the rules and regulations in daily practice. In other words, one must have faith in religious values and beliefs (guided by rules and regulations) as well as putting them into practice. Table 3-4 presents definitions of this, given by several authors.

Table 3-4: Definitions of Religiosity

No	Author(s)	Definition of Religiosity	Context	Keywords
1.	Worthington Jr (2003, p. 85)	The degree to which a person adheres to his or her religious values, beliefs or practice and uses them daily (1988)	Psychology	Degree, adherence, values, beliefs, practice
2.	McDaniel and Burnett (1990, p. 102)	Religiosity is someone's commitment to follow principles believed to be set forth by God.	Marketing	Commitment, principles
3.	Delener (1990, p. 28)	The degree to which beliefs in specific religious values and ideals are held and practiced by an individual.	Marketing	Degree, values, practice
4.	Johnson et al., (2001, p.25) quoted in (Kum-Lung and Teck-Chai 2010, p. 225)	The extent to which an individual has committed to the religion he or she professes and its teachings, such as the individual's attitudes and behaviours reflecting this commitment.	Business Ethics	Committed, attitudes, behaviour
5.	Marsiglia, et al. (2005, p. 586)	Religiosity is a multidimensional construct referring to a person's behavioural and attitudinal religious fervour, regardless of the content of his or her beliefs.	Orthopsychiatry	Behavioural, attitudinal, fervour.
6.	Bloodgood, Turnley, and Mudrack (2008, p. 558)	Religiosity as understanding, committing to, and following a set of religious doctrines or principles.	Business Ethics	Understanding, committing, principles
7.	Kashyap and Iyer (2009)	Religiosity is the degree to which an individual is committed to a set of religious beliefs and the degree to which they influence her/his attitudes and behaviours.	Marketing	Degree, committed, beliefs, attitudes and behaviours.
8.	Reber, Allen, and Reber (2009, p. 676)	Involvement, interest or participation in religion. Although the term is used by some authors to denote a high degree of religious involvement, it properly refers to a continuum of degrees of participation in religious ritual and practice, and one may correctly characterise a person as displaying low or moderate religiosity.	Psychology	Involvement, degree, ritual, practice
9.	Muhammad (2009, p. 54)	Intensity of commitment to a religion belief system	Business Ethics	Commitment, belief

The definitions given by the authors in Table 3-4 provide a consensus that “religiosity as the degree of commitment towards their religious values, beliefs and principles that affecting

attitudes and behaviours”. This definition will be used throughout the thesis. The keyword analysis provided below shows the evidence that the essence of religiosity is the degree of commitment. This is shown from the number of authors using the keywords degree and commitment is larger than the other keywords.

Table 3-5: Keywords Analysis of Religiosity

Keyword	Definition
Degree	1,3,7,8
Adherence	1
Commitment	2,4,6,7,8,9
Values	1,3
Beliefs	1,7,9
Principles	2,6
Practice	1,3,8
Attitudes	4,5,7
Behaviour	4,5,7

Note: The number represents the study number in Table 3-4.

The majority of the authors outlined degree (studies nos. 1,3,7,8) and commitment (studies nos. 2,4,6,7,8,9) in their definitions of religiosity. They can be interpreted as the commitment of individuals towards their religious values (study no 1, 3), beliefs (studies nos. 1, 7, 9) and principles (studies nos. 2, 6) which will, as a result, affect their attitudes (studies nos. 4, 5, 7) and behaviour (studies nos. 4, 5, 7).

Religiosity varies from one person to another in terms of putting religious values, beliefs and principles into practice (studies nos. 1, 3, 8) in their daily lives. Now, turning to the studies conducted related to religiosity and consumer behaviour, these present us with some interesting connections with the study context of IBs and customer satisfaction.

3.2.2 Empirical Evidences of Religiosity and Consumer Behaviour

There is an abundance of religiosity measurement instruments developed in many areas. For instance, in the area of psychology (Gorsuch 1984; Hill and Pargament 2003), macroeconomics (Rehman and Askari 2010), sociology (Glock 1972), business ethics (Scott et al. 2001; Babakus et al. 2004; Conroy and Emerson 2004; Cornwell et al. 2005; Scott et al. 2005; Vitell 2009; Vitell et al. 2009; De Bock and Van Kenhove 2010) and marketing.

The religiosity instrument are aimed at measuring to what extent people adopt a religious belief in their lives (Choi et al. 2010). However, religiosity in consumer behaviour area is under-researched (Lindridge 2005; Cleveland and Chang 2009). Religiosity is an important component because consumer behaviour can be predicted by commitment to adhering to the rules and regulations of their own religion (Moschis and Ong 2011). However, the consumers' level of commitment might be different from one individual to another based on their education background, age and ethnicity (McDaniel and Burnett 1990; Assadi 2003).

This implies that the degree of commitment or observance of the sets of laws and regulations of the religions varies across individuals. Therefore, conservative believers would vary from the liberal believers in adhering or following such rules and regulations, which affect consumption and the level of cognitive and behavioural influence in their individual purchasing decisions.

For instance, sociologists have found seven types of taxonomy of religious individuals: the Outsiders, the Conservatives, the Rejectors, the Modern Religious, the Marginally Religious, the Orthodox, and the Culturally Religious (Filsinger et al. 1979). However, religiosity levels are also viewed as a continuum in psychology from low to highly religious (Reber et al. 2009).

This becomes a premium for religious consumers where normally religious institutions use it to their advantage, charging the religious consumers a price for their insurance against uncertainty – the promise of life after death (Assadi 2003). These findings support the earlier studies conducted by Allport on religiosity that distinguishes between conservative and liberal believers (Allport, 1966).

The consumers can be highly committed, moderately committed or less committed to the principles of their religion, or they may not be committed at all. To complicate matters, there is also a group of consumers who choose not to believe in any religion and to be free from any commitment to God.

They are called free thinkers, atheists, pagans or non-believers. However, the number of consumers with a religious belief makes the majority of consumers in the market, thus

making it relevant to focus on this type of consumers, especially in the context of the IB industry, which has an emphasis on religious banking.

3.2.2.1 Religiosity and Shopping/Buying Behaviour

A study of the influence of consumer religiosity towards the evolution of retail department store attributes such as religious affiliation and store patronage revealed that religiosity can be measured in a specific religious group which is identified as highly religious (evangelical Christians) to reflect the impact of their religiosity towards their retail store patronage (McDaniel and Burnett 1990, 1991). In other instances, religious groups tend to be sensitive to any potential negative consequences of their purchase decisions/the perceived risk of their purchasing decisions (Delener 1994).

However, Sood and Nasu (1995) who compared Japanese and American Protestants, claimed that there were no significant differences between the consumer behaviour of devout and casually religious Japanese, whereas the devout American Protestants had considerably different consumer behaviour compared with casually religious Protestants. In addition, it was found that Japanese and Americans differed significantly in some aspects of consumer behaviour (Sood and Nasu 1995).

In contrast to Sood and Nasu (1995), there is evidence showing significantly different behaviour affected by the religiosity of different religious backgrounds in the purchase of televisions (Nittin and Sally 2004) and in shopping orientation (Mokhlis 2006). In addition, religiosity is found to be negatively related to impulse buying (Mokhlis 2006).

Huefner et al. (2002) studied subscale religiosity towards consumers' voice, exit, and retaliation behaviour. Their study found religiosity to be negatively related with voice and retaliation and to significantly predict exit (Jonathan et al. 2002). A similar study on store loyalty and customer complaints found religious commitment/ religiosity to be significant (Swimberghe et al. 2009).

3.2.2.2 Religiosity and Business Ethics

There are quite a number of studies examining religiosity and its impact on business ethics or ethical conduct (Scott et al. 2001; Scott et al. 2005; Bloodgood et al. 2008; Vitell 2009; Vitell et al. 2009; Kum-Lung and Teck-Chai 2010; Witkowski and Reddy 2010). For instance, Vitell et al. (2007), employing Allport's intrinsic and extrinsic religious orientation, found that intrinsic religious orientation significantly explained consumer's ethical beliefs for three (active/illegal, active/legal and passive dimensions) of the five dimensions.

The higher a respondent's sense of intrinsic religiosity was, the more likely they were to perceive various "questionable" consumer activities as unethical or wrong. Overall, an intrinsic religious orientation does appear to explain consumer ethical beliefs, as expected, with more religiously oriented individuals being more likely to view questionable consumer behaviours as wrong and vice versa. An extrinsic religious orientation significantly explained consumer ethical beliefs only for the doing good/recycling consumer ethics dimension.

Bloodgood et al. (2008) conducted another study employing the same religiosity measurement in business ethics. They examined the interactions between ethics training and religiosity and between ethics training and intelligence. The results were that classroom ethics training worked better for those who were relatively low in religiosity or relatively higher in intelligence than for those who were relatively high in religiosity or relatively low in intelligence (Bloodgood et al. 2008).

3.2.2.3 Religiosity and New Product Adoption

Ateeq-ur-Rehman and Shabbir (2010) studied religiosity and new-product adoption in Pakistan in an attempt to understand the impact of religiosity in the Islamic market. The authors identified a significant relationship between religiosity (as independent variables) and new-product adoption (as dependent variables). The religiosity dimensions used were based on Glock's (1972) definition of operational religiosity. These dimensions are ideological, ritualistic, intellectual, experimental and consequential (Ateeq-ur and Muhammad Shahbaz 2010).

3.2.2.4 Religiosity and Subjective Well Being

The relationship between religiosity and subjective wellbeing (as a dependent variable) was found to be significantly negative using religious church attendance ($p=0.03$) and religious importance ($p=0.082$) as religiosity measurements (La Barbera and Gurhan 1997).

In contrast, Ong and Moschis (2009) reported positive results of a large-scale survey in Malaysia using older consumers of the country's three main ethnic subcultures (Malays, Chinese, and Indians) who are of different religions (Muslims, Buddhists, and Hindus respectively) and who differ in consumption activities in response to stress-induced life events.

Cultural differences in emotion-focused coping responses to stress as well as the consequences of these responses to consumers' well-being were examined. They found that the three ethnic groups, which differ with respect to their degrees of religious commitment, also differ with respect to their employment of emotion-focused strategies (Ong and Moschis 2009; Moschis and Ong 2011).

3.2.2.5 Religiosity and Advertising

The relationship between religiosity and advertising was investigated by Al-Modaf (2007) using a sample of commercial ads played / shown / displayed in the most sacred months in Islam, and which meet four conditions: through sources, through targeted consumers, through products, and specialization. The study results revealed that the use of religious symbols and rituals in advertising has become important (Al-Modaf 2007).

3.2.2.6 Religiosity and Other Areas

Religiosity was also studied in other areas, such as non-economics goals (Iyer and Kashyap 2009; Kashyap and Iyer 2009), the relationship between religiosity and being pro-environment (Rice 2006), religiosity and food selection (Benjamin et al. 2007) and religiosity with philanthropic behaviour (Hamdani et al. 2004). All the studies have indicated that religiosity has an important effect on consumer behaviour.

3.2.3 Some Useful Implications Regarding Religiosity

A summary of the studies conducted on religiosity and consumer behaviours presented in Table 3-6 revealed that there are limited studies conducted in measuring Muslims' religiosity in the scope of banking environment. Nevertheless, this creates an opportunity for the researcher to contribute to the existing knowledge in providing a religiosity scale measurement for IB.

In addition, the research found that majority of the studies found that a similar relationship between religiosity and consumer behaviour. Table 3-6 shows the studies on religiosity found from the systematic search revealing the results whether religiosity influences consumer behaviour in many different scopes.

Table 3-6: Studies on Religiosity

Author(s)	Year	Religiosity (R*)		
		Relationship of R* and RI**	Relationship of R* and CB***	Scope
Wilkes, Burnett, and Howell	1986	-	R → CB	Credit purchase and Life Satisfaction
McDaniel and Burnett	1990	-	R → CB	Retail store patronage
Tansuhaj et al.	1991	-	R → CB	New product adoption
Delener	1994	RI = R	R → CB	Buying behaviour
Sood and Nasu	1995	-	R → CB	Shopping behaviour
La Barbera and Gurhan	1997	-	R → CB	Subjective Well Being
Hamdani and Ahmad	2002	-	Not sig	Philanthropic behaviour
Huefner et al.	2002	-	R → CB	Shopping behaviour ³⁷
Rice and Al-Mossawi	2002	-	R → CB	Advertising
Nittin and Sally	2004	RI = β R	R → CB	Shopping Behaviour
Rice	2006	RI = R	R → CB	Environmental
Mokhlis	2006	-	R → CB	Shopping Behaviour
Al-Modaf	2007	RI = R	R → CB	Advertising
Benjamin, William and Anne	2007	-	R → CB	Organic Food Purchase
Vitell, Singh, and Paolillo	2007	-	R → CB	Business ethics
Bloodgood, Turnley and Mudrack	2008	-	R → CB	Business ethics
Cleveland and Chang	2009	-	R → CB	Ethnic Identity and Materialism
Iyer and Kashyap	2009	-	R → CB	Investors' Non-Economic Goals
Kashyap and Iyer	2009	-	R → CB	Investors' Non-Economic Goals
Katz-Gerro, Raz and Yaish	2009	-	R → CB	Cultural Consumption
Ong and Moschis	2009	-	-	-
Swimberghe, Sharma and Flurry	2009	-	R → CB	Store Loyalty and Complaints
Vitell	2009	-	Conceptual	Business ethics – Lit review
Vitell et al.	2009	-	R → CB	Business ethics – Self Control

³⁷ The religiosity sub scale was found to be negatively related to voice, exit and retaliation.

Author(s)	Year	Religiosity (R*)		
		Relationship of R* and RI**	Relationship of R* and CB***	Scope
Ateeq-ur, and Muhammad Shahbaz	2010	-	R → CB	New product adoption
Kum-Lung, and Teck-Chai	2010	-	Mixed	Business ethics
Hashim and Mizerski	2010	-	Conceptual	Buying behaviour
Parameshwaran and Srivastava	2010	-	Conceptual	Buying behaviour
Taylor, Halstead, and Haynes	2010	-	R → CB	Advertising – Religious symbol
Witkowski and Reddy	2010	-	Weak	Ethical consumption
Moschis and Ong	2011	-	R → CB	Consumer wellbeing and behaviour

Indicators: R* denotes Religiosity, RI** denotes Religious Influence and CB*** denotes Consumer Behaviour

It is apparent from the above table that the majority of the studies found that religiosity affects consumer behaviour (shown by the arrow pointing to CB). In addition, several authors have also treated religious influence as religiosity.

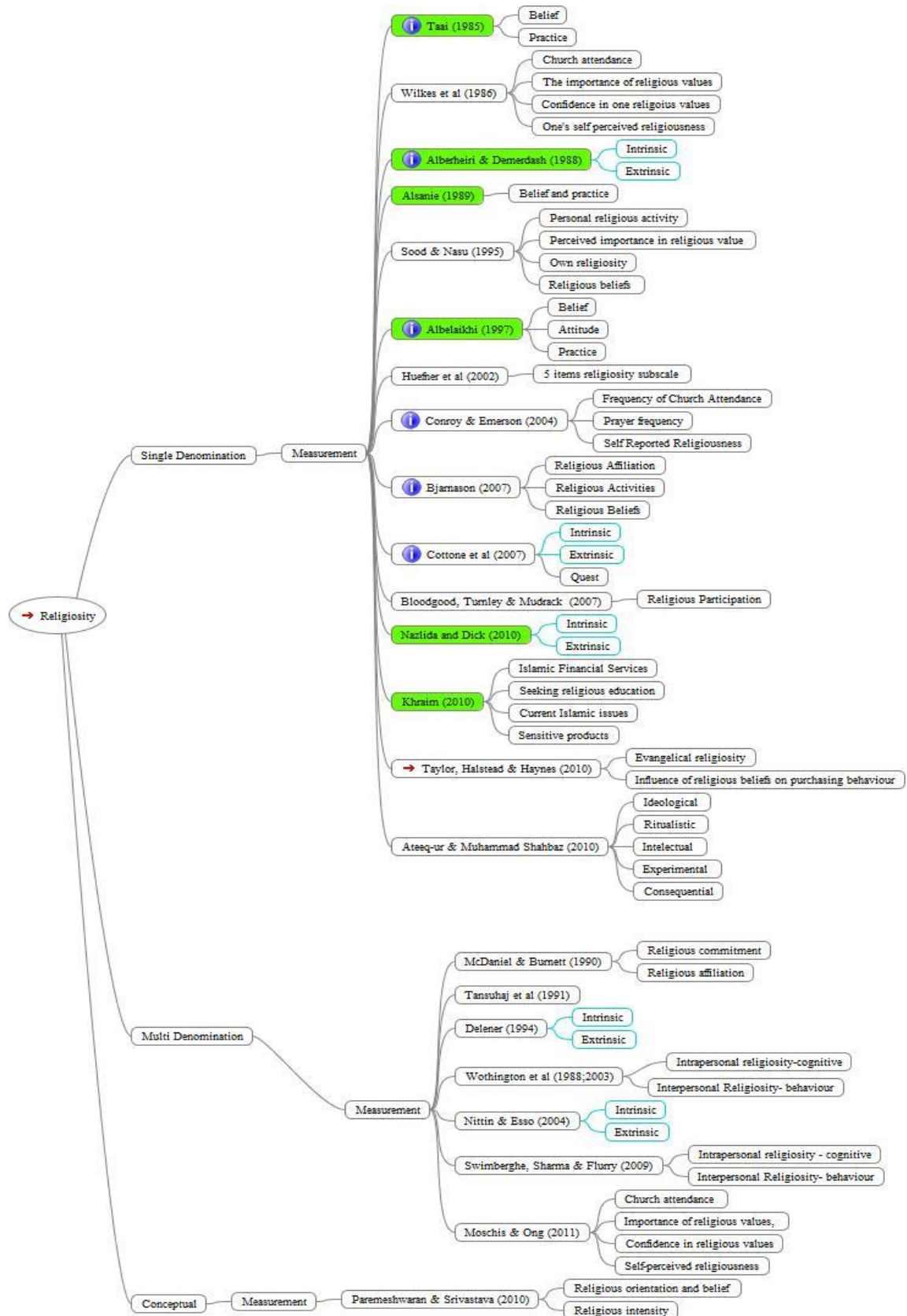
Therefore, this study will focus on religiosity instead of religious influence due to the fact that its conceptualisation is more specific in comparison to religious influence. Linked to this discussion, the issues of how one measures someone's religiosity becomes the interest of this study, as explained in the following section.

3.4 RELIGIOSITY MEASUREMENT

Religiosity measurements are conducted for either a single denomination/faith (13 studies) or multiple denominations/faiths (7 studies). A considerable amount of literature has been published on single denomination religiosity measurement.

However, some of the measurements used in these studies were also used in multi denomination studies. Figure 3-1, summarises religiosity measurement used in consumer behaviour.

Figure 3-1: Diagram of Religiosity Measurements



Note - i represents studies that were cross-referenced and not captured in the systematic database search.

Figure 3-1, above, shows the religiosity instruments used which were found earlier in the systematic database search including six studies which were cross-referenced, and revealed that only six studies (Alberhairi and Demerdash 1988; Alsanie 1989; Albelaikhi 1997; Khraim 2010; Nazlida and Dick 2010) have attempted to measure Muslims' religiosity (shaded in a green colour).

All the studies conducted prior to 2010 were quoted from Khraim (2010). One question that needs to be asked, however, is whether a specific or general religiosity measurement for IB users should be constructed. It is best to discuss the main religiosity measurements in an attempt to answer this question.

3.4.1 Religiosity Orientation Scale (I-E Dimensions of Religiosity)

Allport and Ross (1967) who developed the Religiosity Orientation Scale - ROS, undertook one of the earliest studies of religiosity (Cantril 1968; Pettigrew 1969; Faber 1970). ROS was originally developed in the context of Christianity to identify whether churchgoers or pro-religious people were more prejudiced than non-churchgoers are.

The instrument developed by Allport using the intrinsic and extrinsic approach has apparent validity since the items measure what they are intended to measure. Their 1967 findings stated that indiscriminate pro-religious people are prejudiced compared to pro-religious people. As for the current study, ROS was identified for use by five studies, i.e. Alberhairi and Demerdash (1988), Delener (1994), Nittin and Ezzo (2004), Cottone et al. (2007) and Hashim and Mizerski (2010) as shown in Figure 3.18.

In this scale, religiosity is explained using the two dimensions of intrinsic and extrinsic religiosity (*I-E* dimensions of religiosity) which divided people into either pro-religious or non-religious. The *I-E* dimensions of religiosity are based on religious sentiments where *intrinsic* religiosity is defined as a meaning-endowing framework in terms of which all of life is understood (Allport and Ross 1967).

Extrinsic religiosity, in contrast, is the religion of comfort and social convention, a self-serving, instrumental approach shaped to suit oneself (Rodero and Branas 2000; Assadi 2003). In simple terms, intrinsic is for the conservative and extrinsic is for the liberal followers of a religion. Allport (1966) added two additional typologies to cater for a middle

group, named either indiscriminate pro-religious or indiscriminate antireligious. Table 3-7 illustrates the typology of the different types of religiosity.

Table 3-7: The Separation of Religiosity Based on Sentiments

	Agree on E items	Disagree on E items
Agree on I items	Indiscriminate Pro-religious	Intrinsic
Disagree on I items	Extrinsic	Indiscriminate Antireligious

Source: Adapted from Allport (1966)

Table 3-7 illustrates the conceptual framework of the religiosity construct based on the above I-E dimensions of religiosity developed by Allport (1966). The separation of the groups is based on agreement on the intrinsic and extrinsic items. The intrinsic religiosity group will agree on I items and disagree on E items and in contrast, the extrinsic religiosity group will agree on E items and disagree with I items.

The indiscriminate pro-religious group will agree on both I and E items, while the indiscriminate antireligious group will disagree on both (I and E), and are therefore, nonreligious. The variables used in the I-E religiosity are prejudice, dogmatism (level of openness), fear of death (I is negatively correlated to fear of death), sex differences (women are more religious than men) and other variables such as trait anxiety, an internal locus of control, the purposes of life, the perceived powerfulness of life, feminism and social desirability.

The majority of the researches conducted using ROS look at Christianity; a meta-analysis conducted on ROS by Donahue (1985) revealed that from thirty four studies, thirty one studies focussed on Christianity, and none studied the Muslims. However, from Table 3-6, two studies were identified, Alberheiri and Demerdash (1988) and Hashim and Mizerski (2010), which applied ROS to measure Muslim consumers' religiosity.

The problem with the scale developed by Allport or the modified version to suit Muslim consumers' religiosity is that the scale was originally aimed and constructed to measure Christian believers' religiosity. For example, one of the items asked about their frequency of going to church. If this item is modified to the frequency of going to a mosque for Muslim, on aggregate, the result will not represent the truth.

For example, the frequency of going to the mosque will always be lower for Muslim women since only men are encouraged to perform congregational prayers in the mosque. Muslim women are encouraged to perform daily prayers at home. Other items also can be problematic in the context of measuring Muslim consumers' levels of religiosity.

3.4.2 Religiosity and Values

A widely cited religiosity model in the psychological literature is Schwartz's Model (1995) of ten values, which form a religiosity index. These values are security, conformity, tradition, benevolence, universalism, self-direction, stimulation, hedonism, achievement and power.

Table 3-8: List of Studies Conducted in Religiosity and Values

Studies	Country	Religion	Participants	N	Measure
Schwartz and Huismans (1985)	Israel	Jews	Students + teacher	629	Religiosity Index
	The Netherlands	Protestants	Students + teacher	216	Religiosity Index
	Spain	Catholics	Students + teacher	473	Religiosity Index
	Greece	Greek Orthodox	Students + teacher	398	Religiosity Index
	Germany	Protestants	General	849	Church attendance
Roccas and Schwartz (1995)	Italy	Catholics	Students+ teachers	396	Religiosity Index
	Portugal	Catholics	Students+ teachers	374	Religiosity Index
	Czech Republic	Catholics	Students+ teachers	344	Religiosity Index
	Poland	Catholics	Students+ teachers	385	Religiosity Index
	Hungary	Catholics	Students+ teachers	300	Religiosity Index
Burris and Tarpley (1998)	USA	Mostly Christians	Students	107	Church attendance
Bilsky and Peters (1999)	Mexico	Catholics	Students	107	Church attendance
Kusdil and Kagitcibasi (2000)	Turkey	Muslims	Teachers	183	Religiosity Index
Dollinger (2001)	USA	Christians	Students	102	Religious auto photography
Schwartz et al. (2002)	Israel	Jews	Students	200	Religiosity Index
Devos et al. (2002)	Switzerland	Catholics + Protestants	Students	265	Religiosity Index
Roccas et al. (2002)	Israel	Jews	Students	246	Religiosity Index
Anciaux (2002)	Belgium(French)	Catholics	Old-aged	131	Religiosity Index
Saroglou and Galland	Belgium (French)	Catholics + Muslims	Students	246	Religiosity Index
Fontaine et al.	Belgium (Dutch)	Catholics	Students + Adults	1695	Inclusion of Transcendence

Source adapted from Saroglou et al. (2004)

Saroglou et al. (2004) conducted a meta-analysis on the relationship between values and religiosity, and found that people tend to favour values that promote the conservation of social and individual order, and dislike values that allow for a limited amount of self-transcendence and hedonism. Table 3-8 provides examples of the studies conducted using Schwartz's religiosity model.

Even though Schwartz's model is widely cited in psychology with the aim of examining the relationship between values and religiosity, the model used a one-dimensional religiosity measurement (one or few items) and measures of general personal religiosity (Saroglou et al. 2004).

This could indicate a superficial religiosity measurement, especially when the aim is to study the Muslim consumers' religiosity. Now, if we cannot use the widely cited model of religiosity for reasons mentioned earlier, a fresh religiosity measurement should be developed for the study's context. However, before developing one, the concept of religiosity measurement from the Islamic perspective must be understood.

3.4.3 Religiosity Measurement from the Islamic Perspective

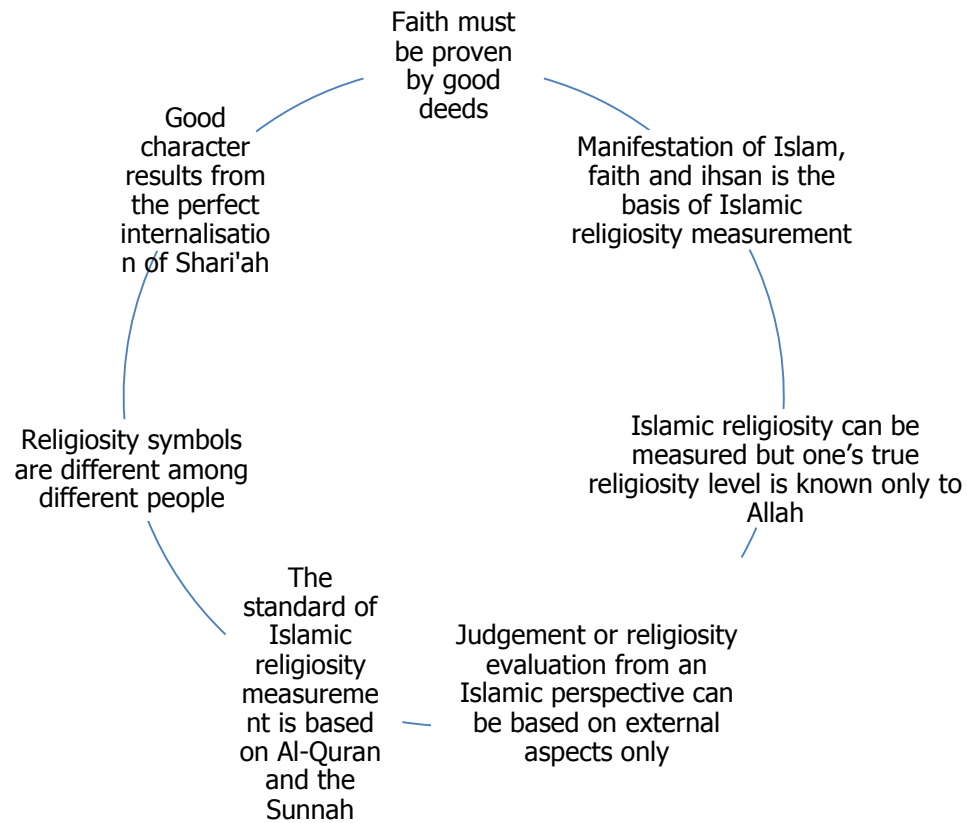
The Islamic perspective incorporates moral and transcendental elements within the production decision-making process in product development and is guided by the principles of Islamic business ethics (Abdullah et al. 2004; Ma'sum Billah 2004; Hassan et al. 2008).

A classical Islamic scholar, Imam Al-Ghazzali, in his book "The Beginning of Guidance", has outlined that religiosity comes from within (from the heart) then can be seen outwardly or in actions and vice versa (al-Ghazzali et al. 2010). Therefore, religiosity measurement should include beliefs, actions and how these actions are delivered.

A study of the Islamic religiosity index conducted by Manap et al. (2004) revealed that religiosity must adhere to a set of seven assumptions or foundational principles. These principles were arrived at using a qualitative research and analysis approach, obtained from a series of six in-depth interviews with Islamic scholars from Malaysia.

Seven major themes emerged from the analysis of the interview data, one of which was ‘principles of religiosity measurement’. These principles of religiosity measurement, as prescribed by the Islamic scholars, are shown below:

Figure 3-2: Principles of Islamic Religiosity Measurement



Source adapted from (Manap et al. 2004)

The principles presented in Figure 3-2 can be used as guidelines to develop a religiosity measurement in the study’s context, mainly because the findings are highly relevant, being derived from interviews with Islamic scholars in Malaysia.

3.4.3.1 Empirical Evidence from Religiosity Studies in Malaysia

An empirical study was conducted by Wan-Ahmad et al. (2008) investigating whether religiosity significantly affects the Muslim consumer’s behaviour in choosing IB for an ethnic group (Malay) in Malaysia. Their study revealed that the higher the age of the respondents, the higher the religiosity index of the respondents and the higher the level of

formal religious education which had been received by the respondents, the higher the level of the religiosity index the respondents would be listed at.

In addition to religious factors, electronic service is deemed one of the important factors as to why they embraced IB (Manap et al. 2004). However, the research was conducted in a specific area and the sampling of the respondents consists of only one ethnic group, which is the Malay native group.

Nevertheless, the researchers have contributed a religiosity index, which comprises of three factors, namely Islamic rules and regulations, Islamic manners and faith. Another significant contribution of the research is its demarcation between three levels of religiosity, which are the casual, moderate and devout (Wan-Ahmad et al. 2008).

Another research conducted by Abdullaah et al. (2004) into religiosity in the context of Malaysian youth revealed that young people surveyed at a higher score on Islamic beliefs/world view dimensions than on religious personality/practice constructs. This implies a more consistent level of basic Islamic understanding concerning an Islamic worldview, with a gap between knowledge/worldview and practice/religious personality.

Furthermore, there are clear differences in scores across the selected groups of young people. For example, university students, organisation-affiliated, factory worker youth and political party youth all recorded higher scores on both dimensions, while Serenti³⁸ youth and youth 'at-large' scored lower on both dimensions.

University youth scored the highest for belief/worldview while political party youth scored the highest for personality/practice (Wan-Ahmad et al. 2008). This is also supported by Wan-Ahmad et al.'s (2008) study, which found that age has positive correlation with religiosity. Based on the above, the following hypotheses are developed for this research:

H 22: Age has significant influence on religiosity.

H 23: Formal/Religious education has significant influence on religiosity.

³⁸ Serenti is a drug rehabilitation centre in Malaysia.

As mentioned in the previous chapter, the ability of a bank to comply with *Shari'ah* is a dimension in religious and ethical service quality that could affect customer satisfaction. However, there is no contextual empirical evidence showing that consumer perceptions of the ability or otherwise of a bank to comply with *Shari'ah* is influenced by their own religiosity level and none explains how they are related. The next section will try to conceptualise the connection between religiosity and consumers' perception on *Shari'ah* compliance in IB.

3.4.4 *Shari'ah* Compliance Affecting Banking Behaviour

Shari'ah is a network of injunctions and rules of behaviour. Compliance is rewarded in this world and hereafter. Interest (*riba*), gambling and uncertainty lead to injustice and are therefore prohibited. To be 'ethical' is to stay clear of prohibited activities and instead do what is obligatory and recommended. *Akhlaq*³⁹ or good character is the disposition to act in accordance with the dictates of the rational soul.

Compliance with *Shari'ah* is defined as the ability of the Islamic banks to follow Islamic law and operate under the principles of IB and economics. Compliance with *Shari'ah*, however, varies according to the level of religiosity of the banking users due to differences in *Shari'ah* interpretations, schools of thought, cultures and personal upbringing.

In the case of IB, religiosity is hypothesised to moderate consumer behaviour in financial transactions, which can be written as the following hypothesis:

H 24: Religiosity moderates overall customer satisfaction.

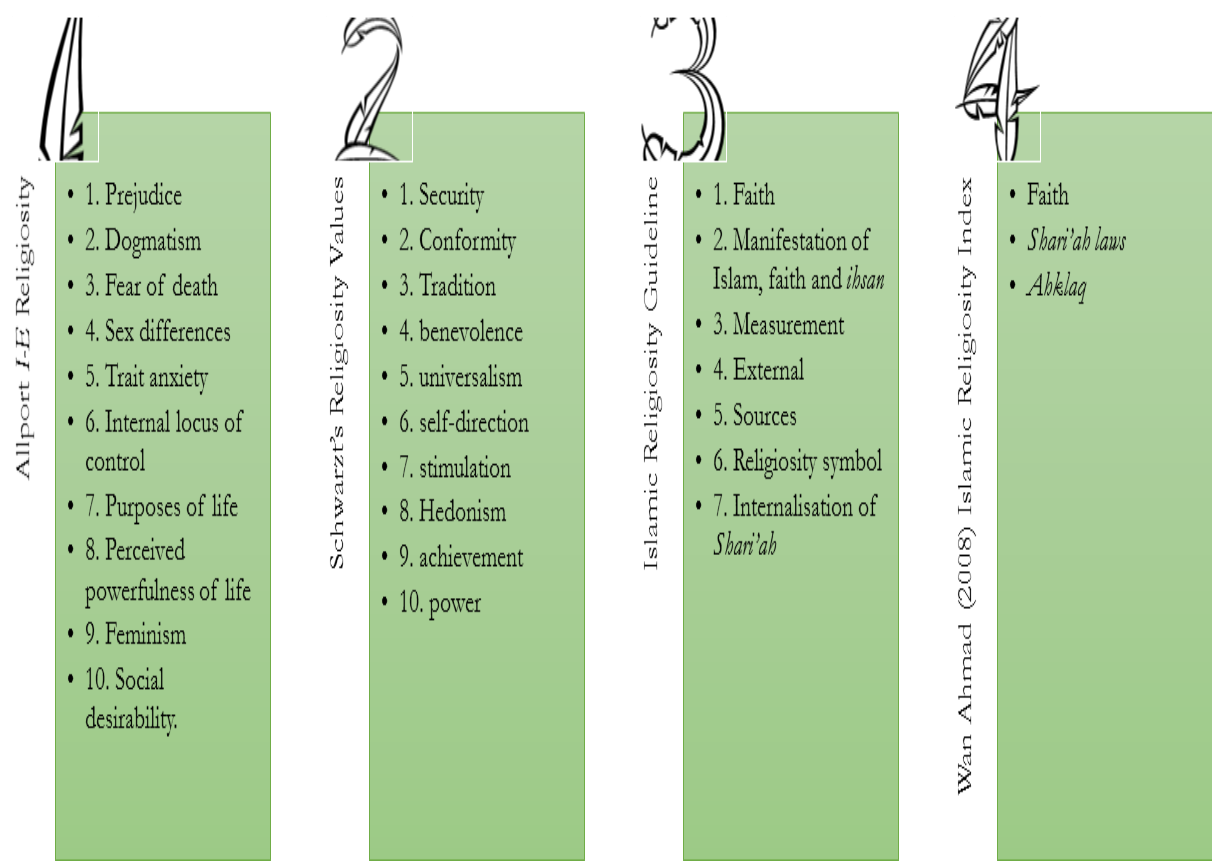
In other words, the level of religiosity will have a significant effect on the conduct of a Muslim's economic activity within his economic system. This can be contemplated in the banking and financial systems within which a religious, committed individual conducts his banking and financial services. Thus, IB and finance, being part of a Muslim's economic activities, is a Muslim's link to *Muamalat*⁴⁰, to *Shari'ah*, to Islam, and finally to *Allah*.

³⁹ Good manners according to Islamic perspectives.

⁴⁰ *Muamalat* refer to transaction between humans relations and interactions in commercial transactions.

This is the foundation or the root of IB and finance. Within the Islamic scheme of life and the *Shari'ah* framework, Islam imposes its '*ahkam*' (laws) representing norms or values to be followed by its believers. These laws or values are not man-made but are ordained by *Allah*. These laws are derived from the sources of *Shari'ah*, the two primary sources being the *Al-Qur'an* and *Al-Sunnah* (Abdullah et al. 2004). The fundamentals of the Islamic principles differentiate the beliefs of Islam from all other religions. The differences in religiosity are shown by the following figure.

Figure 3-3: The Differences between the Western and Islamic Religiosity Index



A summary of the above could be described as saying that the religiosity index measurement for Christianity, Judaism and Islam developed by Allport (1967), Schwartz (1995) and Wan Ahmad et al. (2008) are similar, with some differences to cater for dissimilarities in the teachings and rules of the respective religions.

However, this research will only focus on belief and religiosity commitment because of the difficulty in quantifying some of the Islamic religiosity as laid out in the religiosity guidelines such as *ihsan* and others.

In addition, the religiosity structure can take either a one-dimensional or a bi-dimensional view. The one-dimensional view will have a continuum of religiosity level. The bi-dimensional view will look at religiosity in two dimensions, as shown in Table 3-9. These views were adapted from the measurement of attitude structure in psychology (Maio and Haddock 2010, p. 34).

Table 3-9: Muslim Religiosity – Bi-dimensional

	Agree on Commitment items	Disagree on Commitment items
Agree on Faith items	Pro-religious	Liberal
Disagree on Faith items	Non-believer	Non-religious

In addition, the study also attempts to make product specific contextual contribution in understanding satisfaction for the Islamic and conventional credit card users. Empirical evidences in the literature revealed that there are significant differences between the CCC and ICC in terms of the selection factors.

Nevertheless, it is important to highlight that there is a gap in identifying if there is any differences between different groups of users which are based on their banking preferences or credit card preferences, as mentioned earlier in chapter one. Specifically, there are three different groups for the credit card users.

They are the ICC users representing Islamic banking credit card users, CCC users representing conventional banks credit card users and credit card users who have both the Islamic and conventional credit cards. Therefore, different credit card groups are hypothesised to moderate overall customer satisfaction.

H 25: Different credit card credit groups moderate overall customer satisfaction.

The findings will add to the knowledge on the differences of different credit card user groups to the marketing literature and the banking industry as a whole.

3.5 CHAPTER SUMMARY

This chapter has outlined three objectives in understanding the roles of religion in customer satisfaction. The first objective of this chapter has been to define the scope of the study with regard to the impacts of religion towards consumer behaviour. This chapter has discussed the scope of the study in examining consumer behaviour instead of looking at it from macroeconomic aspects. A discussion then followed about the relationships between religion and consumer behaviour.

Secondly, the chapter aimed to review the literature in consumer behaviour on the concepts of religiosity. Empirical evidences from the literature were presented to determine the relationships between the three concepts with consumer behaviour. The literature shows that the most prominent concept in affecting consumer behaviour is religiosity.

Linked to the second objective, the third objective of this chapter has been to discuss the measurement of the religiosity concept from various perspectives. The literature found in the second objective supported that religiosity influences consumer behaviour to a varying degree depending on the individual's own religiosity.

Highly devout individuals behaved differently compared to moderately and liberal individuals. Hence, researchers have tried to understand the mechanics of religiosity and consumer behaviour by measuring individual religiosity. The discussions on the concept of religiosity measurement from different perspectives and how religiosity should be measured according to an Islamic perspective were also presented. Religiosity can be measured from an Islamic perspective on the condition that specific guidelines must be adhered to.

CHAPTER 4 : THE CONCEPTUAL MODEL OF ISLAMIC CREDIT CARD CUSTOMERS' SATISFACTION

Customer service quality is expected to be a major determinant of branch banking performance and potential (Sadek et al. 2010).

4. INTRODUCTION

Several customer satisfaction models have been discussed in chapter two. In addition, the discussion of additional service quality dimensions affecting customer satisfaction was also discussed in the same chapter. The discussion was followed by a discussion about the possible impact of religiosity and compliance with *Shari'ah* to RESQ was then discussed in chapter three. The preceding chapter two and three were written to investigate the existing theoretical and empirical studies in order to build a basis for the overall conceptual framework of the research.

The first objective of this chapter is to highlight the conceptual development of the research based on the literature review conducted in the preceding chapters. This will be achieved by comparing several customer satisfaction models. The models were improved by creating an integrated research model. The proposed model incorporated new service quality and customer satisfaction variables. This study adopts a systematic abductive social science research approach. Research hypotheses are proposed to validate the research model integrating three models as presented in chapter two and three.

The second objective is to develop a complete customer satisfaction model for ICC users in the IB industry comprising functional (FSQ) and technical service quality (TSQ). Theoretically, the proposed model will attempt to integrate functional quality (Servqual), technical quality (Groenroos, 1982), and other additional dimensions as discussed in the previous chapters into a single model.

The model also proposes a new second order construct named religious and ethical service quality (RESQ). RESQ derives from two constructs namely the compliance with *Shari'ah* and the ethical dimension. In addition, this study attempts to evaluate the moderating effect of individuals' religiosity on the relationship between service quality and satisfaction with

ICC as found in the qualitative results discussed in chapter five. The overall research framework will be discussed in the last section.

4.1 CONCEPTUAL DEVELOPMENT

The review of relevant customer satisfaction models in chapter two revealed that there are only a few models, which are highly cited in journals. For instance, the Servqual model developed by Parasuraman et al (1988) is one of the models that are widely accepted by academicians and practitioners even though there are some controversial debates over the validity of its methodology. The model is based upon the Gap theory where the customers' expectations will be subtracted from the customers' perceptions of the service providers' performance (See Chapter 2, p. 46). However, the process of subtracting the performance and expectation of the customers' perceptions gaps have been argued to be statistically inferior when compared to using only performance (Cronin and Taylor 1994) while others have found the opposite (Jain and Gupta 2004).

The addition of customers' expectations in the questionnaire creates complexity and confusion to respondents in differentiating between the actual performance and their prior expectations (Fogarty et al. 2000; Brady et al. 2002; Jain and Gupta 2004). It leads to the validity of the Servqual being called into question. In addition, the model focuses on functional quality and its coverage of technical quality is under scrutiny. Despite comments on its methodology, however, Servqual has made a big contribution to the existing literature and the industry.

Another important model in service-quality literature is the technical model developed by Groenroos (1984). This multi-dimensional model includes both the technical service quality and the functional service quality dimensions. The service outcome and the service processes are taken into consideration in evaluating customer satisfaction. The major difference of the Servqual and Technical model is the technical orientation (Lassar et al. 2000).

The concept of customer satisfaction can be treated as multi-dimensional. The multi-dimensional constructs were discussed separately in chapters two and three (Avkiran 1994). The customer satisfaction dimensions are divided into three 2nd order factors. These second

order dimensions, as identified in the previous chapters, are functional service quality, technical service quality and religious and ethical service quality dimensions.

All these multi-dimensional customer satisfaction dimensions will form the overall measure for customer satisfaction. The second order level is the level where all service quality dimensions such as FSQ, TSQ and RESQ will affect overall customer satisfaction through respective dimension satisfaction i.e. FSQ Satisfaction, TSQ Satisfaction and RESQ Satisfaction. The first-order level will comprise of RATERs (FSQ dimensions affecting FSQ), TECET (TSQ dimensions affecting TSQ), compliance with *Shari'ah* (ability of the banks to fulfil their *Shari'ah* obligations and principles affecting RESQ) and ethics (the ethical dimension affecting RESQ).

4.2 MODEL AND CONSUMER GROUP COMPARISON

There are two basic issues in comparing customer satisfaction models. Firstly, different models have different dimensions, capabilities and functionality requiring the formulation of a thoroughly thought out single model encapsulating the strengths of each of the different models. Secondly, different consumer groups will have different perceptions on service quality and satisfaction thus challenging the marketers of services to be more sensitive to these differences.

A brief review and theory comparison in the field of customer satisfaction research has been conducted in chapter two (2). The models have contributed significantly in identifying the antecedents to customer satisfaction in either the academic or the working industry after they have been tested empirically in prior research and proven to be reliable and valid.

Examples of these models are Servqual developed by Parasuraman et al. (1988), Technical Model developed by Groenroos (1988); Serveperf by Cronin and Taylor (1982); Bankserve developed by Avkiran (1992); BSQ developed by Bahia and Nantes (1994); Systra-SQ developed by Aldaigan and Buttle (2000) and Carter developed by Othman and Owen (2002). The models mentioned above are used to evaluate customer satisfaction for specific products or industries.

In addition, a similar model based on the Gap theory measuring national customer satisfaction indexes has been introduced in countries such as the United States, Sweden,

Germany, Norway, and Switzerland with the ability to measure satisfaction across national product categories and services (1994; 2002). An examination of the models has concluded that Servqual, Gronroos Technical model, Carter and Servperf are most related to the proposed research model.

However, some additional dimensions from Bankserve and Systra-SQ would also contribute to the overall research design (see chapter two). Servqual as one of the prominent models in customer satisfaction; using absolute disconfirmation (P-E)/E or using (P-E); is argued to have some weaknesses in its methodology. The process of subtracting the P and E affects the validity of the overall result.

Cronin and Taylor (1992) have suggested that customer perceptions of the service provider's service quality performance result (Servperf) is superior to the result of (P-E). Thus, there is no need to subtract customers' expectations. Furthermore, not having similar performance and expectation questions reduces the survey complexity, which often creates confusion to the respondents.

The respondents of the survey are customers who use the services offered; and they could be categorised into different types of groups depending on their demographic backgrounds, culture, and religious and ethical beliefs. In general, credit card consumers can be divided into three different groups such as CCC, ICC and Both.

The Muslim consumers can be further classified such as suggested by Wan-Ahmad et al. (2008) in a research conducted to investigate Muslims' banking preferences in Malaysia. They are classified; based on their religiosity commitment, as casual, moderate and devout. However, this study has categorised the respondents into four different groups: highly religious, moderately religious, casually religious and liberal.

4.2.1 Hypotheses for Model Comparison

The model developed in this study is an integrated model following Servqual (FSQ), Technical (TSQ) and Religious and Ethical Service Quality (RESQ) models. Each model assess different dimensions of customer satisfaction such the process, outcome and intangible aspects of service quality. The FSQ and TSQ models have been widely utilised in many customer satisfaction research settings as discussed in sub-section 2.5.

However, the intangible aspects of service quality is still inadequate in terms of numbers except in a research conducted by Othman and Owen (2000) in which they propose Compliance with *Shari'ah* as a dimension affecting customer satisfaction. In addition, there are also attempts by Sadek et al. (2010), Avkiran (1994), Wilson (2002) and Harvey (1995) in which they include ethical dimension to be deemed as important for customer satisfaction. This is in line with the growth of ethical banking in many parts of the western world.

Therefore, twenty-five hypotheses are proposed in this study; twenty-one of these were developed in chapter two for the FSQ (8 hypotheses), TSQ (7 hypotheses) and RESQ (6 hypotheses) service quality models in which will affect overall customer satisfaction through FSQ Satisfaction, TSQ Satisfaction and RESQ Satisfaction respectively. They include the additional service quality dimensions (i.e. staff conduct, communication and technology and ethical quality satisfaction) which are additions to the FSQ, TSQ and RESQ models.

Three hypotheses were developed in chapter three, which dealt with religiosity and the final hypothesis is developed in this chapter to investigate whether different credit card groups moderates overall satisfaction. In addition, the complexity of different groups in the credit card industry i.e. subscribing to CCC, ICC and Both creates a need for an assessment if the model can fit for all groups or in other words, can one size fits all?

4.3 CREDIT-CARD USERS SATISFACTION MODELS

Based on the twenty-five hypotheses listed in the previous section, an overall research framework can be designed combining Servqual, Technical, and Carter models at the same time. In addition, the possible effect of religious commitment and ethical values towards customers' satisfaction were also incorporated in the research model.

In this section, a brief discussion of how the disintegrated different models are integrated into a comprehensive customer satisfaction model will underpin the understanding of the research design. A summary of the customer satisfaction model's development is illustrated where Servqual was developed based on the Gap theory (See chapter two for a detailed discussion).

The overall customer satisfaction is formed from a combination of functional, technical, *Shari'ah* and ethical quality satisfaction to give a complete measurement of the banking service quality processes and its outcomes.

4.3.1 Functional Service Quality Model (FSQ)

As discussed in chapter two, Servqual has been used by many in different types of industries including banking. Empirical evidences reviewed in chapter two revealed that the consumers perceived the dimensions as positively significant in affecting customer satisfaction (See subsection 2.5.1)

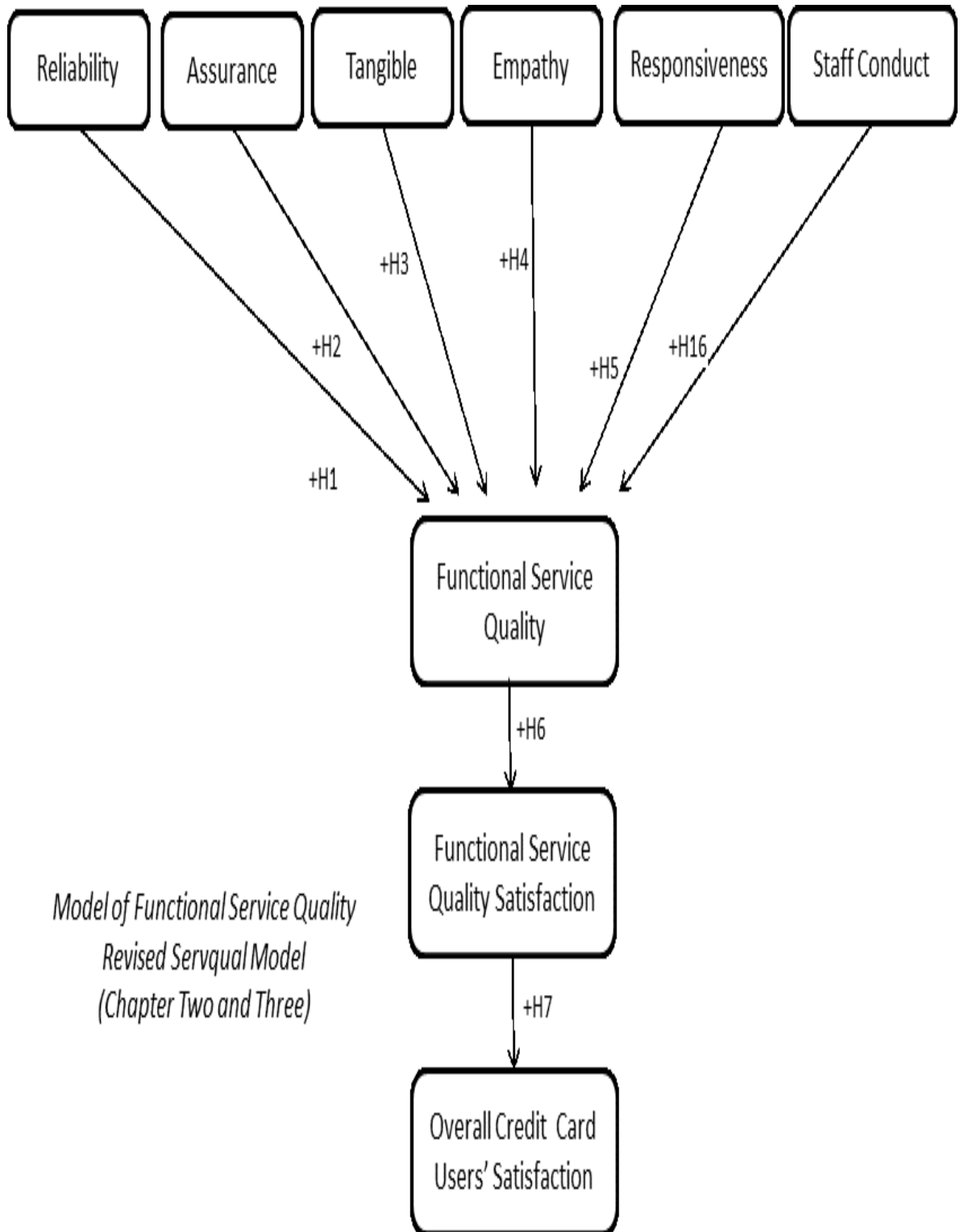
However, the model is not free from criticism. Many disagreed with the usage of subtracting service quality performance and expectation of the consumers and many disagreed on the possible antecedents of customer satisfaction (Cronin and Taylor 1992; Cronin and Taylor 1994; Carman 1999).

Therefore, either many have revised the Servqual model or many have created new models in assessing customer satisfaction in the banking context (See a list of new models created in the banking industry in subsection 2.4). All the dimensions in Servqual are categorised as the functional service quality (FSQ) or how the services are provided i.e. the process.

In addition, there is an additional dimension found to become a potential antecedent to FSQ i.e. staff conduct. Staff conduct or civilised conduct and presentation of the staff that will project a professional image to the customers was found to be the driver of customer satisfaction in many eastern countries such as Pakistan, Australia, China and Indonesia (See sub section 2.6.1).

Therefore, this study hypothesised that the FSQ quality dimensions as the Servqual model and staff conduct positively affects FSQ for all the three groups of credit card users i.e. CCC, ICC and Both. The FSQ will positively affect FSQ Satisfaction and FSQ Satisfaction will positively affect overall satisfaction. The revised FSQ model including the additional staff conduct dimensions is shown in the following figure:

Figure 4-1: The Revised FSQ Model Including Staff Conduct Dimension



Hypotheses developed for FSQ

H 1: The reliability (R) dimension positively affects FSQ.

(See p. 48)

H 2: The assurance dimension (As) positively affects FSQ. H 3: The tangible (Tan) dimension positively affects FSQ..

H 4: The empathy (Emp) dimension positively affects FSQ. H 5: The responsiveness (Res) dimension positively affects FSQ. H 6: Staff conduct (St) dimension positively affects FSQ.

H 6: FSQ positively affect FSQ Satisfaction.

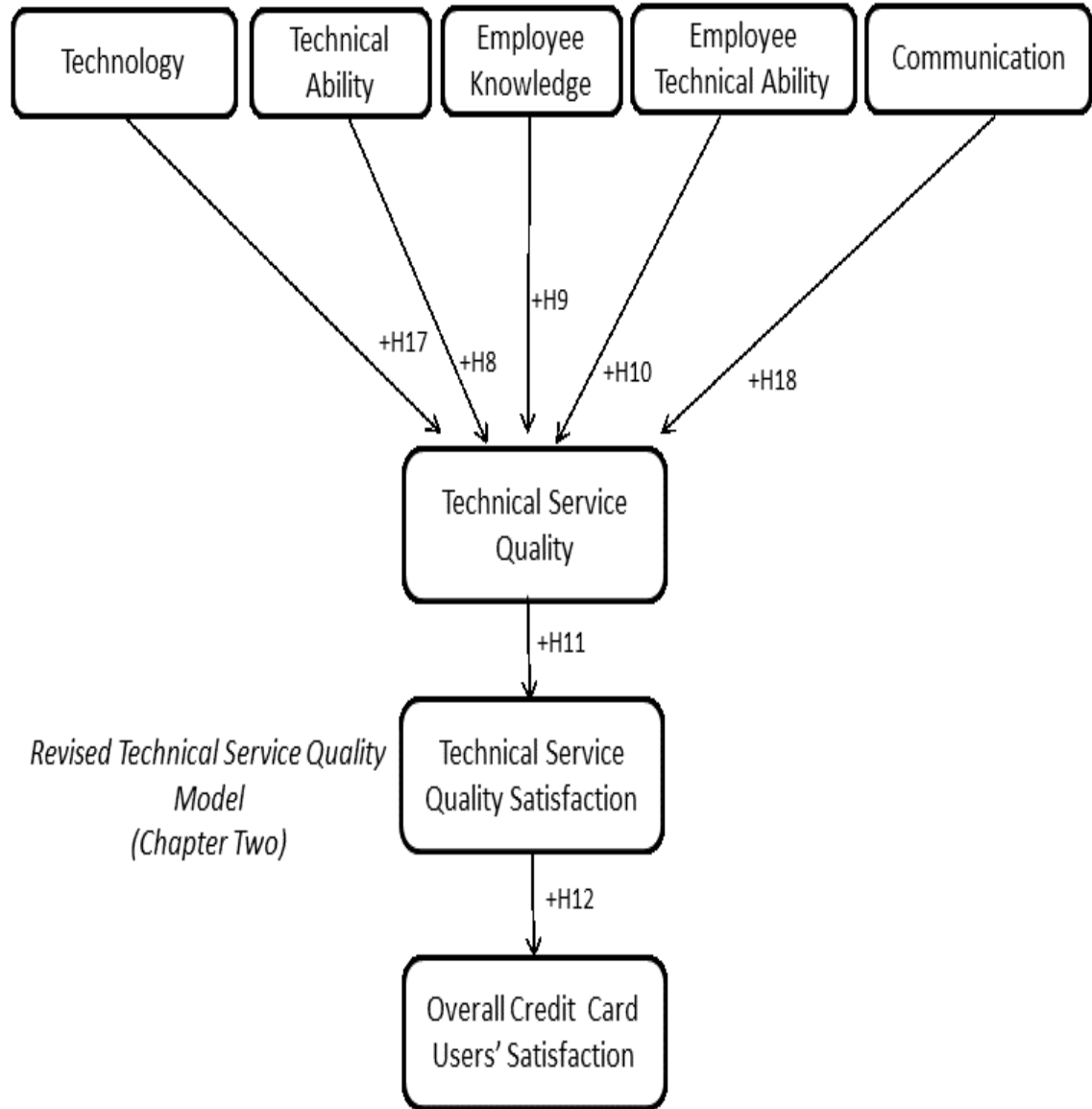
H 7: FSQ Satisfaction positively affects overall customer satisfaction.

4.3.2 Technical Service Quality Model (TSQ)

The TSQ model is proposed by Gro'nroos (1982) in which the technical and functional service quality are taken into consideration in assessing customer satisfaction. The technical quality is the outcome of the service quality processes. The TSQ dimensions were discussed in sub section 2.5.2. The dimensions are technical ability, employee's knowledge, and employee's technical ability.

In addition, there are two additional dimensions that affect the TSQ i.e. technology and communication. Technology and communication as discussed in subsection 2.62 and 2.63 are found to be important for customer satisfaction (Moutinho 1992; Stafford, 1996; Guo et al., 2008). The revised TSQ model including technology and communication dimensions is shown in the following figure:

Figure 4-2: The Revised TSQ Model Including Technology and Communication Dimensions



Hypotheses developed for TSQ

H 8: The technical ability (TA) dimension positively affects TSQ (See p. 50).

H 9: Employees' knowledge (EK) dimension positively affects TSQ.

H 10: Employee technical ability (ETA) dimension positively affects TSQ.

H 17: Technology (Tech) dimension positively affects TSQ.

H 18: Communication (Com) dimension positively affects TSQ.

H 11: TSQ positively affects TSQ satisfaction.

H 12: TSQ satisfaction positively affects overall customer satisfaction.

4.3.3 Religious and Ethical Service Quality (RESQ)

Religious and ethical service quality (RESQ) is a construct that is based on consumers' cognitive perceptions towards satisfaction. This study proposed that RESQ comprises of two constructs, namely compliance with *Shari'ah* and the ethical dimension (Othman and Owen 2002; Sadek et al. 2010). This study conceptually distinguishes between Compliance with *Shari'ah* and ethical dimension in order to explore if it could differentiate the CCC, ICC and Both credit card users.

4.3.3.1 *Shari'ah* Compliance (Compliance with *Shari'ah*)

The Carter model developed by Othman and Owen is an example of an attempt to answer whether a religious belief has any influence on consumer behaviour in the context of the banking industry. The model includes a dimension to measure the ability of the banks to fulfil their Islamic law (*Shari'ah*) obligations and operate according to *Shari'ah* requirements. The dimension was named as Compliance with *Shari'ah* and is an additional dimension to the RATER dimensions from Servqual.

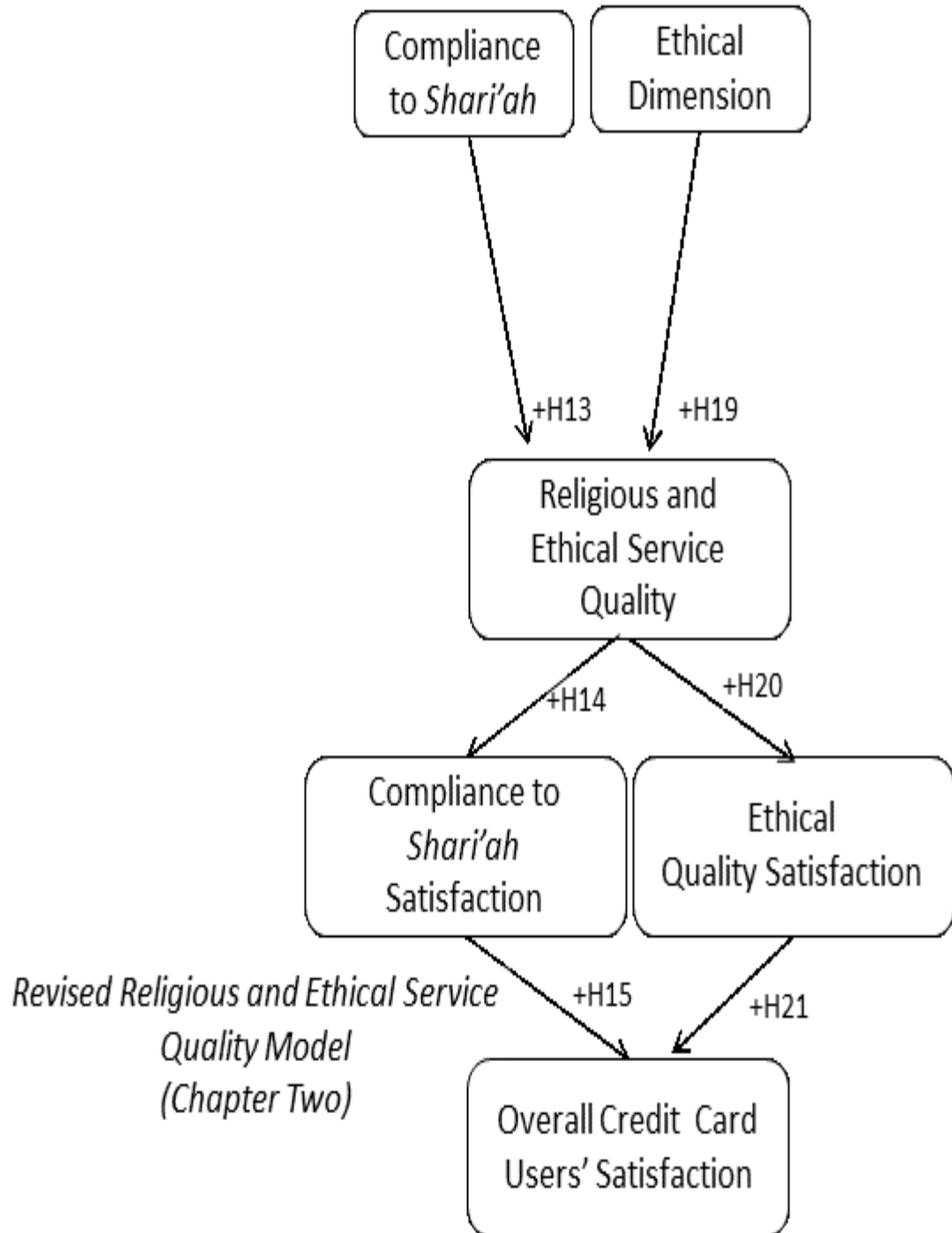
The Carter model, however, did not investigate the differences in religiosity commitment to the customers' perceptions of compliance with the *Shari'ah* dimension. In addition, technical quality is also ignored. Therefore, in this research design, religiosity commitment is to be integrated based on the customers' religiosity commitment to their religious faith, *akhlaq* and *Shari'ah* laws (see chapter three a brief discussion for religiosity). In addition to religiosity commitment, another group of customers seemed to rank ethics as one of the most important dimensions for customer satisfaction.

4.3.3.2 Ethical Dimension

The ethical dimension is a new dimension in the measuring of customer satisfaction in the banking industry. This is evident from previous literatures and the emergence of ethical or social banking; where customers have demanded that their sources and uses of funds should only be from and channelled towards businesses, organisations and governmental agencies, which operate ethically. Sadek et al. (2010) found that conventional banking users ranked ethics as having a higher importance towards customer satisfaction. Therefore, the study grouped compliance with *Shari'ah* and ethic as constructs affecting the second order factor

RESQ. Based on the above, the RESQ model is conceptualised as shown in the following figure:

Figure 4-3: The Revised RESQ Model



Hypotheses developed for RESQ

H 13: Compliance with *Shari'ah* (SC) positively affects RESQ.

H 14: RESQ positively Compliance with *Shari'ah* Satisfaction.

H 15: Compliance with *Shari'ah* Satisfaction affects overall satisfaction.

H 19: Ethical (Eth) dimension positively affects RESQ.

H 20: RESQ affects Ethical Quality Satisfaction

H 21: Ethical Quality Satisfaction affects overall customer satisfaction

4.4 THE MODERATING INFLUENCE OF RELIGIOSITY AND DIFFERENT CREDIT CARD GROUPS

Empirical studies reviewed in chapter three revealed that religiosity tend to influence consumer behaviours in many contexts such as shopping behaviour, business ethics, new product adoption, subjective wellbeing, advertising and other areas. Conceptually religiosity is the commitment of individuals towards their religious values, belief and principles, which will affect their attitudes and behaviours.

A considerable amount of literature has been published on religiosity measurement for various religions. However, religiosity from the Islamic perspectives in the context of banking is limited, warranting the study to develop such scale. This study has developed an Islamic religiosity scale to fulfil the gap in the literature. The dimensions found to form a Muslim religiosity are belief and commitment to practice (See chapter five, pg. 144). These two dimensions are conceptualised to affect Muslims behaviours in the banking industry. In addition, age factor and religious education were hypothesised to influence religiosity.

The influence of individual religiosity on customer satisfaction is not identical for all individuals. Therefore, to ensure that the model can correctly differentiate between different levels of religiosity, religiosity is hypothesised to moderate customer satisfaction. In other words, the variations of the level of adherence to *Shari'ah* rules and regulations will affect customer satisfaction. This study has categorised the Muslim into four religiosity levels i.e. highly religious, moderately religious, casually religious and liberals. The integrated model consisting of FSQ, TSQ and RESQ will be examined for these different groups and the study's exploratory results will add to existing literature. Therefore the following hypotheses are developed.

H 22: Age has significant influence on religiosity. (See p. 100)

H 23: Formal/Religious education has significant influence on religiosity.

H 24: Religiosity moderates overall customer satisfaction.

Even though, the differences between the credit card user groups such as the CCC, ICC and Both in terms of overall satisfaction have been pointed out by several studies, there is no conclusive theoretical explanation about the differences (Amin 2013). The present study hypothesised that different groups of credit card users will have different impacts towards overall satisfaction. Particularly, this study examines the moderating factor of different groups to the integrated model. The credit card groups are CCC, ICC and Both. The following hypothesis is developed.

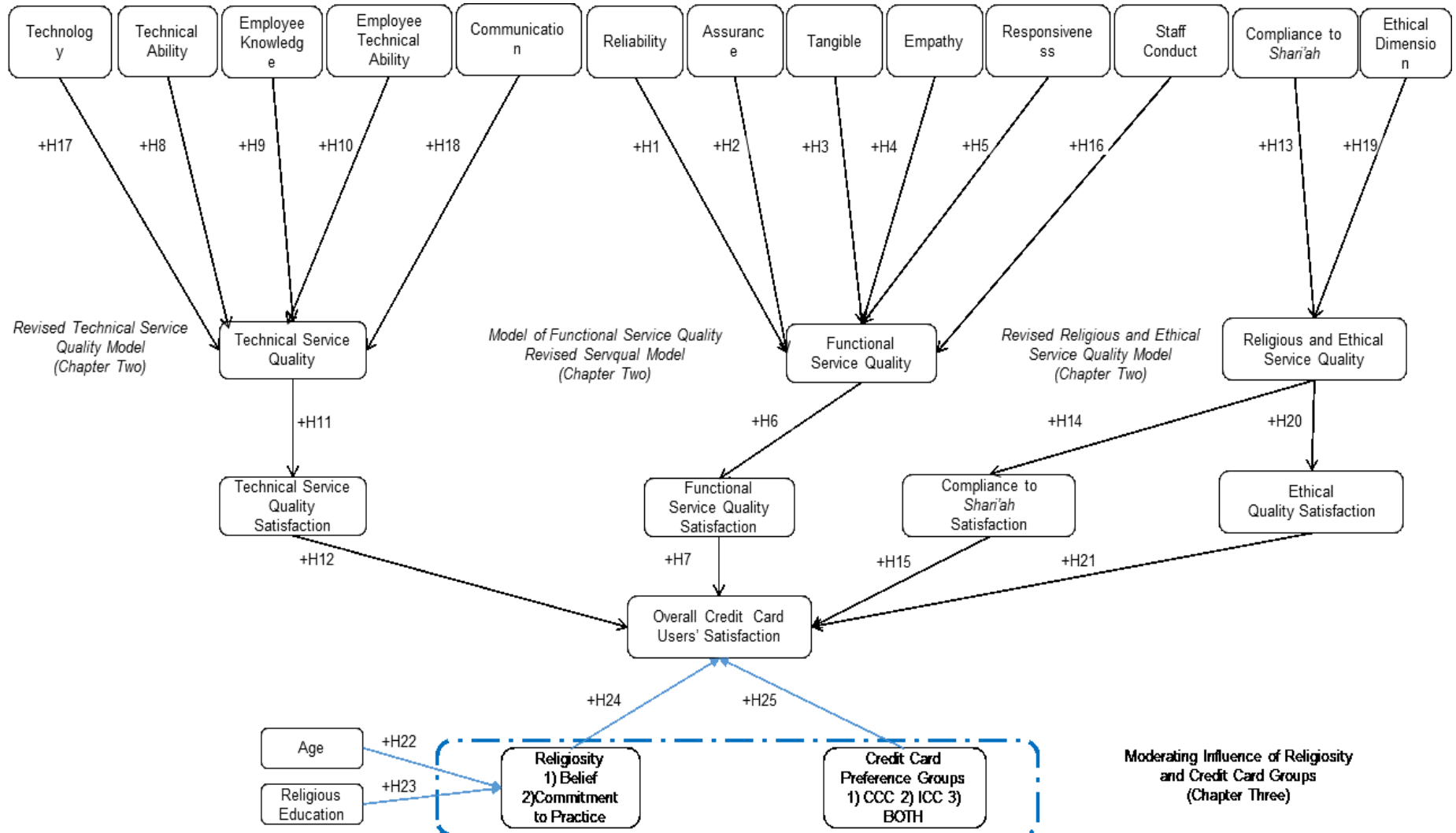
H 25: Different credit card credit groups moderate overall customer satisfaction.

4.5 INTEGRATED CUSTOMER SATISFACTION MODEL

Functional and technical service quality, derived from the Servqual (RATERS) and technical (TECET) models, where staff conduct is included in the original RATER Servqual dimensions and communication, and technology dimensions are all included in the technical model. The new additional variables are deemed important since they frequently emerged in various previous studies (See chapter two for a discussion of the additional variables).

The integration of these two models has been identified to be superior in performance compared to using the models separately (Kang and James 2004). However, since IB deals with its customers' religious belief, a customer satisfaction model incorporating religiosity can provide useful IB marketing strategies and is shown in Figure 4-4, overleaf:

Figure 4-4: Overall Research Framework for the ICCs Users' Satisfaction



4.6 CHAPTER SUMMARY

The proposed customer satisfaction model is a multi-dimensional model comprising TSQ, FSQ, and RESQ as antecedents to customer satisfaction as discussed in chapter two and religiosity in chapter three. The proposed model is comprehensive, and taking into consideration the intangible aspects. The model is a contribution to knowledge in which it combines three different disintegrated models.

Furthermore, the addition of new customer satisfaction dimensions (*Shari'ah* and ethical quality satisfaction) to RESQ will enable us to have a better understanding of the nature of religion-based customers. The model, however, will only be a success if it follows a systematic research methodology, which will be discussed in the following chapter.

CHAPTER 5 : RESEARCH METHODOLOGY

“Somewhere, something incredible is waiting to be known.” (Dr. Carl Sagan)

5. INTRODUCTION

This chapter explains the research design and methodology that are used to collect and analyse the data in order to answer the hypotheses proposed in the previous chapter. The main objective of this chapter is to link the proposed conceptual model with the empirical results that will be presented in the next two chapters. Therefore, this chapter is organised into six major sections. The first section concerns the scientific research paradigm in which a discussion on the present study's research paradigm will explain on the overall research methodology. The second section discusses the data collection method of the present study explaining the two sequential phases of qualitative and quantitative methods. The third section explains the research sampling procedures. The fourth section focusses on the measures taken to ensure a good measurement reliability, validity and unidimensionality. The fifth section explains the necessary steps taken for screening and cleaning the data. The sixth section explains on the analysis methodology used by the present study.

5.1 SCIENTIFIC RESEARCH DESIGN

The research endeavours have a primary purpose of expanding knowledge and understanding of ICC users' satisfaction in the Malaysian banking context. Abenerthy et al. (1999) argue that a fundamental axiom for research is that the method chosen and used for a study should be based on, and appropriate to, the research question posed (Yousafzai 2005).

In addition, the usefulness of a research project depends on the overall quality of the research design, and on the data collected and analysed based on the design (Aaker et al. 2001). Therefore, this chapter is the spine of the study, or in other words, the pillar that supports the thesis. Eventually, the choice of methodology must be steered by the origin of scientific research paradigms (Black 2001).

5.1.1 Research Paradigms

Research paradigms can be explained by philosophical probing inquiry on three different elements which are ontology, epistemology and methodology (Denzin and Lincoln 2011; Creswell 2013). It means that researchers start a project with certain assumptions about how they will learn and what they will learn during their inquiry (Creswell 2013).

Ontology is concerned with the nature of reality or what researchers claim about what is knowledge (Creswell 2013) or is a systematic account of Existence (Gruber 2009). Ontology is the science of what is, of the kinds and structures of objects, properties, events, processes, and relations in every area of reality (Smith 2003).

Holbrook (1994) mentioned that the never-ending academic debates between different polarities variously named as cognitivist/ non-cognitivist, realistic/idealistic, naturalistic/non-naturalistic, monistic/pluralistic, intensive/extensive, and objectivist/subjectivist have created many different research paradigms, which entail a choice of methodology (Rust and Oliver 1994). Of the many mentioned above, the last mentioned appears to be widely accepted before the new millennium and in today's situation, research practices lie somewhere in the continuum between the two (Creswell 2013).

In the study context, philosophy inquiry revolves around the issue of whether satisfaction is an objective reality, or an aspect of subjectivity or the interaction between the two. For instance, customer satisfaction can be seen as falling along the continuum of extreme objectivism to the other extreme of subjectivity.

Meanwhile, epistemology is concerned with philosophical claims about the way in which the world is known to us or be made known to us (Hughes and Sharrock 1997). In other words, epistemology is the science of knowing (Babbie 2012).

The central issue in epistemology for the current study is the question of whether the same principles, procedures, and ethos can be applied to ICC users' satisfaction. Table 5-1 represents the specific epistemological views on reality, views of human nature and views of the representative scholars in each area.

Methodology is defined as the procedures of collecting data, describing, explaining and predicting phenomena using chosen methods or techniques (Bryman and Bell 2003; Rajasekar et al. 2006; Bryman 2012; Creswell 2013). In other words, methodology is the processes for studying it (Creswell 2013) or the science of finding out (Babbie 2012). Usually the methods chosen are embedded in the how the researchers view reality or ontology, and how the knowledge is acquired (epistemology).

Hirsman and Holbrook (1992) have explained that debates on the origin of knowledge were revitalised by Cartesian Dualism, which separated the material world and the human mind. Table 5-1, p. 126 shows the two different extremes of mental and material determinism in a continuum.

Cartesian Dualism also separated knowledge building into two; material determinism and mental determinism. However, the distinction of mind and matter can be traced back to Plato's Ideal and Aristotle Substance. Cartesian Dualism created a different epistemological foundation for two extreme approaches to the problem of knowledge which are objectivism and subjectivism.

Objectivism refers to logical essences or subsistence, independent of their being known or, in other words, reality might lie in the objective qualities of things, independent of a value bearer (Rust and Oliver 1994, p. 30). In other words, positivists take the view that the social world exists externally, and its properties should be measured through objective methods rather than being inferred subjectively through sensation, reflection or intuitions (Easterby-Smith et al. 1991).

In contrast, Holbrook (1994) in Rust and Oliver (1994) have stated that subjectivism refers to being dependent on and relative to human experience and entails the belief that the source of a value is within the inner world of the agent. Many researchers in customer satisfaction are positivists, empiricists or critical realists.

There are a limited number of known studies on customer satisfaction based on subjectivism. It is interesting to note that there is another view, which intermediates both paradigms, namely, the interactionist view (Creswell 2013). They advocate that there is a dyadic or relational nexus between subject and object. The relation between subject and object based

on the existence of an object is valuable upon the condition that there is a value in it (Hirschman and Holbrook 1992; Babbie 2012; Creswell 2013).

Therefore, this research accepts interactionist views of satisfaction as a relation between the subject and the object (or, more precisely, between a customer and a product). This is also in line with Islamic worldviews that require Muslim to be balanced between spiritual and material spheres of human existence, between objectivism and subjectivism (Siddiqi 1999).

5.1.1.1 The Present Study Ontology

The present study's ontological position is based on the Islamic worldview of ontology on what is reality. There are two domains of reality which are the seen reality and the unseen reality⁴¹ (Barise 2005). Seen reality is known through faculties of sense (Azram 2011) while unseen reality is unknowable through sense (Barise 2005).

The source of knowledge of the seen reality can be acquired through acquired or derived knowledge (Azram 2011), while revealed knowledge is the only source of unseen reality (Ali 1995; Barise 2005). Human intellect interacts with acquired knowledge and revealed knowledge to construct integrated knowledge (Barise 2005) or based on unity of the seen and unseen reality (Faridi 1999, p. 55).

5.1.1.2 The Present Study Epistemology

As for the study's epistemology, the researcher will follow Islamic epistemology in answering how knowledge can be acquired. There are two domains of knowledge according to Islamic epistemology: revealed knowledge (Azram 2011) and acquired knowledge (Barise 2005). Islam views the concept of human as the vicegerent of God and God is the ultimate source of both types of knowledge (Barise 2005; Azram 2011).

There are four major sources of revealed knowledge which are the *Qur'an*, the *Sunnah* of Prophet Mohammad (peace be upon him), *ijma*⁴² of Islamic scholars and *qiyas*⁴³ (Khan 1999, p. 65; Nazlida Muhamad 2011, p. 38).

⁴¹ See Quran *Surah Al-Jinn* Verse 26 and *Surah al-Hashr* Verse 22.

⁴² The unanimous agreement of the Muslim scholars

⁴³ To derive from one law of Islamic *Shari'ah* other laws on the basis of similarity.

These are the nucleus of the Islamic rulings or *Shari'ah*. The human intellect interacts with God's creation (other humans and the environment) to develop acquired knowledge. In other words, the source of revealed knowledge is God's word and inspiration, while the source of acquired knowledge is God's creation (Barise 2005).

It is important to take note that from Islamic perspective, these two knowledge, revealed and acquired, are integrated into a unified knowledge: '*ilmi*'⁴⁴ (Faridi 1999). This is based on the belief that comes from the only One existing God (Barise 2005). Thus, this study will follow this approach of epistemology of which can be said as normative and it lies in between the two extremes of objectivism and subjectivism.

7.1.1.3 The Present Study Methodology

Many scholars use a quantitative approach to measure customer satisfaction (Ndamnsa 2013; Tsang 2013). However, the need for a broad and in-depth explanation of the antecedents of customer satisfaction involving different cultural and religiosity factors has opened up an opportunity for mixed methods research, even though the majority of the work done in assessing customer satisfaction is based on quantitative methods (Newman and Cowling 1996; Burton et al. 2001).

Nevertheless, studies have also been conducted using qualitative and mixed methods. For instance, the most cited researchers, Parasuraman et al. (1988), employed a mixed method in their research and are labelled as constructivists. However, there are also elements of positivism in their mixed methods.

For instance, studies compiled in Appendix 8 revealed that the survey technique dominates customer satisfaction research. The ratio of other data collection techniques to survey is about 1 to 10, indicating that survey method is strongly preferred.

This preference is probably due to the quantitative fraternity finding it difficult to accept qualitative methods in research. In contrast, the qualitative fraternity sees the quantitative method as unrealistic since it is unable to explain a researched phenomenon in depth. The

⁴⁴ '*ilmi*' means the combination of revealed and acquired knowledge.

debate about these research paradigms would never end since the ontological backgrounds between quantitative and qualitative are incompatible (Bryman and Bell, 2003).

This situation will create chaotic arguments when involving mixed methods since some believe it is impossible to combine qualitative and quantitative methods in a research design. Bryman and Bell (2003) further elaborate that there are two versions of debates on why researchers are cautious in mixing quantitative and qualitative methods.

The first is from an epistemological view, and the second is from a technical view. The epistemological view does not support an incompatibility between quantitative and qualitative methods since the research methods are embedded in the epistemology and ontology.

However, the technical view supports mixed methods because research methods are perceived as autonomous (Bryman and Bell, 2003). Contradicting the epistemological account, the technical version sees qualitative and quantitative research as compatible, feasible and desirable. Bryman (2008) is one of the advocates of meshing quantitative and qualitative research together. He believes that “at the practical level, integrating them would be feasible and even desirable in many contexts” (Bryman 2008, p. 6).

In addition, following the ontological and epistemological position of the study, the study follows the synthesis method, where during its course of investigation it links parts to the whole, seeks overall purposes in segments and fits the pieces of reality into the total design (Faridi 1999). In other words, it desegregates the material and spiritual aspects of reality.

This study applies a mixed method research design based on the technical version in light of normative science by referring scientific findings back to the four major sources of knowledge. The Servqual model is a good example where the technical view is applied.

The model is labelled as constructivist, but there are still elements of positivism in the research (for example, developing hypotheses for the five dimensions in testing the relationship directions of the dimensions with service quality).

Table 5-1: A Continuum of Philosophical Positions on the Origin of Knowledge

Material Determinism		Interactionism				Mental Determinism
Philosophy	Empiricism (Common sense, Logical Empiricism)	Socioeconomic Constructionism (Marxism, Sociology of Knowledge, Ethnomethodology, Genetic Structuralism)	Islamic world view Normative Synthesis	Interpretivism (Hermeneutics, Semiotics, Structural Criticism)	Subjectivism (Phenomenology, Existentialism)	Rationalism (Ideals, Innate Ideas, Archetypes)
View of Reality	Physical Construction of Reality (PCR)	Social Construction of Reality (SCR)	Physical and Spiritual Unity of reality	Linguistic Construction of Reality (LCR)	Individual Construction of Reality (ICR)	Mental Construction of Reality (MCR)
View of human Nature	Homo Sensans	Homo Socius	Human as vicegerent of God	Homo Narrans	Homo Individuals	Homo Cogitans
View of relevant Method	Measurement (Survey) Experiment	Observing Documenting Discussing Reconstructing Dialectics Materialism	Can be quantitative, qualitative or mixed but normative.	Text and narrative Interviews Semiotics	Personal experience Phenomenology Projective techniques	Reasoning Structuralism Prototypes Archetypes

Source adapted and compiled from (Hirshman and Holbrook 1992, p. 8; Ali 1995; Endut et al. 2004; Barise 2005; Azram 2011).

In achieving the research objectives, many research methods could theoretically be applied and the most popular method is using a survey. However, the researcher will try to explore a mix of methods that will fit the purpose in answering the research questions (Karatepe et al. 2005).

Fontana and Frey (1994) quoted in Mason (2002) have also given examples of how different types of interviews are suited for certain situations (Mason 2002). In summary, the present study takes the Islamic worldview approaches in its ontology, epistemology and methods where it lies in between objectivism and subjectivism.

5.1.2 Research Purpose

There are three common research purposes in the literature which are exploratory, descriptive and explanatory research (Saunders et al. 2011; Babbie 2012). The aim of exploratory research is to explore and discover new ideas and insights, look for patterns or hypotheses that can be tested and will form the basis for further research (Stebbins 2001). This approach is normally used when a researcher examines a new interest or when the subject is relatively new (Babbie 2012).

Descriptive research is usually concerned with describing a population with respect to important variables, situations and events (Babbie 2012). Quantitative techniques are the most often used, while explanatory or causal research is used to establish cause-and-effect relationships between variables (Zikmund et al. 2012) or to explain things (Babbie 2012).

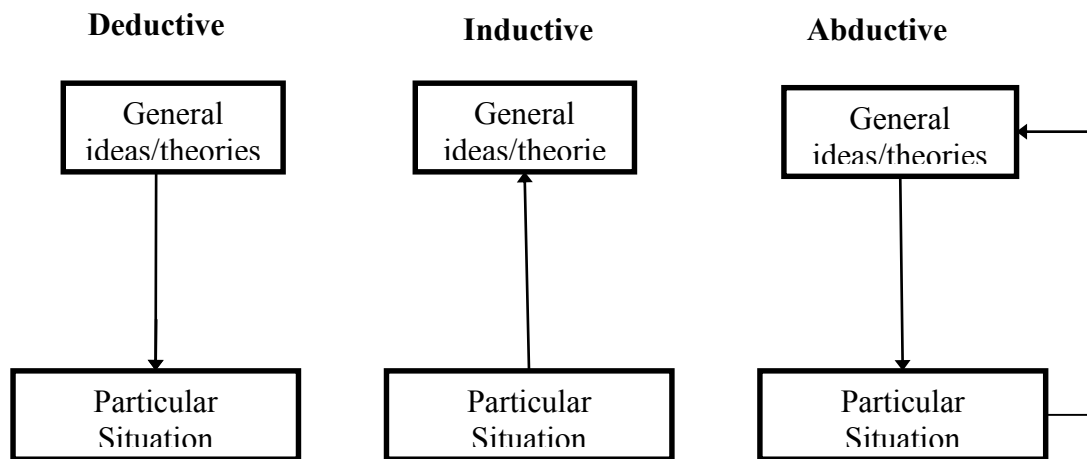
The present study's most appropriate research purpose seems to be exploratory research because it aims to discover and unravel if religious factors influence customers' satisfaction of credit card users in Malaysia. The hypotheses that were developed in the previous chapters provide answers on possible antecedents of satisfaction and its relationships with satisfaction.

Therefore, methodologically, the present study aims to investigate the antecedents of ICC users' satisfaction in light of their religiosity levels. Typical exploratory research has been applied in customer satisfaction studies, such as the Servqual (Parasuraman et al. 1988), Servperf (Cronin and Taylor 1992), technical model (Groenroos 1990) and Carter (Othman and Owen 2002).

5.1.3 Research Approach

The validity of social research can be increased depending on the research approach used by the researchers (Creswell 2013). The relationship between theory and data determines the types of research approach selected. There are three approaches: deductive, inductive, and abductive. The major difference between the three types of research approach is what comes first, the theory or the data. The following figure illustrates the relationship between theory and data for the three different research approaches.

Figure 5-1: The Three Research Approaches



Firstly, the deductive approach starts with general ideas or theory to specific particular and situation: the particular situation is deduced from the general ideas or theory. The deductive approach enables research findings to be generalised (Guba and Lincoln 2005). Reversely, the inductive approach starts with particular situation to develop theory (Babbie 2012). However, in practice these two approaches were combined (Bryman 2008).

This mixed approach, which is also known as abductive approach, is used to generate explanation or theory development rather than theory generation (Paul 1993; Nordman 2004). It starts with established theory in the literature or developed theoretical model or can be described as a continuous improvement of the empirical world and a model world (Dubois and Gadde 2002, p. 554)

Abductive approach is best suited for present research since it allows the researcher to find and add new dimensions to the study's concepts (e.g. customer satisfaction, functional service quality, technical service quality, religious and ethical service quality, compliance with *Shari'ah* and religiosity).

Although the major constructs of the present study have been generated from well-established existing literature and revealed Islamic knowledge, conducting these constructs in a relatively new context setting (i.e. ICC users in Malaysia) has required it to use abductive approach to contribute to the theory development.

5.2 DATA COLLECTION METHODS

This section is structured around a brief discussion of the nature of the data collection methods to answer the research objectives set out in chapter 1, p. 21. The present study used mixed method data collection/design using abductive approach.

There are four major types of mixed methods design which are triangulation design, embedded design, explanatory design and exploratory design (Creswell and Clark 2007). As mentioned earlier, this study is an exploratory design.

Table 5-2 shows the data collection used in which the research has undergone three phases which are the qualitative method in the first phase followed by the quantitative method in the second and third phases (Sequential data collection i.e. qual => QUAN⁴⁵).

Different types of interviews were used in the individual phase in the exploratory design with the aim of developing and testing an instrument (Creswell and Clark 2007, p. 75). An interview can be defined as a purposeful discussion between two or more people. The use of interviews assists us in gathering valid and reliable data which is relevant to the research question(s) and objectives (Punch 1998).

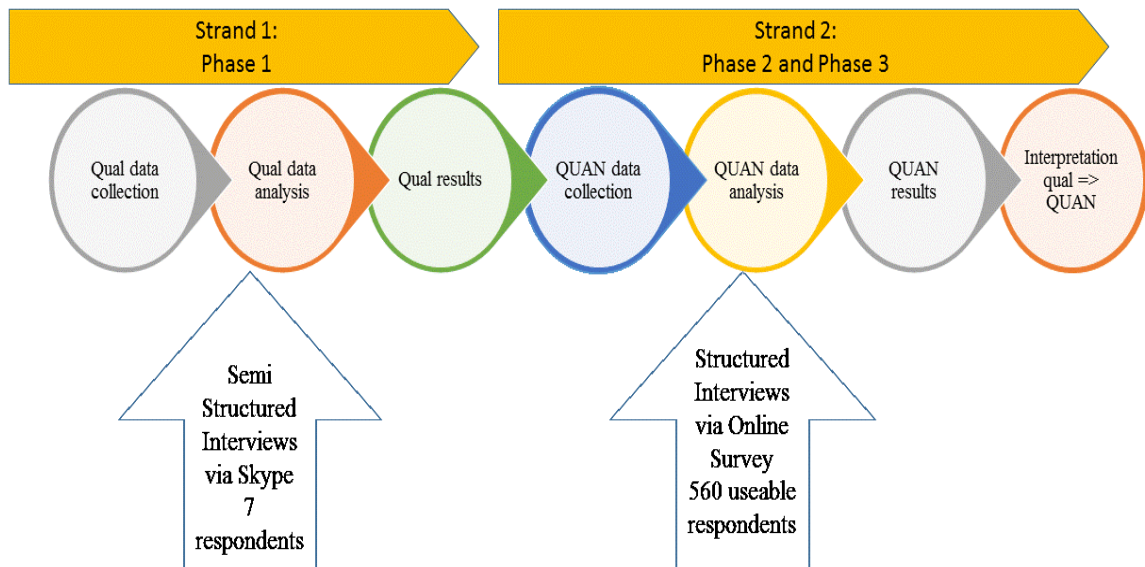
⁴⁵ The capital letters show that quantitative method is more emphasized.

Table 5-2: Methods of Data Collection

Method	Description	Number	Time Period
Literature Review	Books, periodicals, academic journals, newsletters and newspapers.	-	2009 - 2013
Phase One – Semi Structured Interviews			
Semi Structured Interviews	Conducting Skype interviews with seven ICC users in Malaysia to understand whether religion has any impacts toward satisfaction.	7 respondents	April 2010
Phase Two – Islamic Religiosity Scale			
Initial Religiosity Scale Development	Conducting religiosity literature and consumer behaviour.	-	Jan 2011
<i>Shari'ah</i> scholars opinion survey	Conducting <i>Shari'ah</i> scholars' opinion survey on the relevancy of the religiosity items.	12 respondents	4/7– 18/7/2011
3 Sorting Rounds	Sorting of items for questionnaire with the aim of ensuring content validity by Malaysian Muslims in Cardiff.	27 respondents	July 2011
Religiosity Instrument testing	1 st pilot testing for religiosity scale.	50 respondents	31/8- 2/9/2011
2 nd Pilot Study	2 nd pilot testing for religiosity scale.	180 respondents	3/9- 7/9/2011
Phase Three– Final Survey Integrated Customer Satisfaction Model			
Final Survey Content validity	Content validity by a senior university staff.	1	Sept 2011
Final Survey pre-test	Conducting pre-test involving 5 respondents, each with more than 1 year of experience using credit card.	5 respondents	Sept 2011
Final Survey Pilot Study	Conducting a pilot test to a sample of thirty Malaysian students and their accompanying spouses in Cardiff owning Malaysian credit cards.	30 respondents	Oct 2011
Final Survey Questionnaire	An online survey was distributed using purposive sampling – convenience sampling.	560 useable respondents	7 th Nov – 8 th Dec 2011

Some authors differentiate interviews between being standardised and non-standardised (Burgess 1984; Healey 1991); respondent interviews and informant interviews (Healey and Rawlinson 1993; Robson 1993) and structured, semi structured and unstructured interviews (Robson 1993). Semi-structured interviews will be used in the first phase, followed by the surveys in the second phase and third phase. This research design is shown in the following figure.

Figure 5-2: Exploratory Design – Instrument Development Model



Source: (Creswell and Clark 2007, p. 76)

This enables the researcher to use different approaches or techniques in collecting data. The selection of data collection methods in each of the phases is based on the research objectives mentioned earlier in chapter 1. In addition, a brief discussion of how the semi structured interviews were conducted will also be presented in the following section.

5.2.1 Semi Structured Interviews (Phase 1)

The first objective of the research is to identify the factors affecting customer satisfaction for ICC users in Malaysia. In this case, the researcher has speculated that one of the factors affecting ICC users' satisfaction is the users' religiosity factor despite other antecedents being possible, as highlighted by Parasuraman et al. (1988) and Groenroos (1982).

Therefore, in this phase, the aim was to explore the possible factors affecting ICC users' satisfaction, especially the religion factor. There are 10 open-ended questions in the interviews. The interviews were conducted online using Skype and recorded with digital recorder software (Pamela).

The rationale for using the semi-structured form in this phase, apart from answering the research objective and being exploratory, is that it also permits detailed answers and

clarifications regarding an issue rather than the respondents answering predefined answers as in surveys. In addition, it also allows unanticipated answers and the emergence of new insights regarding a phenomenon. Furthermore, it could reveal the logic behind a respondent's response.

In an exploratory study, semi-structured interviews may be used in order to understand the relationships between variables. It is the best way to capture how a person thinks or feels about whether religion has a significant impact on ICCs users' satisfaction. The respondents can speak freely and their facial and bodily expression can be recorded too.

In addition, it allows the interviewees to go into as much depth as they feel they want to, whereas surveys would not allow this type of freedom. The interviewers may have questions they want to ask, which will be answered over time, but the semi-structured method allows them to ask additional questions that have not been prepared in advance or written down if the opportunity arises and they are deemed appropriate.

The interviews were initiated with a question asking the respondents an easy question on why they choose an ICC. Then, the respondents were asked about whether there are any differences between the ICC and the CCC. Then the respondents were asked which service quality dimensions are important to them. The respondents were asked whether they were satisfied with the services provided by the ICC issuers. After that, the respondents were asked whether their religion has an impact on their satisfaction and they were also asked on the reason for their answer.

The questions were asked in the sequence from easy to more complicated questions, which deal with their religion. This is to prevent the respondents from being very defensive, as they might be if the questions were put forward at the beginning of the interview.

The questions were also worded to imply the respondents' own experiences rather than the experiences of other people or what the respondents perceived others or the researcher to believe (see Appendix 13, p. 372, for the semi-structured interview guide).

The transcribed conversations from the semi-structured interviews were analysed to identify key themes emerging from qualitative data. These can come from direct quotes or from

paraphrasing the common ideas arising from the respondents (Blanchard and Galloway 1994).

However, there are drawbacks to this method, the main being that it is so time-consuming; not just the collecting of the data, but the time needed to spend in transcribing and analysing the data consumes most of the available research time. In addition, it is very easy to digress and become diverted with irrelevant answers and generally inappropriate information.

Alternatively, a focus group interview could be conducted as Parasuraman et al. (1988) did, however, the limitation of the focus group interview is that the researcher has to allow more time in getting all the respondents together at one time and place. A semi-structured interview is more appropriate when taking into consideration the researcher's time, labour and budget constraints.

Another drawback of the semi-structured interview is that it may not be generalised and comparisons are difficult to make. Therefore, surveys were conducted in the second and third phase to overcome all of the problems mentioned here. The results from the semi-structured interviews are presented in the following section.

A selection criterion was developed to give a representation of the credit-card users who were highly religious people. Firstly, all the respondents were highly educated. Secondly, the respondents must either have an existing credit card (Islamic, conventional or both) or have owned a credit card in the past. Respondents who had terminated their credit cards were also included in the sample in order to avoid a bias of positive answers from satisfied credit-card users.

The inclusion would provide a clue to the reasons why he/she had done so. Lastly, all the respondents were in the same religious denomination (i.e. Muslims). The researcher emailed online semi-structured interviews followed up by a telephone interview via Skype. The telephone interviews were recorded using Pamela for Skype software and the interview findings are presented in the following section.

5.2.1.1 Interviews Findings

Seven respondents were interviewed for this research, and their demographic profiles are presented in Appendix 17, p. 388. Their age range is in between 29-37 years. Four respondents were male and three respondents were female. Three respondents had two credit cards; one had three credit cards and one respondent each had one and four credit cards. Lastly, one used to have two credit cards before terminating both credit cards. Six major questions were asked of the respondents (see Appendix 13, p. 372).

In this preliminary study, we were interested in the reasons why the customers choose ICCs, to see if there are any differences between ICCs and CCCs from their perspectives, the most important being service quality, to find out whether their religiosity had any effect on overall satisfaction level with their ICC. The discussion of the findings is given below.

5.2.1.2 The Impact of Religion towards Selecting ICCs

The interview results of the seven respondents show that religion has a vital role in the selection of an ICC. For example, the respondents in the interviews specifically mentioned the words *Shari'ah* compliance, Islamic, Islamic teaching and *Shari'ah* principles. The respondents selected their ICCs because they wanted to comply with *Shari'ah* principles in relation to the prohibition of *riba*⁴⁷. The finding is in tandem with researchers who conducted banking selection studies such as Gerard and Cunningham (1997), Robson (1993), Metawa and Al-Mossawi, (1998), Naser et al. (1999), Othman and Owen (1999) and Abbas et al. (2002).

These studies found that the religion factor is significant for consumers in choosing their financial services products. Three of the respondents mentioned that no compound interest charge was one of the reasons why the ICC was preferable to them. The respondents perceived that with the ICC, the risk of uncertainty in terms of the interest getting higher due to compound interest, as with a conventional credit card, could be avoided.

The ICC issuers seem to have succeeded in portraying that an ICC is more certain in terms of the total profit that will be charged by the bank (sometimes referred to as a ceiling by the

⁴⁷ Interest.

customers). One of the respondents even mentioned that their choice of conversion from the conventional credit card towards an ICC was a symbol of purifying oneself.

5.2.1.3 The Differences between ICCs and CCCs as Perceived by the Respondents

The respondents are in a consensus in their views regarding whether there are any differences between the ICCs and conventional credit cards. Some of the examples brought up by the respondents included the ceiling price or the maximum amount that the ICC issuers can charge, the *akad*⁴⁸ for ICC issuance and the control mechanism that prevents the card users from purchasing or using prohibited products and services such as alcohol.

For example, the CCC will charge interest from the remaining outstanding balance, and this will be compounded until the total outstanding balance is fully paid. In contrast, the ICC will have a ceiling amount that the bank can charge as profit. This is because the ICC contracts are based on a *Kafalah*⁴⁹ guarantee contract or on *bay' al `inah*⁵⁰ instantaneous two parties' sales and purchase, or on *Tawarruq*⁵¹ three parties' sales and purchase. The Islamic contracts might be complicated, but these contracts are used by the banks issuing ICCs in order to avoid problems regarding interest prohibition.

5.2.1.4 The Credit Card Facilities Perceived as Important

In terms of credit card facilities, which are deemed to be important by customers, the important factors are minimum service charges for cash withdrawals, the ceiling profit charged and the control mechanism in the usage of the ICCs for buying prohibited products and services. In addition, other service quality dimensions, as offered by conventional cards, are also deemed to be important.

The findings support the Servqual functional quality dimensions developed by Parasuraman et al. (1988) and the technical service quality measure developed by Groenroos (1982; 1990). In addition, the religious and ethical service quality dimension that is related to complying

⁴⁸ Contracts

⁴⁹ Normally referred as *Kafalah bi al-dayn*, is a guarantee for a debt owed by a party.

⁵⁰ Refers to a contract which involves selling and buying back transactions of an asset by a seller to the customer. The seller will sell the asset on a cash basis but the customer will buy back the asset on deferred payment at a price higher than the cash price.

⁵¹ Buying a commodity with deferred payment and selling it to a person other than the buyer for a lower price with immediate payment.

with *Shari'ah* principles, as expressed by the respondents above, is incongruent with Othman and Owen (2002). The findings supported that the service quality dimensions have a positive impact on Islamic credit users' satisfaction.

5.2.1.5 The Impact of Religion towards Satisfaction

In assessing the levels of impact of religion towards the respondents' satisfaction, the respondents have been asked whether their religion had an impact on their level of satisfaction. All seven respondents answered that religion has an impact on their satisfaction, something that is not captured in the service quality models developed by Parasuraman et al., (1988) and Groenroos (1982; 1990).

However, Othman and Owen (2002) added the religion factor and named the variable compliance with *Shari'ah* as an additional service quality dimension in the Servqual model developed by Parasuraman et al. (1988). Even though Othman and Owen (2002) have identified religion as one of the antecedents, their model did not include a technical quality dimension (Groenroos model) as one of the antecedents to customer satisfaction. Therefore, there is a gap in the model improvement whereby all the three models could be integrated to become a parsimonious comprehensive model.

In addition, the analysis of the interview also noted that one of the respondents had different opinions regarding credit cards issuers which he wanted to use due to the level of religiosity as mentioned by Assadi (2003) which influences on the consumers' cognition and behaviour. He believes that the fully-fledged IB is better at implementing *Shari'ah* contracts than Islamic bank subsidiaries whose parent companies are conventional banks.

The results support the claims that religion has a positive impact on ICC satisfaction. These results show that the level of commitment in the respondents' attitudes is very high and can be categorised as internalisation, which means that deep-seated attitudes are internalised and become part of the respondents' value system. These attitudes are very difficult to change because they are so important to the respondents (Abbas et al. 2003). However, their impact would decrease, as the level of religiosity is higher, as explained by one of the respondents.

In summary, the findings from the analysis revealed that the ICC users, as consumers of financial services, choose Islamic cards as a symbolic consumption in adhering to Islamic

rules and regulations. They preferred the ICC because they perceived that there are differences between the ICC and the CCC. The ICC issuers (in this case the IBs) have managed to differentiate their credit cards services from the CCC issuers. The IBs target Muslims who see taking and giving interest as a sin.

Even though the ICC issuers differentiated their products by creating awareness of the prohibition of interest in the Muslim society and the need to embrace ICC, the Islamic banks must still ensure that they can bring in new customers while maintaining their existing customers and increasing their brand equity by offering high service quality, which leads to satisfaction. The ICC users' satisfaction has been identified as similar to those with conventional credit cards, however, the religion factor is deemed very important for ICC users. The preliminary findings in the semi-structured interviews will be facilitated from the main findings of the survey in phase 2 and 3.

5.2.2 Islamic Religiosity Scale Development (Phase 2)

This section will address the steps taken in developing the Islamic religiosity measurement that has to go through three different stages. The stages are stage 1 (Initial religiosity scale construction), stage 2 (Sorting procedures) and stage 3 (Instrument testing). Figure 5-3 shows the overall methods used in the scale development.

The goal of stage one is to collect all relevant religiosity measurements in the consumer behaviour literature and to identify the appropriate religiosity items, which are relevant to Islamic principles and guideline according to expert opinions.

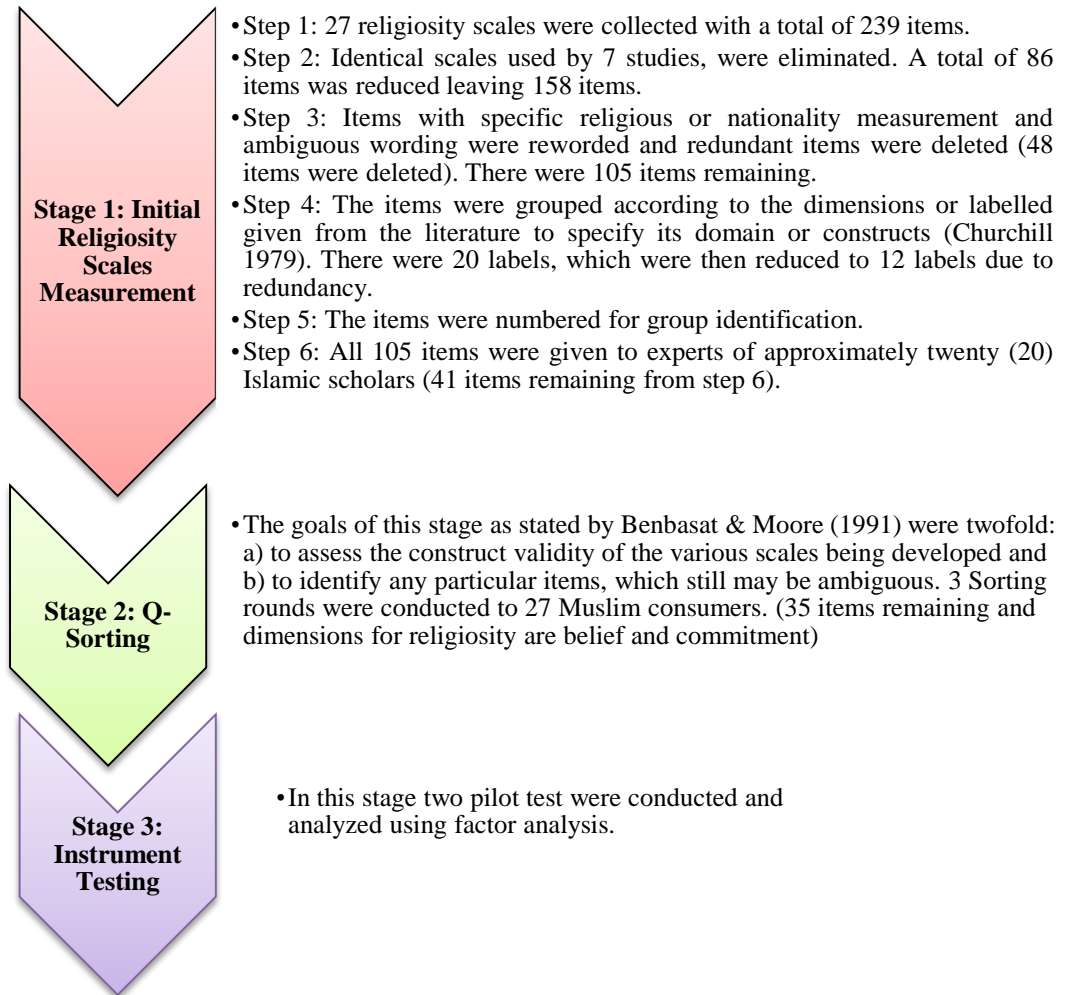
The goals of the second stage as stated by Benbasat and Moore (1991) were twofold: a) to assess the construct validity of the various scales being developed and b) to identify any particular items, which may still be ambiguous. Judges were requested to sort the various items into dimension or construct categories in order to achieve the goals. This technique is similar to Benbasat & Moore (1991) and Bhattacharjee (2002).

The third stage of the development process is testing the overall instrument, which is performed by randomly ordering items from the two scales, belief and commitment to

practice into a common group. Questionnaires were distributed to a convenient sample from the researcher's personal contacts via email and Facebook.

Figure 5-3: The 3 Stages in the Religiosity Scale Development

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Two pilot tests were conducted and the data were analysed using factor analysis. The results from the factor analysis revealed that religiosity is multidimensional comprises of belief and commitment to practice. All the stages in the Islamic religiosity development are explained further in detail at Appendix 10, pg. 354.

5.2.3 Survey (Phase 3)

In the third phase, the integrated customer satisfaction model data can be analysed using statistical analysis. Aaker et al. (2001, p. 218-229) mentioned that “measuring behaviour

usually involves four related concepts: what the respondents did or did not do; where the action takes place; the timing, including past, present, and future; and the frequency or persistence of behaviour.

In other words, it often means assessing what, where, and how often”. This could be done by employing a survey. Surveys are standard format of questions with an emphasis on fixed response categories and systematic sampling, and loading procedures combined with quantitative measures and statistical methods (Hill 1996). The majority of researchers in the business field use this type of interview. The general procedure followed (adapted from Churchill, 1979; Parasuraman et al., 1988) in developing the customer service quality instrument is summarised below:

- i) Define construct.
- ii) Identify domain, i.e. dimensions.
- iii) Generate items on dimensions.
- iv) Collect data (pilot).
- v) Purify instrument.
- vi) Collect fresh data from a new sample on a set of items to emerge from the previous step.
- vii) Further purify instrument.
- viii) Evaluate the reliability, dimensionality and validity of the instrument (Saunders et al. 1997).

There are two types of surveys that could be employed by the researcher i.e. a customer perception survey or a market standing survey (Hill 1996). The customer perception survey will only target a particular company’s customers whereas the market standing survey will require a sample of buyers in the marketplace. This research chose the market standing survey to determine the overall ICC industry outlook. Furthermore, some of the benefits from conducting a structured market standing survey are listed below:

- a) Achieving all the objectives of a customer perception survey;
- b) Ranking suppliers’ competitive performance;

- c) Comparing suppliers' performance against specific customer needs;
- d) Evaluating suppliers' performance in different market segments;
- e) Comparing perceived images of different suppliers;
- f) Improving market share (Aronson 1994).

The questions and answers formulated require the respondents to give their perceptions of banking service quality (see Chapter 4, p. 117 for the overall conceptual model). The questions used the same semantic differential scale to assess service quality and satisfaction as proposed by Breckler and Wiggins (1989) in measuring attitudes (Maio and Haddock 2010, p. 27). An example of the questionnaire can be accessed online at <http://phdsurvey.nuradli.com/survey.htm> (see Appendix 15, p. 375, for the survey).

5.2.3.1 Questionnaire Development Process

There are two major survey developments in this study. Firstly, ICC service quality and customer satisfaction measurement scale were operationalised. Secondly, the Islamic religiosity scale development is also discussed. The operationalisation of ICC service quality and customer satisfaction measurement scale can be divided into four major components i.e. the operationalisation of FSQ, TSQ, RESQ and customer satisfaction. On the other hand, the operationalisation of the Islamic religiosity scale is a bit more complicated. Nevertheless, the operationalisation of Islamic religiosity scale were divided into two components i.e. belief and commitment to practice.

5.2.3.2 Operationalisation of Functional Service Quality

Functional Service Quality (FSQ) is measured by six dimensions. Five of the dimensions were taken from Parasuraman et al. (1988) Servqual model i.e. reliability, assurance, tangible, empathy and responsiveness. Staff conduct dimension scale was measured through a combinations of items from several studies such as Avkiran (1994), Johnston (1997), Levesque and McDougall (1996) and Aldaigan and Buttle (2002). All items of the functional service quality dimensions were measured on a 5-point Likert scale (ranging from 1: "strongly disagree" to 5: "strongly agree"). The items are shown in the following table below.

Table 5-3: Items of Functional Service Quality

Items	Reference
<i>Reliability</i>	
When XYZ bank promises to do something, it keeps its promise.	Parasuraman et al. (1988)
When you have a problem, XYZ bank shows a sincere interest in solving it.	
The XYZ bank performs the service right the first time.	
The XYZ bank provides its service at the time the service is promised.	
XYZ bank billing is accurate	
<i>Assurance</i>	
The behaviour of employees in XYZ bank instils confidence in you.	Parasuraman et al. (1988)
You feel safe in your transactions with XYZ bank.	
Employees in XYZ bank area are consistently courteous with you.	
Employees in XYZ bank have the knowledge to answer your questions.	
<i>Tangibles</i>	
XYZ bank has modern looking equipment.	Parasuraman et al. (1988)
XYZ Bank's physical facilities are visually appealing.	
XYZ Bank's employees are neat appearing.	
Materials associated with the service (such as pamphlets or statements) are visually appealing at XYZ bank.	
<i>Empathy</i>	
Employees give customer individual attention.	Parasuraman et al. (1988)
XYZ bank has operating hours convenient for all its customers.	
XYZ bank has employees who give you personal attention.	
XYZ bank has your best interest at heart.	
The employees of XYZ bank understand your specific needs.	
<i>Responsiveness</i>	
Employees in XYZ bank call the customer back quickly if required	Parasuraman et al. (1988)
Employees in XYZ bank call you immediately when there is an error in your account	
Employees in XYZ bank set an appointment for you quickly.	
Employees in XYZ bank are never too busy to respond to your request.	
<i>Staff Conduct</i>	
Employees in XYZ are polite	Avkiran (1994), Johnston (1997), Levesque and McDougall (1996) and Aldlaigan and Buttle (2002)
Employees in XYZ express concern if there is a mistake in my account	Avkiran (1994) and Johnston (1997)
Employees in XYZ are helpful	Avkiran (1994), Johnston (1997), and Aldlaigan and Buttle (2002)
I am satisfied with the promptness of service from staff	Avkiran (1994) and Aldlaigan and Buttle (2002)

5.2.3.3 Operationalisation of Technical Service Quality

The scale measuring Technical Service Quality (TSQ) was divided into five dimensions i.e., technical ability, employee knowledge, communication, employee technical ability and technology dimensions. Technical ability, employee knowledge and employee technical ability scales in the present study were operationalised from the studies of Aldlaigan and

Buttle (2002). Communication scale was operationalised from a combination of several studies such as Lassar et al. (2000), Avkiran, (1994), Johnston, (1997, and Guo, et al. (2008).

Table 5-4: Items of Technical Service Quality

Items	Reference
<i>Technical Ability</i>	
Problems are sorted out immediately.	Aldlaigan and Buttle (2002)
Technical advice is given accurately.	
The bank/credit card issuer offers a flexible solution.	
The bank/credit card issuer has flexible rules that suit the customers	
Any technical problems encountered are normally solved by the employees within a short period of time.	
<i>Employee Knowledge</i>	
The credit card provider’s employees are knowledgeable about the products.	Aldlaigan and Buttle (2002)
Satisfactory explanation by the credit card provider regarding the products.	Aldlaigan and Buttle (2002)
The employees have the knowledge of the current economic conditions	This study
<i>Communication</i>	
The bank/s/credit card issuer's employees communicate about the different types products available.	Lassar, et al. (2000), Avkiran, (1994), Johnston, (1997), and Guo, et al. (2008)
I can always make complaints to the bank regarding any problems.	This study
The bank/credit card issuer provides a telephone helpline for customers.	Johnston, (1997), Guo, et al. (2008)
The bank/credit card issuer provides a web helpline for customers.	
The bank/credit card issuer provides a help desk in branch for customers.	
<i>Employee Technical Ability</i>	
The employees have discretion in decision making.	Aldlaigan and Buttle (2002)
The bank/credit card issuer's employees avoid making errors.	
The bank/credit card issuer's employees are capable of solving my technical problems.	
<i>Technology</i>	
The credit card of XYZ can be accessed in most of the ATMs.	Aldlaigan and Buttle (2002)
The credit card of XYZ has the latest technology.	Guo et al. (2002), and Sureshchandar et al. (2002)
The bank/credit card issuer of XYZ has a reliable online service.	Guo et al. (2002)
The website provided by the bank/credit card issuer contains helpful updated information.	Guo et al. (2002)

Finally, technology scale was operationalised from a combination of three studies such as Guo et al. (2002), Sureshchandar et al. (2002) and Aldlaigan and Buttle (2002). Table 5-4 illustrates the items of technical service quality scale. The questions of the five set of technical service quality dimensions were measured on a 5-point Likert scale (ranging from 1: “strongly disagree” to 5: “strongly agree”).

5.2.3.4 Operationalisation of Religious and Ethical Service Quality

Religious and Ethical Service Quality (RESQ) in this study are divided into two aspects; *Shari’ah* compliance and ethical dimensions. RESQ scale was operationalised – on a 5-point Likert scale (ranging from 1: “strongly disagree” to 5: “strongly agree”) through items gathered from the studies of Othman and Owen (2002) for items in *Shari’ah* compliance and of Sadek et al. (2010) for items in Ethical dimension. Table 5-5 shows all the items.

Table 5-5: Items of Religious and Ethical Service Quality

Items	Reference
<i>Shari’ah Compliance Dimension</i>	
The bank’s products are using <i>Islamic</i> law and principles.	Othman and Owen (2002)
No interest is paid for my credit card’s outstanding balance.	
The bank provides other <i>Islamic</i> products and services.	
The bank also provides interest free loans	
The bank also provides profit-sharing investment products.	
<i>Ethical Dimension</i>	
The bank runs on ethical policy.	Sadek et al. (2010)
No investment for environmentally harmful businesses.	
The bank does not support organisation/countries with a poor human rights record.	
Customer oriented customer services.	
Provision of all financial banking and conventional products.	

5.2.3.5 Operationalisation of Credit Card Users’ Satisfaction

Credit card users’ satisfaction was measured through five items created by this study on a 5-point Likert scale (ranging from 1: “strongly disagree” to 5: “strongly agree”). The items are shown below in Table 5-6. All of the items are the specific customers’ satisfaction on specific service quality such as FSQ satisfaction, TSQ satisfaction, compliance with *Shari’ah* satisfaction and ethical satisfaction.

Table 5-6: Items of Satisfaction

Items	Reference
Overall I am satisfied with the functional service quality provided by the credit card provider	This study
Overall I am satisfied with the technical service quality provided by the credit card provider	
Overall I am satisfied with the <i>Shari'ah</i> compliance service quality provided by the credit card provider	
Overall I am satisfied with the ethical service quality provided by the credit card provider	
Overall I am satisfied with the all dimensions (Functional, Technical, <i>Shari'ah</i> Compliance, and ethical) provided by the credit card provider	

5.2.3.6 Operationalisation of Religiosity

The aim of this section is to identify the operationalisation of religiosity. Specifically, it aims to provide a comprehensive review of the items used in measuring religiosity in the literature and, finally, to produce an extensive list of religiosity items. The operationalisation of religiosity in this study is reviewed from thirty-one published religiosity measurements found in the systematic search conducted.

Appendix 9, p. 348, provides the initial items collected from 27 scales for operationalising the religiosity scale. Referring to Appendix 9, p. 348, it shows that the 32 studies evaluated from the literature are revealing that religiosity measurement is increasingly being recognised as an area of interest in academic and practitioner communities. However, several of these studies did not address the specific religiosity scale measurement in this study. Therefore, four studies were excluded since they are conceptual (Nazlida and Dick 2010; Parameshwaran and Srivastava 2010), concerned with econometric modelling (Hamdani et al. 2004) and/or were based on content analysis (Al-Modaf 2007).

Based on these 27 scales, the religiosity scale is systematically developed through three different sequential stages, i.e. 1) the initial religiosity scale construction, 2) sorting and 3) instrument testing. The Islamic religiosity has two dimensions, which are belief and commitment to practice.

Details on how the religiosity scale was developed are presented in Appendix 10, p. 354. Religiosity was measured through fifteen items created by this study on a 5-point Likert scale (ranging from 1: “strongly disagree” to 5: “strongly agree”) for belief dimension and (ranging from 1: Never 2: Rarely 3: Sometimes 4: Very Often and 5: Always) for commitment and practice dimension. The items are shown below in Table 5-7.

Table 5-7: Items of Religiosity

Items	Reference
Belief Dimension	
Muhammad (p.b.u.h.) is His last Prophet	Ateeq-ur, and Muhammad Shahbaz (2010)
I believe there is only one Allah ⁵²	Ateeq-ur, and Muhammad Shahbaz (2010)
I believe <i>Al-Quranic</i> teachings are suitable in today's life.	Wan Ahmad et al. (2008)
All mankind's good deeds will be judged and rewarded accordingly after death.	Wan Ahmad et al. (2008)
I believe <i>Rasulullah</i> ⁵³ 's traditions are suitable throughout all times.	Wan Ahmad et al. (2008)
I believe that my faith is a source of comfort	Cleveland and Chang (2009)
Commitment and Practice Dimension	
My religious beliefs influence what I buy	Taylor, Halstead, and Haynes (2010)
I always keep myself away from earning through <i>haram</i> (prohibited) means such as interest from conventional banking.	Ateeq-ur, and Muhammad Shahbaz (2010)
I make sure that my dress/cloth covers my <i>aurat</i> ⁵⁴ .	Wan Ahmad et al. (2008)
I always perform the <i>zikir</i> ⁵⁵ .	Wan Ahmad et al. (2008)
I follow the <i>Sunnah</i> ⁵⁶ in daily life	Hassan et al. (2010)
My religious beliefs influence which service providers I use	Taylor, Halstead, and Haynes (2010)
I always try to avoid minor and major sin (<i>this item was deleted because of confusion between minor and major sins</i>)	Ateeq-ur, and Muhammad Shahbaz (2010)
My whole approach to life is based on my religion.	Delener (1994)
It is important for me to spend time in private thought and prayer	Delener (1994)
I regularly offer prayer five times a day.	Ateeq-ur, and Muhammad Shahbaz (2010)

5.3 RESEARCH SAMPLING

The cost of collecting data can be very expensive and time consuming in quantitative research (Bryman 2012). Research sampling can overcome the problems without jeopardising the general conclusion of the population. Nevertheless, the major goals of sampling are to

⁵² He is the one without partner, unique without peer, ultimate without opposite, alone without equal. He is one, preeternal, beginninglessly, un-create, everlastingly abiding, unceasingly, existent, eternally limitless, the ever self-subsisting through whom all else subsists, ever enduring, without end. He is, was, and ever will be possessed of all attributes of majesty, un-annihilated by dissolution or separation through the passage of eons or terminus of interims. He is the First and Last, the Outward and Inward, and He has knowledge of everything. Cited from Keller, N. H. M. ed. 2011. *Reliance of the Traveller: a Classic Manual of Islamic Sacred Law*, by Ahmad ibn Naqib al-Misri. Maryland USA: Amana Publications..

⁵³ *Rasulullah* means the messenger of God referring to the prophet Muhammad p.b.u.h.

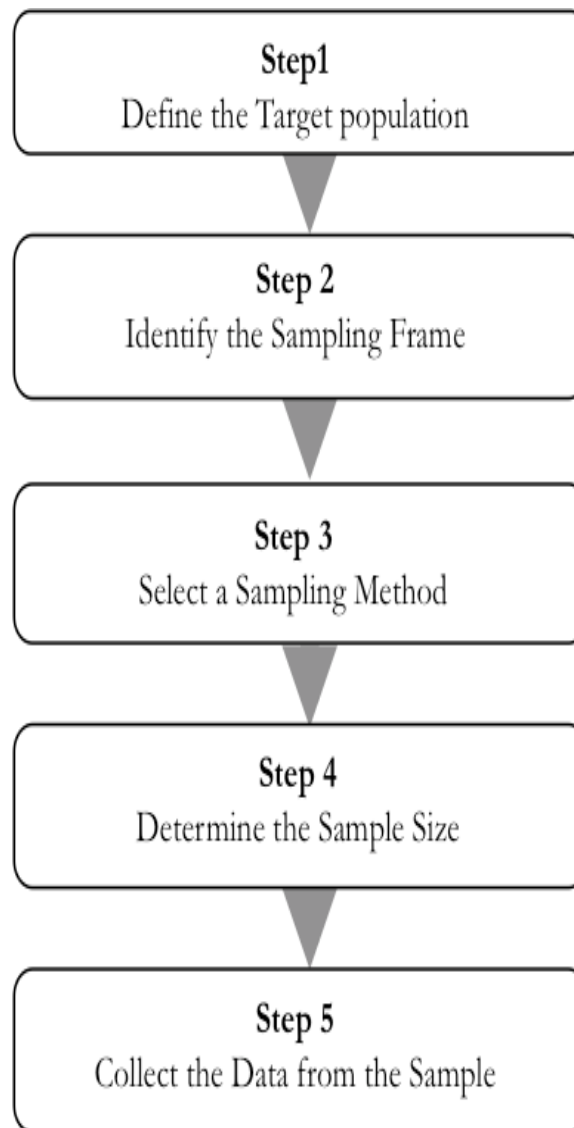
⁵⁴ Parts of the body to be clothed as required by Islam

⁵⁵ Remembrance of Allah.

⁵⁶ The sayings, deeds and approvals of Prophet Muhammad p.b.u.h.. *Sunnah* is also referred to as *Hadith*.

establish representativeness or to reduce biasness and to be able to make inferences from findings based on a sample to the larger population (Baker 1999). It is a process of selecting a number of samples or few people which will later be used in analysis to describe or explain the social phenomenon that apply to hundreds of million people not studied (Babbie 2012). This study follows Churchill and Iacobucci's (2009, p. 282) sampling process and procedures shown in Figure 5-4.

Figure 5-4: Sampling Procedure



Source: Based on Churchill and Iacobucci (2009, p. 282)

5.3.1 Definition of the Target Population

Population is the whole interested group that the researcher wishes to examine and obtain information from (Wilson, 2000). The target population in this study is Muslim credit card users in Malaysia who either own CCC, ICC or having both types of credit cards. In addition, they must have internet access because the survey is conducted online.

5.3.2 Identification of the Sampling Frame

The second step in sampling procedure is to determine the sampling frame. The sampling frame is a list of all cases in the population from which the sample is drawn (Saunders et al. 2011). Choosing an appropriate sampling frame for the current study depends on the characteristics of the target population under investigation⁵⁷ and the sources available for identification of potential subjects⁵⁸. There are 25 credit cards issuers in Malaysia (See chapter one, p. 8 for a discussion about the credit card industry in Malaysia).

However, it is difficult to obtain the credit card users database from the banks since the banks are governed under Islamic Banking Act 1983 and Banking and Financial Institutions Act 1989 (BAFIA) which requires them to adhere to secrecy provision. Information about the customers are not allowed to be disclosed except to the parties as stated in the act (BAFIA 1989). IBA 1983 and BAFIA 1989 act have been re-appealed and two new acts have been introduced namely as Islamic Financial Service Act (IFSA) 2013 and Financial Service Act (FSA) 2013 since June 2013.

Secondly, the number of credit card users who have internet access is unavailable. Some authors use the term 'hidden population' to refer to the inaccessible sampling parameter in which they use non-probability sampling such as convenience, snowball, street access, time based sampling and many more sampling methods (Watters and Biernacki 1989; Salganik and Heckathorn 2004; Bryman 2012). Therefore, for the present study, non-probability sampling seems to be the most appropriate sampling method.

⁵⁷ i.e. Muslim credit card users in Malaysia including the CCC users, ICC users and those who own both types of credit cards, CCC and ICC.

⁵⁸ banks or credit card issuers including CCC and ICC issuers.

5.3.3 Selection of a Sampling Method

Usually there are two types of sampling methods which are probability and non-probability sampling (Fink 2003). Due to the inaccessibility of the sampling frame, the most appropriate sampling method to use in the present study is the non-probability. Non-probability sampling does not involve random sampling as compared to probability sampling. Randomness is important if the objective of any study is to generalize and to avoid biasness (Tansey 2007).

The randomness is difficult to obtain if the population parameter is unknown and when it involves internet users. The latter could not use probability sampling because it only includes respondents who have internet access only. The non-internet users will have an unknown or zero chance to be included in the sample. On the other hand, probability sampling requires all potential respondents in the population to have a known or non-zero chance of being included in the sample (Churchill Jr and Iacobucci 2009).

There are three major types of non-probability sampling, which are: convenience sampling, quota sampling, and snowball sampling (Baker 1999, p. 137; Babbie 2012, p. 183). Convenience sampling is one of the techniques under non-probability sampling in which the selection of respondents are based on convenient accessibility and proximity to the researcher (Baker 1999, p. 138). Convenience sampling is a useful method for theory application or to gain ideas about a subject of interest (Cooper et al. 2006). Snowball sampling is a technique in which respondents are required to suggest other respondents who might be willing to participate in the survey (Babbie 2012, p. 185).

Quota sampling involves with quota samples in which subsamples are selected from clearly defined groups. It is different from stratified probability sampling because it does not have sampling frame (Baker 1999, p. 139). However, quota sampling normally underrepresents certain components of the population such as the people from lower strata, manufacturing workers and overrepresented women with children and people from large family (Bryman 2012) and it does not seem appropriate for this study.

All the non-probability sampling techniques have some advantages and disadvantages as compared to the probability sampling techniques. Some of the advantages are that they are cheaper, time efficient and most importantly, they can be used if the studied population and

sampling frame cannot be determined (Bryman 1984; Saunders et al. 1997). Nevertheless, the usage of non-probability sampling techniques reduces the ability of the researchers to generalise the findings from the non-probability studies to the entire population.

In addition, there are many studies in customer satisfaction literature that use non-probability techniques such as Cronin Jr et al. (2000), Taylor and Baker (1994), Gilbert et al. (2004), Olorunniwo et al. (2006), Lai et al. (2013) and many more. For instance, convenience sampling is used by many researchers in the customer satisfaction literature such as Kaura (2013), Ansari et al. (2013), Choi and Kim (2013), Chang et al. (2013).

Furthermore, the researcher has the option to choose the vehicle for data collection using either a postal survey or an online survey. The researcher chose an online internet based survey to capture the ICC users' responses as the vehicle for data collection. The online survey was developed using a standardized questionnaire developed using Google docs.

Convenience sampling was used in the selection of the respondents. The usage of convenience sampling is preferred for theoretical consumer research and has been justified by Calder, Philips and Tybout (1981) following Popper's (1959) falsification theory of science (John G. Lynch 1982). Calder, Philips and Tybout (1981) argued that even though generalisation requires sampling that represents the population, it is not necessarily required for theory application. They added that the effects observed in a study are employed for testing the theory. The theory explanation is expected to be generalised, not the effect observed.

In addition, there are also many studies in customer satisfaction that use snowball technique in various contexts (Hsu et al. 2013; Maunier and Camelis 2013; Rai and Medha 2013). Many researchers also combined non-probability sampling techniques such as combining convenience and snowball techniques in order to increase the number of respondents of hidden population in which their target respondents are focused into specific interest groups such as women, sexual workers, small enterprises and many more (Duttagupta 2013; Hallal 2013; Lukersmith and Burgess-Limerick 2013; Youchun et al. 2013).

The present study uses non-probability technique that is convenience and snowball sampling techniques combined because of the unknown exact population of credit card users due to

the secrecy act restriction in banking industry and unknown sampling frame, and uses specific interest group such as Muslim credit card users and internet users.

Even though the usage of non-probability sampling technique will limit the ability of this study to generalise in other contextual settings, this exploratory study will provide meaningful evidences on the impact of religiosity towards customer satisfaction in banking context.

5.3.4 Convenience and Snowball Sampling Method and Generalisability

As mentioned earlier, both sampling techniques can be seen as bias because respondents are not selected at random. The selection of respondents is based on personal contacts and social network. However, the problems of biasness can be reduced if all of the possible groups in the population are taken into consideration.

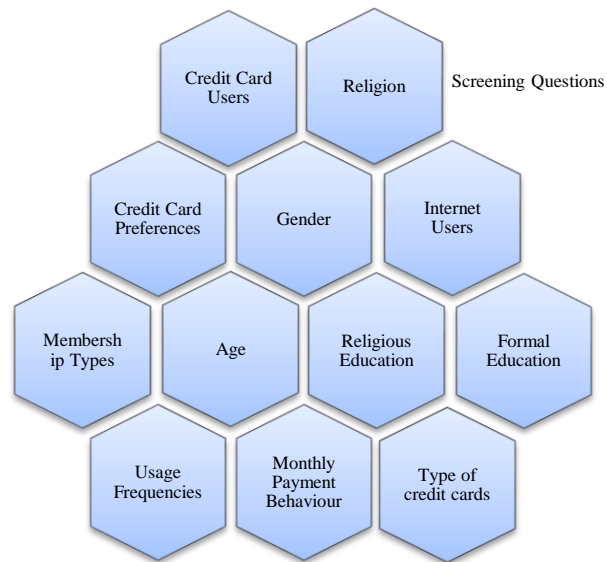
Cooper and Schindler (2006) argue that carefully controlled non-probability sampling often appears to give acceptable results. This can be done if all important demographic variables of the credit card users have been thought out carefully to represent the target population.

The present study's target population is the Muslim credit card users in Malaysia. This is to address the issue of respondents' eligibility in participating in the study (Faugier and Sargeant 1997). Screening questions for both criteria were set up in order to ensure that the respondents are 1) credit card users and 2) they are Muslim.

The next step is to identify the possible potential demographic profiles of the respondents. This study has identified the potential sources of biasness as shown in Figure 5-5. After screening the respondents with screening questions, this study took a careful examination of the respondents from the convenience and snowball sampling techniques.

Since the study employed online survey, there will be a potential bias of leaving out the credit card users who do not use internet. Nevertheless, some authors in political studies comparing political poll results demonstrated that the psychological mechanisms underlying common political decisions do not differ between internet users and the population (Best et al. 2001).

Figure 5-5: Potential Sample of Biasness in Sampling of the Current Study



Therefore, this study assumes that credit card users who use internet will not differ greatly from those who are non-internet users. After the selection of the initial respondents, the respondents were asked to send the survey to their contacts or in other words, they became the informal research assistant. The type of chains and number of cases in the chain, the pace and quality of data are also monitored as suggested by Faugier and Sargeant (1997).

In addition, the study also ensures that female or male credit card users are not under or over represented. Credit card preferences or ownership biasness has also been reduced by ensuring that CCC users, ICC users and those who use both credit cards are not being left out in the sampling. Membership types of the credit cards (Gold, Platinum and Classic), age, religious education and formal education backgrounds, types of credit cards (Visa, Mastercard, or both), monthly payment behaviour and monthly usage frequencies were carefully thought out to ensure that the sample is representative of population of the study.

The effort made to reach different segments of the population using the demographic characteristics as guidelines can increase the maximum theoretical understanding of social

process (Faugier and Sargeant 1997). The sample size required for this study is discussed in the next section.

5.3.5 Determination of the Sample Size

Sample size is a critical factor because the current study uses SEM to test the proposed structural model and hypotheses. Crouch (1984, p. 142) in his observation stated that, “a minimum sample sizes⁵⁹ for quantitative consumer surveys are of the order of 300 to 500 respondents.”

In addition, a sample size between 500 and 1,000 is considered very good to excellent in instances where factor analysis is to be undertaken (Comrey and Lee 1992). Based on the above discussion, the present study planned to obtain a number of useable responses of between 100 and 500.

5.3.6 Collection of the Data from the Sample

The final data collection process was conducted over a period of four weeks, commencing on the 7th of November 2011 and lasting until the 8th of December 2011. The online survey was posted on the 7th of November 2011.

In addition, a total of 2600 personal messages were sent in between 8th of November until 25th of November to potential respondents using convenience and snowball sampling (contacts from researcher’s personal contacts for the initial sampling) to increase the response rate.

A total of 620 respondents from Malaysia participated in the survey. The respondents need to answer a screening question as to whether or not they own a credit card before completing the entire survey. In addition, the respondents were also asked about their preference or ownership of credit cards.

65 respondents do not own any credit cards, therefore, were eliminated. The total useable respondents were 560. Further information on the study sample is presented in chapter six. The following section will discuss the main analysis used in this study.

⁵⁹ A good online sample size calculator can be accessed at: <http://www.surveysystem.com/sscalc.htm>.

5.4 VALIDITY, RELIABILITY AND UNIDIMENSIONALITY

In the scientific study of the social sciences, the accuracy in the measurement model and the theoretical constructs of a model study should be viewed in terms of reliability and validity (Churchill 1979). Churchill (1979) stated that even though reliability is important, a reliable instrument does not necessarily mean that the instrument is valid. However, a valid instrument normally means that the instrument is reliable.

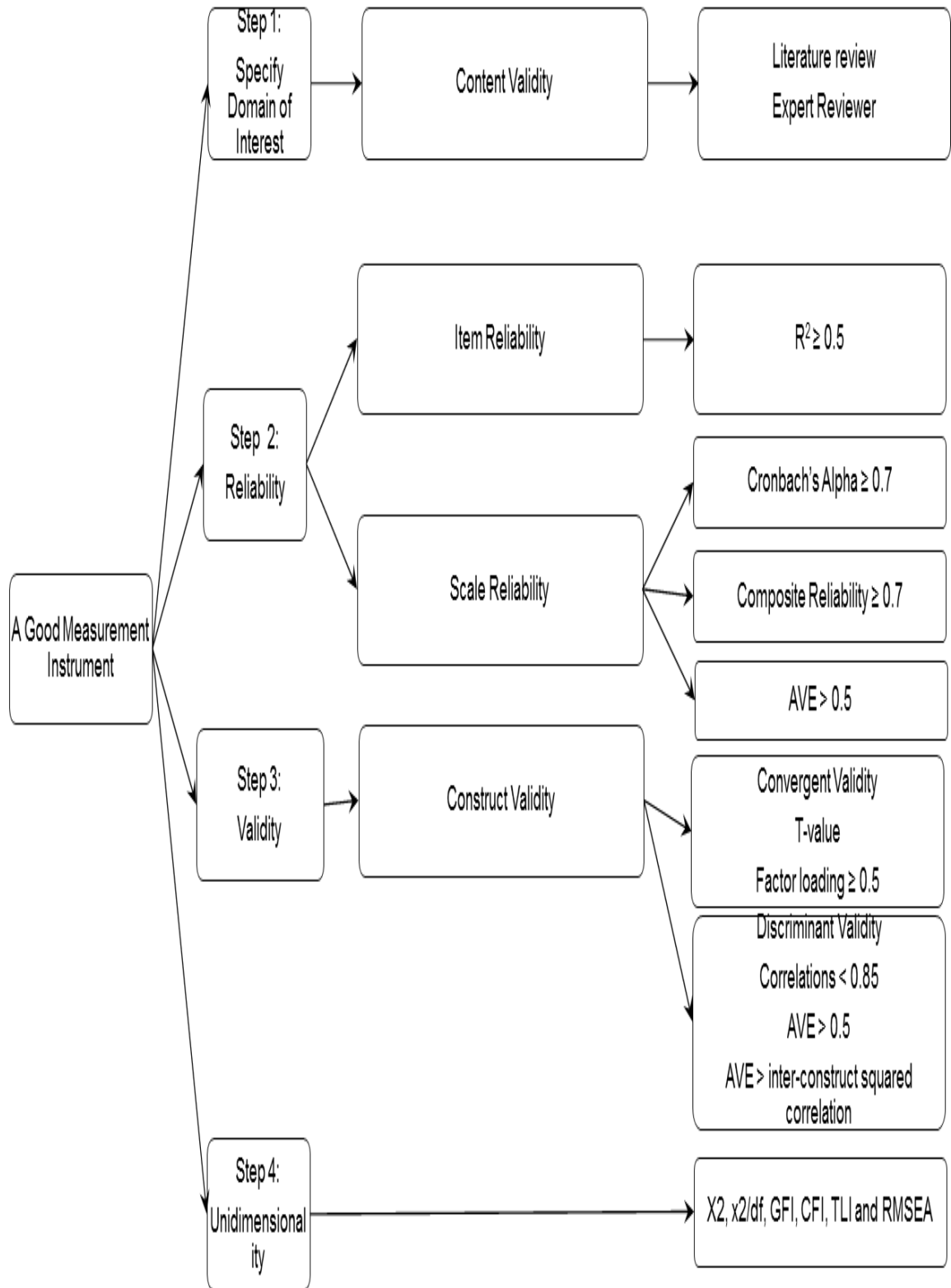
Nevertheless, he added that validity tests are often not reported in many marketing papers despite its importance. In this section, a description of how this study establishes the reliability and validity of the survey instruments will be given. The present study covers the measures taken in ensuring the content validity, reliability, validity and unidimensionality of the survey instruments.

Figure 5-6 summarises the four steps taken in this study to assess the survey instrument's validity and reliability adapting Churchill (1979, p. 66) and Peter (1981) who suggested procedures for developing better measures.

In addition, Gerbing and James (1988) added confirmatory factor analysis to the steps suggested by Churchill (1979) and Oeter (1981). The following procedure differs from Churchill (1979) because of the additional unidimensionality tests, which were added to suit SEM analysis.

Unidimensionality can be achieved if the factor loadings of the measuring items for the respective latent construct are acceptable. Factor loading which is too low should be deleted for the model to be unidimensionality.

Figure 5-6: Methods Used to Assess Validation of Measures



5.4.1 Step 1: Specify Domain of Interest - Content Validity

Validity addresses the question of whether the instrument developed is measuring what it is supposed to measure (Baker 1999). Validity is very critical in measuring abstract constructs such as customer satisfaction and religiosity. The items used to measure the abstract construct must be designed to reflect the construct precisely. There are two types of validity that were important in this study which are content validity and construct validity (Saunders et al. 2011). However, content validity must be identified first, followed by reliability and construct validity as suggested by Churchill (1979) as the procedure in developing a good measure.

Content validity is an examination of whether the measurement instrument really measuring the underlying concept (Baker 1999). Churchill (1979) stated that researchers must be exact in what to include or exclude in the definition of a construct. It requires careful examination in order to establish face validity or armchair validity. Failure to establish content validity will invalidate the instrument results because it does not reflect the full domain of the content. Bryman and Cramer (2011) have laid out content validity as the minimum requirement before establishing construct validity, reliability and unidimensionality.

The present study establishes content validity through 1) conducting a thorough exhaustive, extensive and systematic database literature review, 2) generation of sample items, 3) review of items with experts, 4) conducting pilot test, 5) purifying the items using coefficient alphas and factor analysis (Churchill Jr and Iacobucci 2009; Bryman 2012). After content validity has been achieved, the reliability of the measurement has to be identified.

5.4.2 Step 2: Reliability

After the items, have passed the content validity test, the next step will be assessing its reliability. Reliability can be defined as the correlation between a measure and itself (Peter 1981). Reliability deals with transient personal factor, or ambiguous questions, which produce errors in the measure (Churchill, 1979). The sample items' errors will tend to lower the average correlation or coefficient alpha between the items in the domain. Hair et al. (2010) laid out two general approaches to assess reliability which are: the test-retest approach and the internal consistency approach (Hair et al., 2010).

However, coefficient alpha is the most popular basic statistical analysis used by the academic community in determining the reliability of a specific domain or construct because test-retest approach is involved with respondents' memory and therefore is not recommended (Churchill, 1979). Coefficient Alpha aims to assess the internal consistency of set items (Nunnally and Bernstein 2010). The acceptable alpha score varies according to the purpose of the research (Nunnally and Bernstein 2010).

For instance, Alpha of 0.6 is considered acceptable for exploratory research and alpha of 0.7 for established research areas (Hair et al., 2010). However, the Cronbach Alpha results can be supported by another reliability analysis in order to ensure that the reliability results found in Cronbach Alpha are not inflated due to high number of items in the scales (Garver and Mentzer 1999).

The reliability can also be assessed using (R^2) for individual item reliability and composite reliability (CR) and average variance extracted (AVE) for scale reliability. The item reliability is considered as good if the (R^2) is greater than 0.5 (Bollen, 1989). In addition, the scale reliability is considered acceptable if the Composite Reliability and AVE are higher than 0.7 and 0.5 respectively (Hair et al., 2010). The formula of Composite Reliability is given as follows:

$$\text{Composite Reliability} = \frac{(\text{Sum of squared standardised loadings})^2}{(\text{Sum of standardised loadings})^2 + \text{Sum of the indicator's measurement error}}$$

5.4.3 Step 3: Construct Validity

While determining whether the measurement model is valid or not, it is necessary to establish that the model passes the convergent and discriminant validity tests (Churchill 1979). If the factors do not demonstrate adequate construct validity, the possibility that the structural model will also encounter problems will be higher (Byrne 2010).

Therefore, these tests are recommended before continuing with the structural model. Construct validation aims to assess the underlying construct as measured by a scale. Constructs have systematic and observational meaning (Peter 1981). Systematic meaning

means that the constructs are embedded in theory while observational meaning means that the constructs can be directly or indirectly operationalised (Peter 1981). Technically, construct validation measures whether the variables are similar and dissimilar.

Churchill Jr and Iacobucci (2009) pointed out that constructs validation is one of the most difficult type of validity to establish. Peter (1981) quoting Cronbach and Meehl (1955) suggested that construct validation includes studies of group differences, internal structure, change over time, process, and correlational and factor analytic studies.

Campbell and Fiske (1959) proposed two aspects of construct validity: convergent and discriminant validity (Bagozzi et al. 1991). Bagozzi et al. (1991, p. 425) define convergent validity as, “the degree to which multiple attempts to measure the same concept are in agreement”. In contrast, discriminant validity is the degree to which measures of different concepts are distinct.

5.4.3.1 Convergent Validity

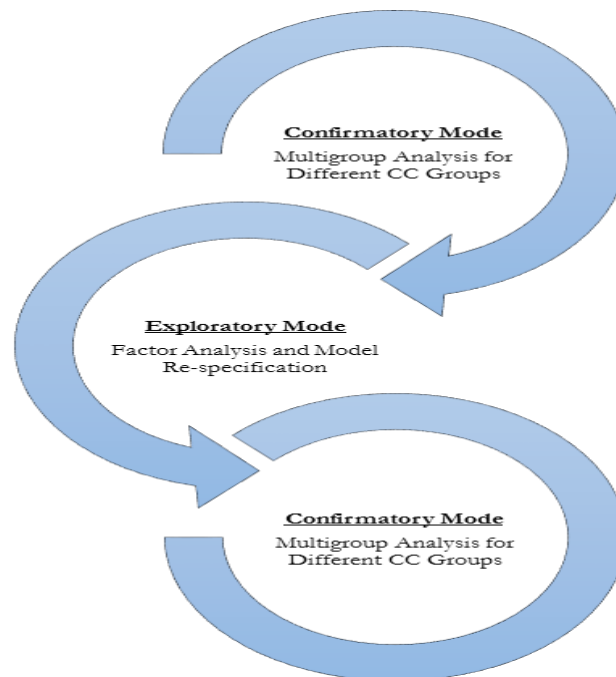
Convergent validity can be defined when the indicators or items of a specific construct converge or share a high proportion of variance in common (Hair et al., 2010). A convergent validity problem means that the variables do not correlate well with each other within their parent factor; i.e., the latent factor is not well explained by its observed variables (Cronin and Taylor 1992).

There are two types of convergent validity approaches that can be employed by researchers. They are classical and contemporary approaches (Bagozzi et al. 1991). The classical approaches are exploratory in nature and therefore use the principle component of EFA, whereas the contemporary approaches are confirmatory in nature in which Confirmatory Factor Analysis (CFA) is employed.

The exploratory mode is normally used when the researchers are uncertain with constructs that form a concept. In contrast, in the confirmatory mode, the theory has been established and the constructs are tested (Kline, 2011). The present study uses both approaches in which the study employed confirmatory mode (CFA), changed to exploratory mode (EFA) and confirmatory mode again (CFA) as suggested by Byrne (2010).

Confirmatory mode (CFA) was employed instead the exploratory mode (EFA) in order to validate the Servqual and so that Technical models can be used in their original forms. If the models passed the convergent, discriminant and reliability tests, the structural analysis can be conducted immediately. However, if the models were detected to have any of the convergent, discriminant or reliability problems, model modification or re-specifications need to be conducted. The model modification or re-specification will overcome the problems in the exploratory mode using EFA and through the use of modification indices in re-specifying the models in study (Byrne, 2010). The process can be shown in the following figure:

Figure 5-7: The Research Mode Used by the Present Study



In addition, the convergent validity can be tested using the results of each parameter estimates (significant standardised loading at 0.05 and 0.01 levels) and standardized factor loading which are greater than 0.5 (Kline, 2011; Bryman, 2012). In addition, this study also compares the Composite Reliability (CR), and Average Variance Extracted (AVE). The Composite Reliability must be greater than the AVE and the AVE must be above 0.5. AVE is calculated using the following formula:

$$AVE = \frac{\text{Sum of squared standardised loadings}}{\text{Sum of squared standardised loadings} + \text{Sum of the indicator's measurement error}}$$

5.4.3.2 Discriminant Validity

In contrast, discriminant validity is concerned with the extent to which the items are representing a latent variable or construct discriminate constructed from the other items representing other construct (Graver and Mentzer, 1999). The discriminant validity problems can be identified using four indicators.

The present study examines the correlation between two constructs (Correlations should be lesser than 0.85) and compares the Maximum Shared Squared Variance (MSV) and Average Shared Squared Variance (ASV) and squared correlation. MSV is the maximum correlation (squared covariance) with any other factor and ASV is an average shared squared variance or the average of all correlations with other variables (Gaskin 2012).

In order to achieve free discriminant validity problems, The AVE must be higher than the squared correlation, the MSV must be lower than the AVE and the ASV must be lower than the AVE. A discriminant validity problem means that the variables correlate more highly with variables outside their latent variable than with the variables within their latent factor (Hair et al. 2006, p. 776). The reliability, convergent and discriminant validity thresholds can be written as follows:

Table 5-8: The Reliability, Convergent and Discriminant Validity Thresholds

Reliability	Convergent Validity	Discriminant Validity
CR > 0.7	CR > AVE	Correlation < 0.85 MSV < AVE
	AVE > 0.5	ASV < AVE
		AVE > squared correlation

Source: Adapted from Gaskin (2012)

5.4.4 Step 4: Unidimensionality

“Unidimensionality refers to the existence of a single trait or construct underlying a set of measures” (Gerbing and Anderson 1988, p. 186). The authors have added confirmatory factor analysis of the good measurement assessment procedures as suggested by Churchill (1979) and Peter (1981). The confirmatory factor analysis assesses the internal and external consistency of unidimensionality implied by a multi indicator measurement model that cannot be assessed by Cronbach Alpha and item to total correlation (Gerbing and Anderson, 1988).

The present study used the fit indices generated by AMOS such as Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). The results for indices are presented in chapter seven.

5.5 DATA PREPARATION AND SCREENING

Data preparation and screening are crucial before data analysis takes place, although it is a time consuming process (Hair et al. 2006, p. 37). The objective of this data examination is to uncover any possible hidden effects that have been overlooked from the actual data such as missing data, outliers, and normality issues. These three issues are prevalent in any survey data collection method and need to be addressed before continuing a SEM analysis.

The key assumptions of ML are large samples (required for asymptotic unbiasedness); indicator variables with multivariate normal distribution; a valid specification of the model; and continuous interval-level indicator variables. For example, biased results can be introduced by non-random missing data, the violation of parametric techniques for data normality assumptions and outlier effects. This section explains the issues around missing data, outliers, and normality.

5.5.1 Missing Data

Analysis using SEM requires that the observation data set for the manifest variables or indicators do not contain even a single piece of missing data. However, data collected using online surveys or any other means will not realistically be free from missing data. Almost all data collected from the survey will encounter missing data problems.

A serious concern about the missing data is that it can introduce biases into the estimates derived from a statistical model, as well as a loss of information and statistical power, common statistical methods becoming inappropriate or difficult to apply and a waste of valuable resources (Peng et al. 2002).

Employing the simple listwise and pairwise deletion methods is not wise because the handling of the missing data using these methods can jeopardise the overall results (e.g. through a loss of the degree of freedom in listwise deletion). Bollen (1989) stated that the most common means to handle missing data is to estimate missing values (Vandamme and Leunis 1993).

In order to tackle the missing data problem appropriately, this study will employ the estimation maximisation algorithm method (EM) using SPSS. The EM method was named and introduced by Dempster, Laird, and Rubin (1977) following the work of several previous authors. However, their EM method was flawed and was therefore improvised by Wu (1983). Even though the EM method was claimed to be the second best missing data treatment after data multiple imputation, the latter is more complex making it less preferable for structural models.

In treating the missing data, an MCAR test was conducted to identify that the data was missing completely at random, observing value Y are a truly random sample of all value Y values, with no underlying process that lends bias to the observed data (Hair et al. 2006, p. 49). Little's MCAR test was not significant which means that the data is missing at random (Chi-Square = 25123.598, DF = 25054, Sig. = .377). Thus, the EM method can be employed to replace the missing data. In addition, the imputed data were rounded up to its lowest figure to ensure consistency.

5.5.2 Outliers

Hair et al. (2006, p. 73) defines outliers as observations with a unique combination of features that are identified as different from other observations. Kline (2011) defines outliers simply as scores that are different from the rest. Others identified outliers as extreme values relative to other observations observed under the same conditions (Mason et al. 2003). Outliers are unusual data values that occur with data collection.

There are many sources of outliers such as data entry errors, implausible values, and rare events (High 2013). The influence of outliers to the results might create problems to the overall results or it might not become a problem at all.

Firstly, outliers increase error variance and reduce the power of statistical tests. Secondly, they can decrease normality, and thirdly, they can change the overall estimates and can be biased (Osborne and Overbay 2004). In addition, the effects of outliers can reduce the performance of the fit indices in CFA and SEM and these were empirically proven by Yuan and Zhong (2013).

There are several ways to identify outliers. The outliers can be identified using visual aids, univariate and multivariate tests. The outliers can visually be identified from graphical evaluation of the QQ plots, box plots and stem and leaf plots. The univariate outliers can be identified if the outliers occur in a variable. For instance, the outliers can be detected through the boxplot inspection. Data cases are considered as outliers if the data cases are higher than the upper quartile plus with 1.5 multiply with inter quartile range (IQR) or lower than the lower quartile minus the 1.5 multiply with IQR.

All the variables in the present study were inspected using boxplot if there is evidence of outliers. Even though there are outliers detected in the study, it is expected for a large sample of data. In addition, after a thorough examination of the data, the outliers come from respondents who strongly disagree regarding the service quality provided by the credit card issuers (respondents who answered 1 as their responses).

Even though deleting the outliers or changing them to the nearest value (for example changing 1 to 2) could improve the multivariate analysis, it will also affect the data for the study. Therefore, the present study retains the outliers for the purpose of inclusivity. In addition, the number of outliers is small and it would not affect the overall estimates. In addition, since this is an exploratory study, the lower performance of the fit indices in CFA and SEM with the presence of outliers can be treated as progressive indices results or starting points for other future studies.

5.5.3 Normality

Data collected in the social sciences is rarely normally distributed (Babakus et al. 1987; Bentler 1987; Barnes 2001). Joreskog (1967) highlighted that SEM requires that the observed variables have a multi-normal distribution (Reinartz et al. 2009). Normality is one of the basic assumptions required in order to carry out structural equation modelling (SEM) analysis.

Univariate normality means that the distribution of the indicator data is normally distributed with mean = 0, standard deviation = 1 and a symmetric bell shaped curve. Normally, univariate distribution can be tested using Skewness and Kurtosis tests. The skewness value should be within the range of ± 1 for normal distribution. Kurtosis values should be within the range of ± 3 for normal distribution (DeCarlo 1997).

Alternatively, the critical value test can be used to measure non-normality using kurtosis and skewness. The critical value is from a z distribution, based on the significance level we desire. The most commonly used critical values are ± 2.58 (.01 significance level) and ± 1.96 , which correspond to a .05 error level (Hair et al. 2010). In addition, Byrne (2010) states that the β^2 figures in the normality test for kurtosis should not exceed seven in number. An examination of the kurtosis β^2 reveals that the univariate normality is within the acceptable range except for SC2 and SC4.

Non-normal data are expected to inflate the chi square and thus reject the model (type I error) when the model is true. Therefore, some studies in the Marketing field employ Partial Least Square (PLS) to overcome the non-normal distribution problem but the majority of the studies in Marketing use SEM.

For instance, the ACSI model (Fornell et al. 1996) uses PLS while some European indices use SEM (Reinartz et al. 2009). When assumptions concerning indicator distribution are not met, most authors cite a lack of assumptions regarding indicator distribution and measurement scale as their main reason for choosing PLS over Maximum Likelihood (ML)-based CBSEM (Reinartz et al. 2009).

However, Reinartz et al. (2009) argued that such a justification is often inappropriate, as ML-based CBSEM is proven to be extremely robust with respect to violations of its normality

distributional assumptions. Their findings proved that “the distribution of indicators will not impact neither the share of proper solutions for ML-based CBSEM nor the parameter accuracy in any significant and substantial manner, even in extreme cases of skewness and kurtosis” (Reinartz et al. 2009, p. 341).

They further added that although PLS does not build on any distributional assumptions, ML-based CBSEM behaves robustly in cases of their violation (Reinartz et al. 2009). In addition, PLS has been found to be less accurate (Goodhue et al. 2012).

Sharma, Durvasula, and Dillon (1099) have conducted a Monte Carlo simulation study testing on normal (using ML and GLS methods) and non-normal data (using EGLS, ERLS, AGLS methods). Kurtosis has a significant effect on the biasness of the parameter estimated, and the standard error of estimate in normal and non-normal data.

Fortunately, the data in this study have acceptable kurtosis values. Skewness, however, has no effect on the level of biasness (Sharma et al. 1989). It is interesting to note that the ML method does not produce bias in parameter estimates and the consistency of the model conclusion in non-normal data when compared to the Satorra-Bettler scaled statistics is reliable (Byrne 2010, p 127) .

In addition, the ML estimator is considered to be relatively robust to violations of normality assumptions (Bollen 1989; Diamantopoulos et al. 2000). For example, another Monte Carlo experiment conducted by Reinartz, et al. (2009) found no major differences in terms of SEM analysis results using the ML estimator on samples of different sizes and with different kurtosis and skewness levels. Bootstrapping is also increasingly being used to overcome this non-normality issue (Preacher and Hayes 2004).

Furthermore, a large sample size leads to deviation from the assumption of multivariate normality (Hair et al. 2006, p. 740). Hair et al. (2006) indicate that “normality can have serious effects on small samples (less than 50 cases), but the impact effectively diminishes when sample sizes reach 200 cases or more” (Hair et al. 2006, p. 740). The sample size for this study is more than 500 cases.

5.6 DATA ANALYSIS METHODOLOGY

The data from the survey is analysed using descriptive analysis, confirmatory factor analysis (CFA) and structural equation modelling (SEM). Descriptive analysis is used to give the overall picture of the respondents' demographic profiles. Confirmatory factor analysis (CFA) is conducted to evaluate whether the sub scales actually fall into the right group.

This is to address the issue of scale measurement construct validity. A Cronbach alpha test will also be conducted to address the issue of the reliability of the scale measurement. The final analysis involves Structural Equation Modelling that aims to identify the interrelations between the latent variables.

5.6.1 The Basic Concept of Structural Equation Modelling (SEM)

Structural equation modelling (SEM) grows out of, and serves purposes similar to, multiple regression, but in a more powerful way which takes into account the modelling of interactions, nonlinearities, correlated independents, measurement errors, correlated error terms, multiple latent independents each measured by multiple indicators, and one or more latent dependents also each with multiple indicators.

Hair et al. (2006, p. 703) also argued that, "SEM is the best multivariate procedure for testing both the construct validity and theoretical relationships." SEM is used as a more powerful alternative to multiple regressions, path analysis, factor analysis, time series analysis, and analysis of covariance.

Hair et al. (2006) added that by using SEM, the strength of relationships between constructs could be identified more accurately because it will consider measurement errors. The advantages of SEM compared to multiple regression include:

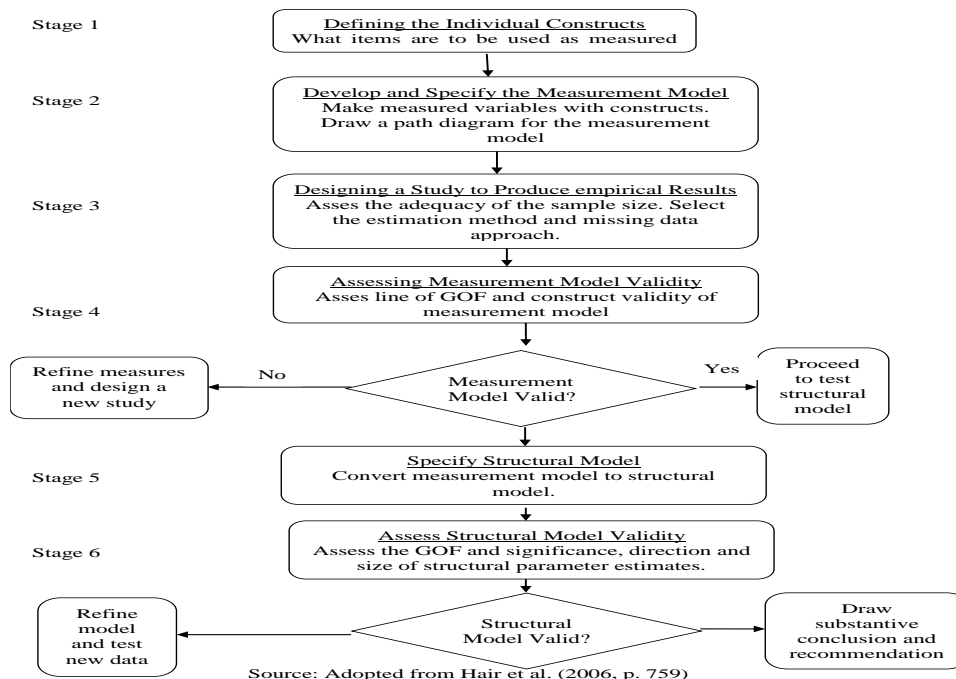
- i) More flexible assumptions (particularly allowing interpretation even in the face of multi-collinearity);
- ii) The use of confirmatory factor analysis to reduce measurement error by having multiple indicators per latent variable;
- iii) The attraction of SEM's graphical modelling interface;

- iv) The desirability of testing models overall rather than coefficients individually,
- v) The ability to test models with multiple dependents;
- vi) The ability to model mediating variables rather than be restricted to an additive model;
- vii) The ability to model error terms;
- viii) The ability to test coefficients across multiple between-subject groups;
- ix) In addition, the ability to handle difficult data (time series with auto-correlated error, non-normal data, incomplete data).

Moreover, where a regression is highly susceptible to errors of interpretation by misspecification, the SEM strategy of comparing alternative models to assess relative model fit makes it a more robust method. Nevertheless, SEM requires several procedural steps to be taken. Therefore, in the next section, a brief discussion of the six stages of the procedural steps in structural equation modelling will be provided.

5.6.2 The Procedural Steps in SEM

Figure 5-8: Six-Stage Process for Structural Equation Modelling



5.6.3 Guidelines for Establishing Acceptable and Unacceptable Fit

Guidelines in assessing the measurement and structural model are based on the several Goodness of Fit indices (GOF). The SEM has three categories of goodness-of-fit: absolute fit measures, incremental fit measures, and parsimonious fit measures. The absolute fit measure determines the overall model fit. The tests used in the absolute fit measures are likelihood ratio χ^2 statistics, the goodness-of-fit index (GFI), and the root mean square error of approximation (RMSEA). The second category, called the Incremental Fit measure, evaluates the proposed model compared to the baseline model (also known as the independent model).

Examples of this measure are the adjusted goodness-of-fit index (AGFI), the normed fit index (NFI), the incremental fit index (IFI), and the comparative fit index (CFI). The third category is the Parsimonious Fit measure, which includes the parsimonious normed fit index (PNFI), the parsimonious comparative index (PCFI), and the Akaike information criterion (AIC). The magic 0.90 cut off is normally used for several indices such as CFI, and TLI. However, Hair et al. (2006) differentiated the cut off for the indices based on the sample size and the number of variables (m). The following table shows the respective indicators of acceptable GOF indices across different model situations.

Table 5-9: Characteristics of Different Fit Indices Demonstrating Goodness of Fit across Different Model Situations

No of vars (m)	N < 250			N > 250		
	m ≤ 12	12 < m < 30	m ≥ 30	m ≤ 12	12 < m < 30	m ≥ 30
χ^2	Insignificant p-values expected	Significant p-values can result even with good fit	Significant p-values can be expected	Insignificant p-values can result with good fit	Significant p-values can be expected	Significant p-values can be expected
χ^2/DF	< 3	< 3	< 3	< 3	< 3	< 3
CFI or TLI	≥ 0.97	≥ 0.95	> 0.92	≥ 0.95	≥ 0.92	≥ 0.90
RNI	May Not diagnose misspecification as well			≥ 0.95	> 0.92	> 0.90
SRMR	Could be biased upward	≤ 0.08 CFI ≥ 0.95	≤ 0.09 CFI ≥ 0.92	Could be biased upward	≤ 0.08 CFI ≥ 0.92	≤ 0.08 CFI ≥ 0.92
RMSEA	< 0.08 CFI ≥ 0.97	< 0.08 CFI ≥ 0.95	< 0.08 CFI ≥ 0.92	< 0.07 CFI ≥ 0.97	< 0.07 CFI ≥ 0.92	< 0.07 CFI ≥ 0.90

Source adopted from Hair et al. (2006, p. 753).

In the current study, the number of samples is 560 and m is greater than 30. Therefore, the current study will use items in the far right column in the table above. However, some argue that values above 0.9 are acceptable cut offs (Bentler and Bonnett 1980; Hoyle and Panter 1995). Thus, this rule is often disputed and disregarded (Bollen 1989; Hoyle and Panter 1995).

Cohen (1988), for example, has a lower cut-off, of 0.8 (Wong and Jeffery 2002). Bollen (1989) suggested that a significant criterion “may be simply to compare the fit of one's model to the fit of other, prior models of the same phenomenon” (Wong and Jeffery 2002, p. 9). For example, quoted from Moss (2009), a CFI of .85 may represent progress in the context of a study where the best prior model had a fit of .70 (Bollen 1989). Therefore, since this is an initial study in the context of ICCs, any results obtained presently can then become the cut off for future studies.

5.7 CHAPTER SUMMARY

The proposed research design is a sequential mixed model design. The research will have a theoretical lens (the research framework) which overlays the three phases. The phases are a combination of interviews followed by an online survey. In the first phase, several semi-structured interviews were conducted with ICC users in order to capture the potential antecedents of customer satisfaction as well as to ensure that the survey questions are understood. In the second phase, religiosity scale was developed taking the experts opinion and culling and sorting processes from 27 religiosity scales found from the literature.

In the third phase, online surveys were administered to credit-card users. Emails were sent to potential respondents redirecting them to answer the questionnaire at a web-based online survey. The respondents need to answer a screening question as to whether or not they own a credit card before completing the entire survey. An analysis of the survey data will then take place after the third phase of the research design.

This study employs confirmatory factor analysis and structural equation modelling. The major limitation of the proposed research design is time, because the transitions from phase one to phase three are sequential.

CHAPTER 6 : SURVEY DESCRIPTIVE ANALYSIS

“A customer is the most important visitor on our premises. He is not dependent on us; we are dependent on him. He is not an interruption in our work; he is the purpose of it. He is not an outsider in our business; he is part of it. We are not doing him a favour by serving him; he is doing us a favour by giving us an opportunity to do so.” Mahatma Gandhi

6. INTRODUCTION

This chapter aims to outline the results of the descriptive analysis of the final data. The analysis is divided into two major parts. In the first part, a descriptive analysis of all of the responses is presented. Descriptive statistics are employed to describe the demographic characteristics, the measurement scales and the sub-data for predicting behaviour. The second part, presents the results of descriptive analysis between religiosity and demographic variables such as age and education, is also presented.

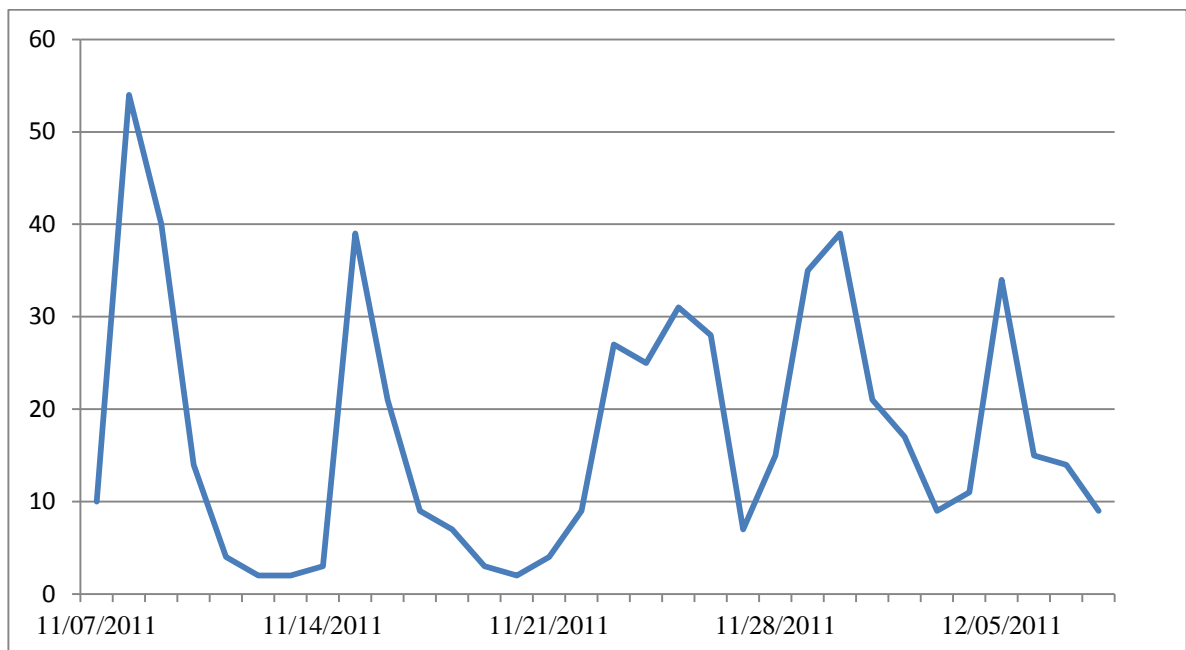
6.1 RESPONSE RATE AND NON-RESPONSE BIAS

The overall response rate of the survey was very positive, with 666 respondents participating. The response rate was 25.62%. Ninety-six respondents did not own any credit cards and were therefore screened out. In addition, ten respondents were deleted because they were working overseas and are using international banks. The total number of useable respondents was therefore 560 respondents.

Therefore, the useable response rate was 21.52%. The response rate was lower than the response rate recommended by Baruch (1999) of 40%. The non-response was probably because the respondents do not have any credit card facilities and therefore, do not bother to answer the survey. In addition, the length of the online survey may also deter them from responding to the survey. Nevertheless, the present response rate is higher than many previous studies in customer satisfaction literature (e.g. Caruana (2002) 20.5%, Lam et al. (2004) 9%, and Ranaweera and Prabhu (2003) 15%). In addition, non-response bias analysis can overcome the low response rate issue.

The non-response bias can be assessed by comparing known values of the population, subjective estimate and extrapolation (Armstrong and Overton 1977). Extrapolation methods are based on the assumption that subjects who respond less readily are more likely to be the non-respondents. Therefore, we can compare between the early response data with the late response data. In particular, we can compare the waves after we send reminder message for the survey participants. The present study data was identified to have five waves of responses as shown in the following figure.

Figure 6-1: Data Collection Waves



Armstrong and Overton (1977) recommend comparing the chi-square of the first wave of respondents compared to the final wave. The two waves can be compared using Chi square. The result illustrated that there were no significant differences ($p > 0.05$) between the two groups of all the constructs' items except for three items. In addition, the study also compared all the five waves using Man Whitney test and found that the non-response bias is not significant for all items except for two items. Therefore, it was assumed that respondents did not differ from non-respondents and thus non-response bias was not a major concern in the present study (see Appendix 19 and Appendix 20).

6.2 OVERALL SAMPLE DEMOGRAPHIC PROFILES

From this section onwards, the descriptive statistics of the respondents will be presented. It starts with a survey of the overall characteristics of respondents, followed by the specific characteristics of the groups of ICC users, CCC users and users of Both the credit cards. Appendix 21, p. 397 shows the profile of the respondents of the survey. In short, the response to this survey was very positive taking into consideration the one month duration of the survey. Now we turn to the demographic profiles of the respondents

Approximately 186 (33.2%) of the respondents were conventional credit-card users, 219 (39.1%) were ICC users and the remaining 155 (27.7%) had both types of credit cards. The profiling of the respondents is important to academic research since the study represents pioneering work that surveys ICC users' satisfaction in Malaysia.

48% of the respondents were male and 52% were female. Of the initial cohort of credit customers, approximately 55% of the respondents are between the ages of 31-40 years, followed by 21-30 years old at 22%. The third largest group (18%) of respondents are 41-50 years old, followed by 51-60 years old at 4%. The smallest numbers of respondents are above 61 and below 20 years old. The majority of the respondents are Malay (97%) with the remaining 3% coming from other ethnic groups such as Chinese (1%), Indian (1%) and mixed (1%). Furthermore, the majority of the respondents owns both of the main brands of card, Visa and MasterCard (37%), followed by solely MasterCard (28%) and solely Visa (26%).

Approximately 42% of the respondents have a Master's degree, followed by 34% with an undergraduate degree. 17% of the respondents have a Doctorate degree. If we now turn to the number of years using the credit cards, the majority of the respondents, approximately 34% have been using the cards for between 6 to 10 years, followed by approximately 30% who have been using the cards for between one to five years. The remaining can be categorised as experienced users in which 19% hold the credit card(s) for between 15 until 20 years, 7% hold between 21 until 25 years and 6% hold for more than 25 years.

Additional characteristics of the respondents were also collected, such as previous formal religious education and the respondents' *mazhab* backgrounds, their types of credit card membership and the number of credit cards owned, the frequency of their credit card usage

within an average month and the respondents' monthly payment behaviour. The information can be used to gauge the initial demographic and psychographic profiles of the respondents.

Approximately 44% of the respondents obtained a formal religious education in high school while 35% of the respondents obtained it at university level. If we now turn to the number of respondents who do not have any formal religious education, approximately 10% of the total respondents have never obtained any formal religious education. Furthermore, only a small number of respondents indicated that they obtained their religious education from primary school, a middle-east university or *pondok*⁶⁰ religious education. With regard to the respondents' *mazhab*⁶¹, a majority of the respondents subscribed to the *Shafi*⁶² school of thought, accounting for 97% of the total respondents.

Turning to the types of credit card membership, many of those surveyed, approximately 40%, indicated that they subscribed to gold membership. Other respondents subscribed to Classic and Platinum memberships accounting for 26% and 18% respectively. The remaining 16% subscribed to any combination of the three types of memberships.

The most interesting result from the data regarding the number of credit cards owned by the respondents is that 60% of the respondents had more than one credit card. The highest number of credit cards owned was eight and 188 respondents had two credit cards.

In terms of monthly usage frequencies, 18% of the respondents said they were heavy users of the credit cards with a usage rate of more than 10 times monthly. However, more than half of the respondents used their credit cards less than five times within a month.

When the respondents were asked about their monthly payment behaviour, 45% said they paid the total outstanding balance, 40% paid most of the balance, 14% paid the minimum payment required by the credit-card issuers. In addition, only five respondents have financial difficulties because they could not meet the minimum monthly payment requirement.

⁶⁰ *Pondok* is a traditional religious education system.

⁶¹ There are four major schools of thought based on four Islamic scholars (*Hanafi*, *Maliki*, *Hambali* and *Shafi*).

⁶² The major *mazhab* in Malaysia.

If we turn to the background of the CCC users, the response rate for this group was 186 respondents or 33.6% of the total respondents surveyed. More than half of the CCC respondents were female. Approximately 51% of the respondents are between 31-40 years old, followed by 21-30 years old at 23%. The third largest (18%) group of respondents is between 41-50 years old, followed by 51-60 years old at 5%. The smallest numbers of respondents were above 61 or below 20 years old. The majority of the respondents were Malay (95) and of the remainder of the sample, 3% were Chinese and 2% were Indian.

The majority of the respondents owns both types of card, Visa and MasterCard (35%), followed by only MasterCard (30%) and only Visa (26%). If we examine the education of the respondents, 40% of the respondents have a Master's degree, followed by an undergraduate degree, 38%. Interestingly, 14% of the respondents have a Doctorate degree. If we now turn to the number of years they have been using their credit cards, approximately 32% of the respondents, have been using the cards for between one to five years, followed by approximately 28% who have been using them for between six to ten years. More than 35% of CCC users have used their credit cards for more than ten years.

Approximately 45% of the respondents obtained a formal religious education in high school while 33% of the respondents obtained it at university level. If we now turn to the number of respondents who do not have any formal religious education, approximately 12% of the total respondents have never obtained any formal religious education. Furthermore, only a small number of respondents indicated that they obtained their religious education from primary school or a middle-east university. With regard to the respondents' *mazhab*, a majority of the respondents subscribed to *the Shafii* school of thought, accounting for 95% of the total respondents. Turning to the types of credit card membership, many of those surveyed approximately 40%, indicated that they subscribed to gold membership.

Other respondents subscribed to Classic and Platinum memberships accounting for 26% and 18% respectively. The remaining 16% subscribed to any combination of the three types of memberships. The majority of the surveyed respondents, i.e. approximately 56%, had more than one credit card. One respondent said they owned eight credit cards. Almost 20% of the surveyed respondents answered that they used their credit cards more than 10 times within an average month.

Approximately 69% of the respondents used their credit cards less than five times within a month and 11% of the respondents used their credit cards between six to nine times in a month. When the respondents were asked about their monthly payment behaviour, 45% said they paid the total outstanding balance, 38% paid most of the balance, 16% paid the minimum payment required by the credit-card issuers and two respondents could not meet the monthly minimum payment requirement.

6.2.2 The ICC Users Background

If we turn to the background of the ICC users, the response rate was 219 respondents or 39.1% of the total number of respondents surveyed (See Appendix 21 p. 397). The demographic profile of the survey respondents presented in Appendix 21 reveals that the compositions of male and female respondents are equal. Approximately 56% of the respondents are between the ages of 31-40 years, followed by 21% in 21-30 years old group. The third largest group (20%) of respondents is between the ages of 41-50 years, followed by 3% at 51-60 years old.

The majority of the respondents are Malay (97%) with the remaining 3% being Chinese, Kadazan or Bajau. Furthermore, the majority of the respondents own a Visa card (35%) or a MasterCard (34%), followed by both a Visa and a MasterCard owner at (27%).

If we examine the education level of the respondents, 42% of the respondents have a Master's degree, followed by 27% with an undergraduate degree. 24% of the respondents have a Doctorate degree.

If we now turn to the number of years using the credit cards, we see that the largest group of the respondents, approximately 37%, have been using their cards for between six to ten years, followed by approximately 34% with between one to five years' use. In addition, 25% of ICC users have used their credit cards for more than ten years.

Approximately 42% of the respondents obtained a formal religious education in high school while 39% of the respondents obtained it at university level. If we now turn to the number of respondents who do not have any formal religious education, approximately 9% of the total respondents say they have never obtained any formal religious education. Furthermore, only

a small number of respondents indicated that they obtained their religious education from primary school (6%), *pondok* education (1%) or a middle-east university (3%).

Referring to the above figures, the majority of the respondents subscribes to the *Shafii* school of thought. In response to their types of credit card membership, approximately 44% of those surveyed indicated that they subscribed to gold membership.

Other respondents subscribed to Classic and Platinum memberships, accounting for 32% and 18% respectively. The remaining 6% subscribe to any combination of the three types of memberships. The majority of the surveyed respondents, approximately 58%, have one credit card. Meanwhile, no respondent admitted to owning more than five credit cards and almost 14% of the surveyed respondents answered that they used their credit cards more than 10 times in an average month.

Approximately 76% of the respondents said they used their credit cards less than five times a month and 10% of the respondents used their credit cards between six to nine times in a month.

When the respondents were asked about their monthly payment behaviour, 52% said they paid the whole outstanding balance, 35% paid most of the balance, 12% paid the minimum payment required by the credit-card issuers. Only two respondents could not meet the monthly minimum payment requirement.

6.2.3 Both Card Users Background

If we turn to the background of respondents who use both CCC and ICC, the response rate for this group was 155 respondents or 27.7% of the total respondents surveyed. 52% are female and 48% are male. Approximately 57% of the respondents are between the ages of 31-40 years, followed by 23% in 21-30 years old category. The third largest group (14%) of respondents are 41-50 years old, followed by 6% at 51-60 years old.

The majority of the respondents are Malay (99%) with the remaining 1% from mixed ethnicity due to inter-ethnic marriages. The majority of the respondents own both types of card, i.e. a Visa card and a MasterCard (56%), followed by only a MasterCard (16%) and only a Visa (13%). If we examine the education level among the respondents, 44% of the

respondents have a Master's degree, followed by 37% with an undergraduate degree while 13% of the respondents have a Doctorate degree.

If we now turn to the number of years they have used their credit cards, approximately 38% of the respondents have been using the cards for between six to ten years. More than 33% of CCC users have used their credit cards for more than ten years. The remaining 22% are new credit-card users (one to five years).

Approximately 47% of the respondents obtained a formal religious education in high school while 34% of the respondents obtained it at university level. If we now turn to the number of respondents who do not have any formal religious education, approximately 7% of the total respondents have never obtained any formal religious education. Furthermore, only a small number of respondents indicated that they had obtained their religious education from primary school (10%) or a middle-east university (2%).

Regarding the respondents' *mazhab*, the majority of the respondents subscribed to the *Shafii* school of thought, accounting for 99% of the total respondents. Turning now to their types of credit card membership, many of those surveyed, approximately 36%, indicated that they subscribed to gold membership.

Other respondents subscribed to Classic and Platinum memberships (17% and 18% respectively). The remaining 29%, subscribed to any combination of the three types of memberships. The majority of the surveyed respondents, approximately 88%, have more than one credit card. Two respondents said they owned eight credit cards.

Almost 24% of the surveyed respondents answered that they used their credit cards more than 10 times a month. Approximately 61% of the respondents used their credit cards less than five times a month and 15% of the respondents use their credit cards between six and nine times a month.

When the respondents were asked about their monthly payment behaviour, 36% said they paid the whole outstanding balance, 48% paid most of the balance, 16% paid the minimum payment required by the credit-card issuers. Only one respondent could not meet the monthly minimum payment requirement.

6.3 DESCRIPTIVE ANALYSIS OF RESPONSES

After identifying the demographic characteristics of the survey respondents and the credit card usage pattern connected with different credit card issuers, attention turns to how they answered the survey questions related to the 13 latent dimensions in the conceptual model (See p. 118) and their satisfaction.

The table in Appendix 22, p. 400 reports the percentage frequencies for all the items and their central tendency (mean) and dispersion (standard deviation). The findings represent all respondents' responses, including the CCC, ICC and Both CCC and ICC card users.

6.4 DESCRIPTIVE ANALYSIS OF RELIGIOSITY

To assess religiosity, the scale developed in chapter three was used. The dimensions used were belief (six items) and commitment (nine items). The religiosity scale developed for this study was designed specifically for Muslims. Therefore, a screening question asking the respondents whether they are Muslim or not was introduced before the religiosity questions.

If the respondents answered yes, they then proceeded with the religiosity question. If the answer was no, the respondents skipped the religiosity questions. The following table shows the respondents' responses regarding their religiosity.

Table 6-1 shows the responses for Muslims using credit cards (All) and the individual items' means and standard deviations for CCC, ICC and Both card users. The responses for the belief items were negatively skewed to the left.

The results reveal that all items (b1-b5) in the belief construct were statistically significant between the three groups. Both constructs B and CP, show that ICC users have higher means compared to the other groups.

Table 6-1: Descriptive Statistics for Religiosity

Credit-card Users							All		CCC		ICC		Both		
Dimensions		Study Response Scale %					Mean	SD	Mean	SD	Mean	SD	Mean	SD	KW Test
		(1)	(2)	(3)	(4)	(5)									
Belief	b1	0	0	0.2	2.3	97.5	4.97	.17	4.94	.24	4.99	.15	4.99	.08	.002*
	b2	0	0	0.2	2.9	97	4.97	.18	4.94	.25	4.98	.18	4.99	.08	.004*
	b3	0	0	1.8	1.1	97.1	4.95	.28	4.88	.45	4.99	.13	4.99	.08	.000*
	b4	0	0	3.8	4.3	92	4.88	.42	4.81	.52	4.92	.36	4.91	.36	.014*
	b5	0	0	1.6	2.3	96.1	4.94	.29	4.87	.44	4.97	.19	4.99	.08	.000*
	b6	0	0	2.5	5.2	92.3	4.90	.37	4.84	.48	4.94	.30	4.92	.32	.030*
Dimension		(1)	(2)	(3)	(4)	(5)	Mean	SD	Mean	SD	Mean	SD	Mean	SD	KW Test
Commitment /Practice	cp	1.1	1.3	10.2	25.2	62.3	4.46	.81	4.31	.84	4.58	.83	4.48	.70	.000*
	cp	0.2	2.5	13.6	26.1	57.7	4.39	.82	4.10	.87	4.66	.66	4.34	.85	.000*
	cp	0.4	0.7	7.7	20.7	70.5	4.60	.69	4.41	.83	4.74	.57	4.64	.60	.000*
	cp	0.7	3	28.8	36.8	30.7	3.94	.88	3.76	.96	4.09	.82	3.95	.83	.002*
	cp	0	2.5	25.4	44.5	27.7	3.97	.79	3.87	.87	4.13	.70	3.88	.79	.001*
	cp	1.6	2.9	17.9	31.4	46.3	4.18	.93	3.80	.98	4.51	.81	4.16	.83	.000*
	cp	0	0.4	7.7	29.6	62.3	4.54	.65	4.35	.69	4.71	.57	4.52	.63	.000*
	cp	0	0.7	10	25.9	63.4	4.52	.70	4.35	.78	4.66	.62	4.53	.66	.000*
	cp	0	0.9	5.2	12.9	81.1	4.74	.59	4.57	.75	4.89	.40	4.73	.54	.000*

Indicators:

(1) = Strongly disagree, (2) = Disagree, (3) = Neither Agree Nor Disagree, (4) Agree, (5) Strongly agree

(1) = Never, (2) = Rarely, (3) = Sometimes, (4) Frequently, (5) Always

There is not much variation along the belief dimension but commitment and practice dimension has more variations in terms of the respondents' responses. It is also apparent from the above table that all items in the commitment and practice dimension were statistically significant. In addition, the results show that the ICC credit card users score higher compared to the CCC and Both credit card user groups, for all items (cp1 - cp9).

6.5 AGE AND RELIGIOSITY

In order to answer the hypothesis (H 22: Age has significant influence on religiosity.) on p. 100, a Kruskal Wallis test is conducted in order to find out whether the items in the religiosity dimensions (belief and commitment) have any significant relationship with age.

Table 6-2: Kruskal Wallis Test between Age and Religiosity

Dimensions	Items								
Belief	b1	b2	b3	b4	b5	b6			
Kruskal Wallis Test	.587	.139	.383	.000*	.546	.309			
Commitment	cp1	cp2	cp3	cp4	cp5	cp6	cp7	cp8	cp9
Kruskal Wallis Test	.016*	.002*	.002*	.000*	.000*	.008*	.000*	.080	.006*

*Significant at 0.05 levels.

The Kruskal Wallis test results in the table above show that no items in the belief religiosity constructs were significant except for b4 (All mankind's good deeds will be judged and rewarded accordingly after death). The respondents were asked whether their whole-life approach was based on their religion. In addition, all items except cp8 were statistically significant for commitment and practice with age. Therefore, age does influence religiosity.

6.6 EDUCATION AND RELIGIOSITY

In order to answer the hypothesis (H 23: Formal/Religious education has significant influence on religiosity.) in p. 100, a Kruskal Wallis test is conducted in order to see whether the items in the religiosity dimensions (belief and commitment) have any significant relationship with education. The study has requested that the respondents answer two questions regarding their educational background. The respondents were asked to state their highest education level and their highest formal religious education level (if any) attained.

Table 6-3: Kruskal Walis Test between Education and Religiosity

Dimensions	Belief						Commitment								
Items	b1	b2	b3	b4	b5	b6	cp1	cp2	cp3	cp4	cp5	cp6	cp7	cp8	cp9
KW – Education	.32	.92	.41	.72	.90	.38	.00*	.00*	.03*	.08	.01*	.00*	.02*	.05	.01*
KW – Formal religious education	.00*	.00*	.00*	.04*	.00*	.01*	.01*	.08	.11	.00*	.02*	.00*	.00*	.02*	.19

*Significant at 0.05 levels.

There were no significant differences between the levels of education background of the respondents with the items in the belief dimension, as shown in the table above. However, the level of education does have a significant impact towards commitment and practice. The most surprising result to emerge from the data is that the levels of formal religious education were statistically significant for almost all the items in belief and commitment and practice except for cp2, cp3 and cp9. Therefore, education and religious education do influence religiosity.

6.7 CHAPTER SUMMARY

This chapter has reported the descriptive analysis carried out on the data from the online survey. It provides a summary of the basic statistics related to the respondents' demographic profile, and the dimensions examined in the present study. The next chapter will present the findings from the multivariate analysis using structural equation modelling.

CHAPTER 7 : SURVEY FINDINGS

“When we contemplate the duration of the universe, we see it limited to the present moment, which is nothing more but the point which separates two infinities of time. The past and the future are as meaningless as if they did not exist. Is anyone more misguided than the man who barter an eternal future for a moment which passes quicker than the blink of an eye?”

(Ibn Hazm Al Andalusi, 994-1064 A.D., Al Akhlaq wa'l Siyar)

7. INTRODUCTION

Structural equation modelling (SEM) is an advance multivariate statistical technique which moves beyond the basic techniques that take a confirmatory approach to a structural theory (Hair et al. 2006). One of the advantages of SEM is that the technique could identify the causal relationships of multiple variables in a model from a single pictorial model (Bentler 1987; Hair et al. 2006).

In addition, the model can be tested statistically using systematic goodness-of-fit indices, which determine whether the model is consistent with the data. If the goodness-of-fit indices are acceptable, then the model fits the data and the relationships between the variables can explain the theory. However, if the goodness-of-fit indices are not acceptable, then the model cannot not be used to explain the theory being studied.

This study has adopted the six stages procedure as presented in chapter five, p. 166 (i.e. CFA => structural). Therefore, this chapter is divided into five major sections. It starts with a study of the confirmatory analysis (1st order factors) for the different service quality and religiosity models. The CFA multigroup comparison for the different groups of credit card users is presented in section two. In section three, the analysis has to return to the exploratory mode from confirmatory mode because the models were found to be having convergent and discriminant problem identified in section two.

After the models have been re-specified, the confirmatory factor analysis (2nd order factors) are conducted in section four. In section five, the structural model analysis is discussed employing the different groups of credit card users and religiosity as the moderating factor. The last section summarises chapter seven.

7.1 MEASUREMENT MODEL – 1ST ORDER

Three basic tests of a measurement model need to be conducted to ensure that the model is good. If, in the theory, an indicator explains the latent variable, there is therefore a relationship between them. Since latent variables do not have any data, the testing process will be conducted upon the indicators that create it. There is also a need to test the covariance from the data samples to understand the relationship between the indicators and the latent variables.

The test will be conducted using the maximum estimation likelihood procedures to produce the estimated covariance matrices. This comparison test is called the goodness of fit test. There are three basic tests which are absolute fit indices, incremental fit indices and parsimony fit indices (Hair et al. 2006, pp. 746-750).

7.1.1 CFA for Different SQ Models

This section will discuss the confirmatory analysis conducted for the three different models and the integrated models. The analysis conducted in this section will evaluate the models to assess them in their original forms. Strikingly, the overall fitness of the models (GOF) is good based on the goodness of fit indices as shown in the following table Table 7-1 overleaf.

Some researchers only report selective fit indices. For instance, Brady et al. (2002) reported two fit indices in their study. The fit indices CFI and NFI are used to represent the model's fitness. In this study, the CFIs and NFIs for all four models are above the general acceptable threshold of 0.90 except for the Integrated model which has an NFI of 0.88.

Detailed discussions of the CFA results for the four models and religiosity are presented in the following subsections. The models are FSQ, TSQ, RESQ and the Integrated Model. The basic goodness fit tests are listed in the first column and their results and indicators are provided in the following columns according to their respective models. In general all three models have an acceptable goodness fit indices as shown in the following table.

Table 7-1: Models Fit Summary CFA

Models	FSQ		TSQ		RESQ		Integrated Models	
Measure	Results	Indicator	Results	Indicator	Results	Indicator	Results	Indicator
Cmin/df	2.44	Good	3.17	Not good	1.38	Good	2.15	Good
p value of the model	0.00	Not fit	0.00	Not fit	0.00	Not fit	0.00	Not fit
CFI	0.96	Good	0.96	Good	1.00	Good	0.93	Good
NFI	0.94	Good	0.94	Good	1.00	Good	0.88	Not Good
NNFI (TLI)	0.96	Good	0.95	Good	0.99	Good	0.93	Good
GFI	0.92	Good	0.92	Good	1.00	Good	0.83	Not Good
AGFI	0.89	Good	0.89	Good	0.99	Good	0.81	Good
SRMR	0.03	Good	0.04	Good	0.00	Good	0.05	Good
RMSEA	0.05	Good	0.06	Good	0.03	Good	0.05	Good
PCLOSE	0.39	Not Significant	0.02	Significant	0.51	Not Significant	1.00	Not Significant
AIC	824.88	Lower better	599.00	Lower better	19.39	Lower better	3409.00	Lower better
BCC	832.08	Lower better	604.00	Lower better	19.55	Lower better	3456.00	Lower better
BIC	1132.16	Lower better	842.00	Lower better	58.38	Lower better	4305.00	Lower better

7.1.1.1 CFA for Functional Service Quality (FSQ-All)

This subsection aims to examine a first-order CFA model which has been designed to test the multidimensionality of a theoretical construct of FSQ. Specifically, FSQ is a multidimensional construct composed of six factors - reliability (R), assurance (AS), tangible (Tan), empathy (Emp), responsiveness (Res) and staff conduct. The theoretical underpinning of this hypothesis is a replication of Servqual model as proposed by Parasuraman et al. (1988) and an extension of an additional dimension known as staff conduct (see chapter two).

This study followed the earlier work in which the five-factor structure of Servqual (22 items) was used but with an additional staff conduct factor (4 items). The FSQ dimensions items were coded as follows; reliability (r1-r5), assurance (as1-as4), tangible (tan1-tan4), empathy (emp1-emp5), responsiveness (res1-res4) and staff conduct (st1-st4). There are 26 items explaining the FSQ constructs. CFA was conducted to confirm the factor structure as laid out in chapter four. The model's GOF indices are good. All the indices are within the acceptable range (see Table 7-1).

The SRMR is 0.05, which is better than the results presented by Engelland et al. (2000) in which they found an SRMR of 0.083. In addition, the GFI is acceptable at 0.91, higher than the minimum guideline of 0.90 and the GFIs found by Engelland et al. (2000) (GFI=0.84) and by Angur et al. (1999) in the Indian banking context (GFI=0.75).

A revised model conducted by Engelland et al. (2000) provided higher GFIs at 0.92 and 0.90. A similar study conducted by Muslim and Zaidi (2008) has a progressively higher GFI result of 0.89. However, there is a caution attached to that result, which prompted Muslim and Zaidi (2008) to include a compliance with *Shari'ah* dimension in their model. It is interesting to note that all the factor loadings are above 0.7, except for two items, which are r5 (0.53; the item is deleted since the R^2 is too low) and res4 (0.68).

In addition, all the covariance connecting between the latent constructs are strongly positive (above 0.5). Furthermore, the convergent and discriminant validity tests for the FSQ model were conducted and are shown in Appendix 23, p. 403. The overall composite reliability figures are above 0.7 showing that the constructs are reliable (after the deletion of r5). In addition, the AVEs are above 0.5 showing that the six constructs have convergent validity.

However, there are some discriminant validity concerns for the dimensions of Responsiveness, Reliability, Assurance, Empathy and Staff Conduct. The square root of the AVE for these dimensions is less than one for the correlations with another factor. This problem is expected since some of the items developed by Parasuraman et al. (1988) were identified as overlapping in the previous literature.

This is consistent with the findings by prior researchers stating that Servqual dimensions in its original form face validity problems (Cronin and Taylor 1992; Cronin and Taylor 1994; Engelland et al. 2000; Brady et al. 2002; Cui et al. 2003). Since all of the items from the original measure, with a new dimension of staff conduct, were included in the CFA, some of the items might overlap with other constructs. However, this can be solved by deleting the affected items or by converging them with the affected constructs (Byrne 2010) at a later stage.

7.1.1.2 CFA for Technical Service Quality (TSQ-All)

The TSQ dimensions are: technical solution ability (ta1-ta5), employee knowledge (ek1-ek3), communication (com1-com5), employee's technical ability (eta1-eta3), and technology (tech1-tech3). There are 20 items in the TSQ. CFA was conducted to confirm the factor structure as laid out in chapter four.

The model's GOF indices are good. All the indices are within the acceptable range except for Cmin/df and PCLOSE. The Cmin/df has exceeded the three threshold because the result is 3.17. The PCLOSE is significant, in which a PCLOSE should not be significant (see Table 7-1). Nevertheless, an examination of the CFA results reveals that all the factor loadings are above the 0.7 threshold except for com3 (0.66) and com4 (0.68). However, since both factor loadings marginally pass the 0.7 threshold, the loadings are considered to be acceptable.

In addition, all the covariance results between the latent constructs are significantly positively related to each other. The convergent and discriminant validity tests for the TSQ model were conducted and are shown in Appendix 24, p. 405. The individual composite reliability (CR) for all factors is above the 0.7 threshold. However, there are some issues with discriminant validity for ETA, TA and COM because the square root of the AVE for ETA is less than one of the correlations with another factor.

However, since the individual AVEs exceeded the cut-off point of 0.5 except for COM, no convergent validity issue has been detected except for COM. However, this can be solved if the factor loadings (com3 and com4) which are below the 0.7 threshold are inspected in further detail before the item deletion process.

7.1.1.3 CFA for Religious and Ethical Service Quality (RESQ-All)

Other religious and ethical service quality dimensions such as *Shari'ah* Compliance and ethical dimensions were tested. There were five items in each dimension (sc1-sc5 and eth1-eth5). The CFA was conducted and the factor loadings for two items from *Shari'ah* compliance (sc2 =0.67, sc4=0.65) and three items from the ethical dimensions (eth1=0.68, eth4=0.47, eth5=0.59) were below the 0.7 factor loading thresholds.

However, the convergent and discriminant analyses of these two factors are good, as shown in Appendix 25, p 406. The CRs are above the 0.7 threshold. In addition, the AVEs are above 0.5 showing that there is no convergence problem, and the factors of MSV and ASV are lower than AVE showing that there is no discriminant problem.

7.1.1.4 CFA for Integrated Models (All)

An attempt to integrate all four models is presented in this subsection. FSQ, TSQ, and RESQ are to be pooled together in a single model. Therefore, to achieve this, all the models presented earlier are grouped and fifty-six (56) items represented by thirteen (13) constructs have been tested.

Interestingly, the overall GOF of the measurement model is acceptable with Cmin/df of 2.425, CFI of 0.92, NFI of 0.94, TLI of 0.91, GFI of 0.82, AGFI of 0.79, SRMR of 0.054 and RMSEA of 0.05 and PCLOSE of 0.35. In addition, all the factor loadings (standardised regression weights) are above 0.7, and the R²s are above 0.5 except for ten items (r5=0.531, emp2=0.692, res4=0.697, com4=0.692 tech1=0.578, sc2=0.684, sc4=0.679, tan3=0.633, eth2=0.661, eth4=0.667).

All of these ten items can be deleted but since the composite ratios (CR) are above 0.7, this shows that the model has an acceptable level of reliability. Furthermore, no convergent issue is detected since all the AVEs are above 0.5 and are smaller than CR. In addition, the discriminant validity tests for the Integrated Model were also conducted and are shown in Appendix 26, p. 407. The constructs' individual CRs are above 0.7. The constructs are therefore said to be reliable.

In addition, no convergent validity issues are found because the AVEs are greater than 0.5 and CRs are greater than the AVEs. However, there are some discriminant validity issues for eight constructs because the ASV is lesser than the AVE and the MSV is lesser than the AVE (See Appendix 26, p. 407). This is to be expected from a model containing many constructs and items.

7.1.2 CFA for Religiosity (All)

As discussed in chapter three, this study attempts to find and explain the relationship between religiosity and customer satisfaction. The religiosity model is multi-dimensional. The constructs are belief and commitment/practice consisting of six items (b1-b6) in belief and nine items (cp1-cp9) in commitment/practice.

There are two items in belief (b6=0.6 and b4=0.45) and seven items in commitment and practice (cp1=0.59, cp2=0.65, cp3=0.65, cp4=0.63, cp5=0.68, cp8=0.65 and cp9=0.68) in which the factor loadings are below the 0.7 thresholds. However, since these are new constructs, we can accept factor loadings which are as low as 0.5. In addition, the overall GOF indicates that the model is a good model, as shown in the following table:

Table 7-2: Model Fit for Religiosity

Models Measure	Results	Religiosity
		Indicator
Cmin/df	2.86	Good
CFI	0.96	Good
NFI	0.94	Good
NNFI (TLI)	0.95	Good
GFI	0.95	Good
AGFI	0.92	Good
SRMR	0.06	Good
RMSEA	0.06	Good
PCLOSE	0.07	Good
AIC	312.00	Lower better
BCC	314.00	Lower better
BIC	417.00	Lower better

The overall GOF of the measurement model is acceptable with Cmin/df of 2.86, CFI of 0.96, NFI of 0.94, TLI of 0.95, GFI of 0.95, AGFI of 0.92, SRMR and RMSEA of 0.06 and PCLOSE of 0.07.

7.1.3 Religiosity Index

This sub-section explains the religiosity index for the respondents. The religiosity index is calculated using the following formula:

$$RI_i = (b_1 + b_2 \dots b_n / 5k \times 100 + (cp_1 + cp_2 \dots \dots \dots cp_n / 5k \times 100)$$

where

RI = Religiosity Index for consumer i

bn = belief score

cpn = commitment/practice score

K = number of items in respective dimension

Individual respondents' levels of religiosity will be categorised into four different groups: liberal, casually religious, moderately religious and highly religious, using a quartile method. The 25% quartile (90% and above) is categorised as casually religious.

The 50% quartile (95.278 and above) is categorised as moderately religious. The 75% quartile (97.778 and above) is categorised as highly religious. Respondents who score less than 90% will be categorised as liberal. The descriptive statistic for the religiosity index based on the above procedures is shown in the following table:

Table 7-3: Religiosity Index Levels			
		Frequency	%
Valid	Liberal	150	26.8
	Casually Religious	130	23.2
	Moderately Religious	170	30.4
	Highly Religious	110	19.6
	Total	560	100.0

Table 7-3 shows that 150 respondents (26.8%) are categorised as liberal, 130 respondents (23.2%) are categorised as casually religious, 170 respondents (30.4) are categorised as moderately religious and 110 respondents (19.6%) are categorised as highly religious.

In addition, it is also interesting to determine whether there are any differences between the levels of religiosity with regard to credit card preferences. A crosstab analysis was conducted and is shown in the following table.

Table 7-4: Crosstab Analysis between Religiosity Levels with Credit Card Preferences

		Religiosity Index				Total
		Liberal	Casually Religious	Moderately Religious	Highly Religious	
Prefer	Count	78	44	40	26	188
CCC	% within Prefer	41.5%	23.4%	21.3%	13.8%	100.0%
	% within Religiosity Index	52.0%	33.8%	23.5%	23.6%	33.6%
ICC	Count	32	41	87	60	220
	% within Prefer	14.5%	18.6%	39.5%	27.3%	100.0%
	% within Religiosity Index	21.3%	31.5%	51.2%	54.5%	39.3%
Both	Count	40	45	43	24	152
	% within Prefer	26.3%	29.6%	28.3%	15.8%	100.0%
	% within Religiosity Index	26.7%	34.6%	25.3%	21.8%	27.1%
Total	Count	150	130	170	110	560
	% within Prefer	26.8%	23.2%	30.4%	19.6%	100.0%
	% within Religiosity Index	100.0%	100.0%	100.0%	100.0%	100.0%

Table 7-4 reveals that the liberal group prefers to use conventional credit card, while the highly religious and moderately religious groups prefer ICCs. In addition, respondents who prefer to have both ICCs and CCCs tend to be concentrated in the casually and moderately religious groups. The differences are significant (chi-square value 54.5, p-value of 0.00). These differences are shown in the following figure.

Figure 7-1: Radar Web Indicating Religiosity and Different Credit-card Users

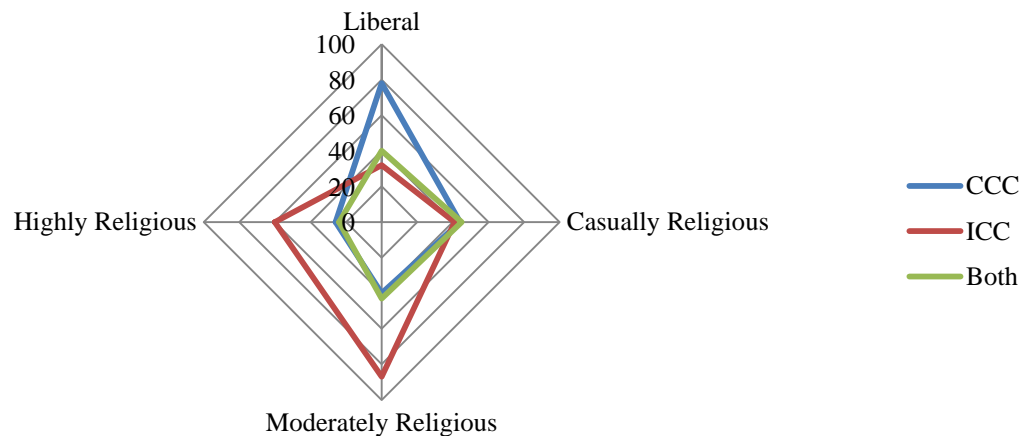


Figure 7-2 shows that ICC users are concentrated in the highly and moderately religious groups while the CCC users are from the liberal group. As for those who use both credit cards, their concentration is more towards the moderately, casually and liberal religious groups with only a small number in the highly religious group.

7.2 CFA MULTIGROUP COMPARISONS – DIFFERENT CREDIT CARD GROUPS

Credit-card users in Malaysia can be divided into three groups. The first group prefers to use a conventional credit card since conventional credit cards have been established for more than three decades. The second group of credit card users prefers ICCs only due to their sense of religious conformity. The third group of credit card users prefers to own both CCCs and ICCs. In this section, a multigroup CFA is explored and is presented to deepen our understanding about the differences between the groups of credit card users. The results for individual groups for CCC, ICC and Both are shown in the following sub-sections.

7.2.1 CFA for CCC, ICC and BOTH Groups (FSQ Model)

The CFA indicates a good fit to the observed data ($\chi^2/df=1.946$; CFI=0.941; GFI=0.839, RMSEA=0.039; TLI=0.93). The CFA factor loadings results for CCC, ICC and Both credit card users are acceptable (above the 0.7 thresholds) for all the items in the FSQ model. The results show that the FSQ model is consistent for all three groups. However, if we examine the individual groups, the models will have some problems with discriminant validity issue. The convergent and discriminant validity results for CCC are shown in Appendix 27, p. 410.

The reliability, convergent and discriminant validity test results for the CCCs show that there are no reliability and convergent problems for the construct because a) CRs > 0.7, b) CRs > AVEs, c) AVEs are greater than 0.5. However, this model has some discriminant validity issues because the AVEs are less than one of the correlations with another factor. This can be detected when the correlation is greater than 0.85.

The convergent and validity tests were also conducted for the ICC group (See Appendix 28, p. 410). The convergent and discriminant validity results for ICC show that no convergent problems are detected. However, this model has some discriminant validity issues because the AVEs are less than one of the correlations with another factor. This can be detected when

the correlation between the constructs is greater than 0.85. Convergent and validity tests were also conducted for the group using Both credit cards (See Appendix 29, p 411).

The convergent and discriminant validity test results for users of Both credit cards shows that no convergent problems are detected. However, this model has some discriminant validity issues because the AVEs are less than one of the correlations with another factor. This can be detected when the correlation is greater than 0.85. Even though the findings show that the model has an overall good fit, the respective groups have some issues with discriminant problems.

In addition, the results for the model of multigroup invariant analysis revealed that the groups are different at the model level (Unconstrained $\chi^2=1402.2$; Fully constrained $\chi^2=1485.7$; p-value=0.002). These problems of discriminant validity might arise from differences in the multigroup, which will be examined in the following sub-section.

Table 7-5: Summary of the CFA FSQ Model Results for Different Credit Card Users

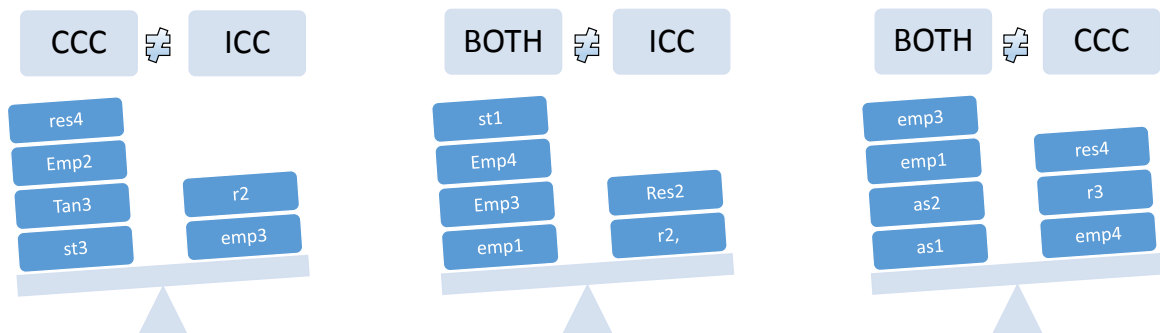
Groups/Indicator	CCC	ICC	Both
Model Fit		Overall Good Model Indices	
Factor Loadings	Acceptable	Acceptable	Acceptable
Reliability	Acceptable	Acceptable	Acceptable
Convergent Validity	Acceptable	Acceptable	Acceptable
Discriminant Validity	Problems Detected (Res, R, Ass, Emp, ST)	Problems Detected (Res, R, Ass, Emp, ST)	Problems Detected (Res, R, Ass, Emp, ST)
Multivariant analysis	Significant		

7.2.1.1 CFA Multigroup Differences (FSQ)

A multigroup difference analysis was conducted to identify whether any significant differences are to be found in any of the constructs between groups. The differences were analysed by determining the z-score between the estimates between any two groups (See Appendix 30, p. 412). There is a significant difference between CCC and ICC for emp2, emp3, r2, res4, st3, and tan3.

There is also a significant difference for items comparing ICC and Both credit card users. The items are as, emp1, emp3, emp4, r2, res2, st1. As for the CCC and Both credit card users, the items found that the significant difference are as1, as2, emp1, emp3, emp4, r3, and res4. The results support the notion that one size does not fit all for FSQ in which are shown below indicating the items that are different between two groups of credit card users.

Figure 7-3: The Z-Score Differences Summary for FSQ model



7.2.2 CFA for CCC, ICC and BOTH Groups (TSQ Model)

The CFA indicates a good fit to the observed data ($\chi^2/df=2.056$; CFI=0.942; GFI=0.86, RMSEA=0.044; TLI=0.928). The CFA factor loadings results for CCC, ICC and users of Both credit cards are acceptable (above the 0.7 threshold) for all the items in the TSQ model.

The results revealed that the TSQ models are not consistent for all three groups. For example, the COM constructs for CCC and Both have loadings which are lower than 0.7, however, the loadings are above 0.7 for ICC. In addition, if we examine the individual groups, the models will have some problems with convergent and validity issue. The convergent and discriminant validity results are shown in Appendix 31, p. 414.

The reliability, convergent and discriminant validity test results for CCC in the TSQ model show that there is no reliability problem for the construct because the CRs > 0.7. However, there is a convergence problem for COM because its AVE is less than 0.5. In addition, this model has some discriminant validity issues for ETA and COM because the AVEs are less than one of the correlations with another factor. This can be detected when the correlation is greater than 0.85. Reliability, convergent and validity tests were also conducted for the ICC group (See Appendix 32, p. 414).

The ICC group's TSQ model has a good reliability indicator (all CRs are above 0.7). However, two constructs have a minor convergence problem because the AVEs are less than

their ASV. Nevertheless, their respective AVEs are greater than the 0.5 threshold. As for discriminant validity, ETA, TA and COM have some discriminant problems because their correlations are higher than 0.85. Reliability, convergent and validity tests were also conducted for the group of Both credit-card users (See Appendix 33, p. 414).

The CRs for all the constructs in the TSQ model for users of both credit cards are reliable since they are above the 0.7 threshold. However, the COM construct has a convergence issue since its AVE is less than 0.5. In addition, there are ETA and COM, and ETA and EK since their correlations are above 0.85.

Even though the findings show that the model has an overall good fit, the respective groups have some issues with discriminant problems. In addition, results for the model of multigroup invariant analysis revealed that the groups are different at the model level (Unconstrained $\chi^2=949.7$; Fully constrained $\chi^2=1026.2$; p-value=0.000). Problems of discriminant validity might arise from the differences in the multigroup, which will be examined in the following sub-section.

Table 7-6: Summary of the CFA TSQ Model Results for Different Credit Card Users

Groups/Indicator	CCC	ICC	Both
Model Fit		Overall Good Model Indices	
Factor Loadings	Acceptable	Acceptable	Acceptable
Reliability	Acceptable	Acceptable	Acceptable
Convergent	Problems Detected (COM)	Acceptable	Problems Detected (COM)
Discriminant	Problems Detected (ETA, COM)	Problems Detected (ETA, TA, COM, TECH)	Problems Detected (ETA, TA, COM, TECH)
Multivariant analysis		Significant	

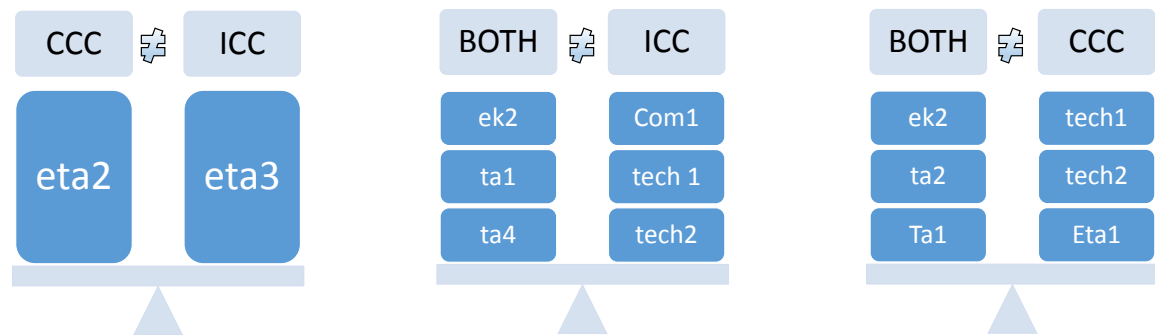
7.2.2.1 CFA Multigroup Differences (TSQ)

A multigroup difference analysis was conducted to identify whether any significant differences could be found in any of the constructs between groups for the technical model. The differences were analysed by determining the z-score between the estimates between any two groups (See Appendix 34, p. 415). There is a significant difference between CCC and ICC for eta2 and eta3.

There is also a significant difference for items when comparing ICC and Both credit card users. The items are ta4, ta1, ek2, com1, tech2 and tech 1. As for the CCC and Both credit

card users, the items found with significant difference are ta1, ta2, ek2, eta1, tech2 and tech1. In the same way as FSQ, the comparison between the TSQ results shows that one size does not fit all.

Figure 7-4: The Z-Score Differences Summary for TSQ model



7.2.3 CFA for CCC, ICC and BOTH Groups (RESQ Model)

The CFA indicates a good fit to the observed data ($\chi^2/df=2.686$; CFI=0.946; GFI=0.916, RMSEA=0.055; TLI=0.926). The CFA factor loadings results for CCC, ICC and Both credit card users are acceptable (above the 0.7 thresholds), however some items are under 0.7 in the RESQ model such as items sc1, sc2, eth1, eth4 and eth5 for CCC; sc2, sc4, eth4, and eth5 for ICC; and eth4 for Both. The CFAs of results for three groups using the RESQ revealed that the RESQ model is not consistent for all three groups. In addition, the results for the model of multigroup invariant analysis reveal that the groups are significantly different at the model level (Unconstrained $\chi^2=265.9$; Fully constrained $\chi^2=301.8$; p-value=0.016).

7.3 MODEL RE-SPECIFICATION (EXPLORATORY MODE)

In order to solve the validity problems discovered in the previous sections, the model needs to be re-specified (by going to an exploratory mode rather than a confirmatory one). As mentioned earlier in chapter five, the modifications will overcome the problems in the exploratory mode using two techniques. The techniques that can be used are EFA and modification indices (Byrne, 2010).

Items that pose low loading and cross loading problems will be deleted or will be assigned to another construct. This same process will also be conducted for the different groups since

in the previous section, the findings showed that the groups (CCC, ICC and Both) are variant at the model level. The model re-specification will be conducted for All, CCC, ICC and Both groups and for the different models of FSQ, TSQ and RESQ.

7.3.1 Model Re-Specification for All

In this sub-section, a model re-specification for All (including all credit-card users from CCC, ICC and Both groups) will be examined for the FSQ, TSQ, RESQ and Integrated models.

7.3.1.1 Model Re-Specification (FSQ – All)

A factor analysis was conducted using a Promax rotation and five items were found to be problematic. They were deleted because the factor loadings were below 0.5 or because they cross loaded into other constructs. These items were as3, as4, st2, emp1, and emp2. In addition, two items in the assurance construct were assigned to the reliability construct.

Since there is no item loading in assurance, only 5 final constructs and 20 items will be used for further analysis. In addition, the model's re-specified GOF indices were compared with the original GOF and are shown in the following table:

Table 7-7: Reliability, Convergent and Discriminant Validity after Re-specification (FSQ)

Construct	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal				
	CR	AVE	MSV	ASV	Responsiveness	Reliability	Tangible	Empathy	Staff Conduct
Responsiveness	0.874	0.637	0.623	0.526	0.798				
Reliability	0.888	0.571	0.707	0.580	0.733	0.756			
Tangible	0.847	0.580	0.490	0.411	0.570	0.648	0.762		
Empathy	0.872	0.694	0.687	0.594	0.789	0.810	0.640	0.833	
Staff Conduct	0.888	0.726	0.707	0.626	0.786	0.841	0.700	0.829	0.852
Unidimensionality									
Acceptable level	Absolute fit			Incremental fit		Parsimonious fit			
	$p < 0.05$			GFI	RMSEA	CFI	TLI	χ^2/df	
				≥ 0.9	< 0.08	≥ 0.9	≥ 0.9	Range 1-3	
Initial model	$\chi^2=94.218$; df = 49; $p < 0.0$			0.839	0.039	0.941	0.93	1.826	
Re-specified model	$\chi^2= 72.51$; df = 39; $p < 0.0$			0.931	0.053	0.97	0.961	2.59	

The table above shows that the GOF of the re-specified models are better than the original FSQ GOF. Therefore, the re-specified model is acceptable. Furthermore, the reliability,

convergent and discriminant validity as shown in Table 7-7, which follows, have managed to overcome the validity issues of the original FSQ model presented earlier. The most striking result to emerge from the data is that there is now no reliability, convergent and discriminant validity issue for the five constructs because a) $CR > 0.7$, b) $AVEs > 0.5$, c) correlation is < 0.85 .

7.3.1.2 Model Re-Specification (TSQ – All)

In order to solve the validity problems discovered in the previous sections, five items were deleted because the factor loadings were cross-loaded into different constructs. Their R^2 s were below 0.5 or the factor loadings were below 0.7. The items were ta4, com1, eta1, eta2, eta3.

Since all the items in the ETA were deleted, the ETA construct is not an important construct for this model (All). Therefore, only four final constructs emerged in the re-specified TSQ (All) model (i.e. TA, EK, Com, and Tech). The model GOF was checked and the overall GOF of the model has improved. The GOF indices are shown in the following table:

Table 7-8: GOF Comparison after Re-specification TSQ (All)

Models		TSQ		TSQ Model Specification	
Measure	Results	Indicator	Results	Indicator	
Cmin/df	3.17	Fairly good	2.39	Good	
p value of the model	0.00	Not fit	0.00	Not fit	
CFI	0.96	Good	0.98	Good	
NFI	0.94	Good	0.97	Good	
NNFI (TLI)	0.95	Good	0.975	Good	
GFI	0.92	Good	0.959	Good	
AGFI	0.89	Good	0.95	Good	
SRMR	0.04	Good	0.03	Good	
RMSEA	0.06	Good	0.05	Good	
PCLOSE	0.02	Not Good	0.49	Good	
AIC	599.00	Lower better	271.00	Lower better	
BCC	604.00	Lower better	274.00	Lower better	
BIC	842.00	Lower better	444.00	Lower better	

In addition, as is shown in the following table below, the model does not have any reliability problem since the CR results are high; ranging from 0.86 to 0.90 (i.e. above the 0.7 threshold). Furthermore, the four constructs do not have any convergent issue since the CR results are greater than the AVEs, and the AVEs are greater than 0.5.

Table 7-9: Reliability, Convergent and Discriminant Validity after Re-specification (TSQ-All)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal			
	CR	AVE	MSV	ASV	COM	TA	EK	TECH
COM	0.816	0.526	0.581	0.549	0.726			
TA	0.908	0.711	0.658	0.550	0.749	0.843		
EK	0.902	0.756	0.658	0.520	0.711	0.811	0.870	
TECH	0.839	0.575	0.581	0.470	0.762	0.657	0.631	0.758
Unidimensionality								
Acceptable level	$p < 0.05$	Absolute fit		Incremental fit		Parsimonious fit		
		GFI	RMSEA	CFI	TLI	χ^2/df		
		≥ 0.9	< 0.08	≥ 0.9	≥ 0.9	Range 1-3		
Initial model	$\chi^2=94.218$; df = 49; $p < 0.0$	0.86	0.044	0.942	0.928	2.056		
Re-specified model	$\chi^2= 72.51$; df = 39; $p < 0.0$	0.959	0.05	0.98	0.975	2.39		

No major reliability, convergent and discriminant problems were detected because the AVEs are greater than 0.5, the CRs are greater than 0.7 and the correlations of the constructs are less than 0.85.

7.3.1.3 Model Re-Specification (RESQ – All)

Since The RESQ model did not face any convergent and discriminant validity problems, there is no need to re-specify the model.

7.3.1.4 Model Re-Specification for Integrated Model (All)

The three re-specified models were integrated and tested in the measurement model. The CFA indicates a good fit to the observed data ($\chi^2/df=2.308$; CFI=0.937; GFI=0.86, RMSEA=0.048; TLI=0.93).

In addition, as shown in Table 7-10 below, the model does not have any reliability problems since the CR results are high, ranging from 0.841 to 0.908 (above the 0.7 threshold). Furthermore, the eleven constructs do not have any convergent issue since the CR results are greater than the AVEs, and the AVEs are greater than 0.5.

Table 7-10: Reliability, Convergent and Discriminant Validity after Re-specification (Integrated-All)

Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal											
CR	AVE	MSV	ASV	TA	EK	TECH	Emp	R	Tan	Res	SC	Eth	ST	COM	
TA	0.908	0.712	0.677	0.493	0.844										
EK	0.903	0.758	0.658	0.448	0.811	0.870									
TECH	0.852	0.594	0.543	0.352	0.655	0.621	0.771								
Emp	0.888	0.726	0.640	0.441	0.741	0.722	0.561	0.852							
R	0.888	0.571	0.709	0.491	0.811	0.742	0.670	0.789	0.755						
Tan	0.841	0.571	0.503	0.368	0.681	0.650	0.644	0.619	0.657	0.755					
Res	0.874	0.637	0.616	0.411	0.773	0.695	0.569	0.763	0.733	0.570	0.798				
SC	0.879	0.596	0.389	0.082	0.238	0.196	0.215	0.237	0.208	0.228	0.216	0.772			
Eth	0.848	0.530	0.389	0.298	0.559	0.557	0.494	0.582	0.561	0.526	0.459	0.624	0.728		
ST	0.889	0.727	0.709	0.512	0.823	0.792	0.611	0.800	0.842	0.709	0.785	0.231	0.590	0.853	
COM	0.832	0.554	0.591	0.419	0.730	0.695	0.737	0.632	0.769	0.638	0.621	0.198	0.485	0.755	0.744

Unidimensionality								
Absolute fit				Incremental fit		Parsimonious fit		
Acceptable level	$p < 0.05$			GFI	RMSEA	CFI	TLI	χ^2/df
				≥ 0.9	< 0.08	≥ 0.9	≥ 0.9	Range 1-3
Initial model	$\chi^2=94.218$; $\text{df} = 49$; $p < 0.0$			0.82	0.05	0.92	0.91	2.425
Re-specified model	$\chi^2= 72.51$; $\text{df} = 39$; $p < 0.0$			0.86	0.048	0.937	0.93	2.309

The table above shows that there is no discriminant validity problem since all the correlations between constructs are below the 0.85 threshold.

7.3.2 Model Re-Specification for CCC

In this sub-section, model re-specification of the CCC group (i.e. excluding credit card users who are using ICC and Both) will be examined for the FSQ, TSQ, RESQ and Integrated models.

7.3.2.1 Model Re-Specification (FSQ – CCC)

A factor analysis was conducted using a Promax rotation and eight items were found to be problematic. They were deleted because their factor loadings were below 0.5 or because they cross loaded into other constructs. The items were r5, as1, as2, as3, as4, st2, emp1 and emp2. Since there is no item loading in assurance, only five final constructs excluding assurance and 18 items will be used for further analysis.

In addition, the CFA indicates a good fit to the observed data ($\chi^2/df=1.709$; CFI=0.965; GFI=0.899, RMSEA=0.062; TLI=0.955). The CFA factor loadings results for the CCC group are acceptable (above the 0.7 threshold).

Table 7-11: Reliability, Convergent and Discriminant Validity after Re-specification (FSQ-CCC)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal				
	CR	AVE	MSV	ASV	Responsiveness	Reliability	Tangible	Empathy	Staff Conduct
Responsiveness	0.892	0.675	0.664	0.532	0.821				
Reliability	0.877	0.642	0.615	0.494	0.700	0.801			
Tangible	0.857	0.600	0.425	0.361	0.591	0.534	0.774		
Empathy	0.874	0.698	0.682	0.586	0.815	0.784	0.619	0.835	
Staff Conduct	0.892	0.733	0.682	0.580	0.791	0.765	0.652	0.826	0.856
Unidimensionality									
		Absolute fit		Incremental fit		Parsimonious fit			
		GFI	RMSEA	CFI	TLI	χ^2/df			
Acceptable level		$p < 0.05$	≥ 0.9	< 0.07	≥ 0.9	≥ 0.9	Range 1-3		
Initial model		$\chi^2=300$; $df = 67$; $p < 0.0$	0.839	0.039	0.941	0.93	1.826		
Re-specified model		$\chi^2= 210.11$; $df = 126$; $p < 0.00$	0.90	0.062	0.965	0.955	1.709		

Furthermore, the reliability, convergent and discriminant validity as shown in the following table manage to overcome the validity issues of the original FSQ model presented earlier. The most striking result to emerge from the data is that there are no reliability, convergent and discriminant validity issues for the five constructs because a) CR > 0.7, b) AVEs > 0.5, c) correlation is < 0.85.

7.3.2.2 Model Re-Specification (TSQ – CCC)

Four items were deleted because their factor loadings were below 0.7 or their R²s were below 0.5. These items were com1, com4, com5 and tech1. The CFA indicates a good fit to the observed data ($\chi^2/\text{df}=1.556$; CFI=0.977; GFI=0.913, RMSEA=0.055; TLI=0.97). In addition, as shown in the following table below, the model does not have any reliability problem since the CR results are high, ranging from 0.862 to 0.922 (above the 0.7 threshold). Furthermore, the five constructs do not have any convergent issue since the CR results are greater than the AVEs, and the AVEs are greater than 0.5.

Table 7-12: Reliability, Convergent and Discriminant Validity after Re-specification (TSQ-CCC)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal				
	CR	AVE	MSV	ASV	ETA	TA	EK	COM	TECH
ETA	0.862	0.676	0.689	0.541	0.822				
TA	0.922	0.703	0.699	0.551	0.830	0.839			
EK	0.883	0.719	0.699	0.553	0.827	0.836	0.848		
COM	0.779	0.640	0.503	0.453	0.679	0.709	0.705	0.800	
TECH	0.874	0.700	0.353	0.331	0.573	0.560	0.575	0.594	0.837

Unidimensionality						
Acceptable level	$p < 0.05$	Absolute fit		Incremental fit		Parsimonious fit
		GFI ≥ 0.9	RMSEA < 0.07	CFI ≥ 0.9	TLI ≥ 0.9	χ^2/df Range 1-3
Initial model	$\chi^2=949.72$; $\text{df} = 462$; $p < 0.0$	0.86	0.044	0.942	0.928	2.056
Re-specified model	$\chi^2= 144.10$; $\text{df} = 92$; $p < 0.0$	0.913	0.055	0.977	0.97	1.556

In addition, no discriminant problems are detected because the correlations of the constructs are less than 0.85.

Table 7-13: Reliability, Convergent and Discriminant Validity after Re-specification (Integrated-CCC)

Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal												
CR	AVE	MSV	ASV	TA	EK	ETA	TECH	Emp	R	Tan	Res	SC	Eth	ST	COM	
TA	0.923	0.707	0.701	0.473	0.841											
EK	0.884	0.720	0.701	0.456	0.837	0.848										
ETA	0.873	0.697	0.674	0.458	0.816	0.818	0.835									
TECH	0.875	0.701	0.365	0.286	0.561	0.577	0.569	0.837								
Emp	0.886	0.721	0.638	0.444	0.779	0.738	0.785	0.513	0.849							
R	0.880	0.648	0.626	0.430	0.736	0.700	0.718	0.593	0.778	0.805						
Tan	0.861	0.610	0.417	0.306	0.581	0.637	0.600	0.592	0.562	0.526	0.781					
Res	0.892	0.674	0.635	0.418	0.794	0.738	0.730	0.483	0.797	0.703	0.582	0.821				
SC	0.875	0.703	0.097	0.013	0.095	0.018	0.115	0.092	-0.010	-0.074	-0.006	0.072	0.838			
Eth	0.760	0.614	0.298	0.209	0.502	0.439	0.454	0.546	0.522	0.492	0.404	0.431	0.311	0.783		
ST	0.892	0.733	0.674	0.486	0.801	0.794	0.821	0.548	0.799	0.762	0.646	0.786	0.017	0.478	0.856	
COM	0.775	0.633	0.626	0.402	0.710	0.714	0.682	0.604	0.620	0.791	0.634	0.616	-0.065	0.401	0.787	0.796

Unidimensionality

Acceptable level	Absolute fit		Incremental fit		Parsimonious fit	
	$p < 0.05$	GFI	RMSEA	CFI	TLI	χ^2/df
		≥ 0.9	< 0.07	≥ 0.9	≥ 0.9	Range 1-3
Initial model (ALL)	$\chi^2=2282$; $\text{df} = 941$; $p < 0.0$	0.82	0.05	0.92	0.91	2.425
Re-specified model (CCC)	$\chi^2= 951.66$; $\text{df} = 633$; $p < 0.0$	0.803	0.052	0.943	0.943	1.503

7.3.2.3 Model Re-Specification (RESQ – CCC)

Since the RESQ model did not face any convergent and discriminant validity problems, there is no need to re-specify the model.

7.3.2.4 Model Re-Specification for Integrated Model (CCC)

The three re-specified models were integrated and tested in the measurement model. The CFA indicates a good fit to the observed data ($\chi^2/df=1.503$; CFI=0.943; GFI=0.803, RMSEA=0.052; TLI=0.943). However, some items have factor loading problems. Therefore these items were deleted (r5, st2, emp1, emp2, tech1, tan5, sc1, sc2, eth2, eth3, eth4, com1, com4, and com5).

The remaining items in the integrated model are now 39 in total. From Table 7-13 below, we can see that the model does not have any reliability problems since the CR results are high; ranging from 0.841 to 0.908 (above the 0.7 threshold). Furthermore, the eleven constructs do not have any convergent issue since the CR results are greater than the AVEs, and the AVEs are greater than 0.5. Table 7-13 reveals that no discriminant problems are detected because the correlations of the constructs are less than 0.85.

7.3.3 Model Re-Specification for ICC

In this sub-section, model re-specification for the ICC group (i.e. excluding credit card users who are using CCC and Both types of cards) will be examined for FSQ, TSQ, RESQ and Integrated models.

7.3.3.1 Model Re-Specification (FSQ – ICC)

Factor analysis was conducted using a Promax rotation and nine items were found to be problematic. They were deleted because the factor loadings were below 0.5 or because they cross-loaded into other constructs. These items were r5, as1, as2, as4, st2, res4, tan3, emp1 and emp2. Since there is no item loading in assurance, therefore, only five final constructs and 17 items will be used for further analysis.

In addition, CFA indicates a good fit to the observed data ($\chi^2/df=2.014$; CFI=0.959; GFI=0.897, RMSEA=0.068; TLI=0.948). The CFA factor loadings results for ICC are

acceptable (above the 0.7 threshold). Furthermore, the reliability, convergent and discriminant validity is shown in the following table.

Table 7-14: Reliability, Convergent and Discriminant Validity after Re-specification (FSQ-ICC)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal				
	CR	AVE	MSV	ASV	Responsiveness	Reliability	Tangible	Empathy	Staff Conduct
Responsiveness	0.867	0.685	0.537	0.443	0.828				
Reliability	0.856	0.599	0.656	0.519	0.707	0.774			
Tangible	0.820	0.603	0.436	0.359	0.508	0.637	0.777		
Empathy	0.877	0.706	0.640	0.492	0.691	0.716	0.581	0.840	
Staff Conduct	0.900	0.693	0.656	0.567	0.733	0.810	0.660	0.800	0.833
Unidimensionality									
Acceptable level	$p < 0.05$	Absolute fit		Incremental fit		Parsimonious fit			
		GFI	RMSEA	CFI	TLI	χ^2/df			
		≥ 0.9	< 0.07	≥ 0.9	≥ 0.9	Range 1-3			
Initial model	$\chi^2=544.90$; df = 280; $p < 0.0$	0.839	0.039	0.941	0.93	1.946			
Re-specified model	$\chi^2= 213.53$; df = 106; $p < 0.00$	0.897	0.068	0.959	0.948	2.014			

There is no reliability, convergent and discriminant validity issue for the five constructs because a) CR > 0.7, b) AVEs > 0.5, c) the correlation is < 0.85.

7.3.3.2 Model Re-Specification (TSQ – ICC)

Eight items were deleted because the factor loadings from the factor analysis were below 0.5. The items were ta3, ta4, com1, com2, eta1, eta2, eta3 and tech1. The ETA construct was deleted, therefore only four final constructs are relevant for ICC. The re-specified TSQ model for ICC indicates a good fit to the observed data ($\chi^2/df=2.255$; CFI=0.969; GFI=0.932, RMSEA=0.076; TLI=0.958).

In addition, as shown in Table 7-15 below, the model does not have any reliability problems since the CR results are high, ranging from 0.838 to 0.919 (above the 0.7 threshold). Furthermore, the four constructs do not have any convergent issues since the CR results are greater than the AVEs, and the AVEs are greater than 0.5.

Table 7-15: Reliability, Convergent and Discriminant Validity after Re-specification (TSQ-ICC)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal			
	CR	AVE	MSV	ASV	COM	TA	EK	TECH
COM	0.838	0.633	0.630	0.525	0.796			
TA	0.890	0.730	0.533	0.506	0.730	0.855		
EK	0.919	0.792	0.508	0.469	0.641	0.713	0.890	
TECH	0.867	0.685	0.630	0.532	0.794	0.691	0.698	0.828

Unidimensionality						
Acceptable level	$p < 0.05$	Absolute fit		Incremental fit		Parsimonious fit
		GFI	RMSEA	CFI	TLI	χ^2/df
		≥ 0.9	< 0.07	≥ 0.9	≥ 0.9	Range 1-3
Initial model	$\chi^2=949.8$; df = 462; $p < 0.0$	0.86	0.044	0.942	0.928	2.056
Re-specified model	$\chi^2= 108.62$; df = 48; $p < 0.0$	0.932	0.076	0.969	0.958	2.255

In addition, no discriminant problems are detected because the correlations of the constructs are less than 0.85.

7.3.3.3 Model Re-Specification (RESQ – ICC)

Since the RESQ model did not face any convergent and discriminant validity problems, there is no need to re-specify the model.

7.3.3.4 Model Re-Specification for Integrated Model (ICC)

The three models were integrated and tested for the measurement model. CFA indicates a good fit to the observed data ($\chi^2/df=1.856$; CFI=0.929; GFI=0.823, RMSEA=0.063; TLI=0.916). However, some items have factor loading problems. Therefore, these items were deleted namely, r2, r5, st2, emp1, emp2, as1, as2, as3, as4, tech1, ta3, ta4, tan3, tan5, res4, sc2, sc4, eth4, com1 and com2.

Thus, the remaining items in the integrated model are 34 items. In addition, as shown in Table 7-16 below, the model does not have any reliability problems since the CR results are high, ranging from 0.841 to 0.908 (above the 0.7 threshold). Furthermore, the eleven constructs do not have any convergent issues since the CR results are greater than the AVEs, and the AVEs are greater than 0.5.

Table 7-16: Reliability, Convergent and Discriminant Validity after Re-specification (Integrated-ICC)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal										
	CR	AVE	MSV	ASV	TA	EK	TECH	Emp	R	Tan	Res	SC	Eth	ST	COM
TA	0.891	0.732	0.607	0.436	0.856										
EK	0.920	0.793	0.591	0.402	0.719	0.891									
TECH	0.868	0.686	0.634	0.416	0.693	0.697	0.829								
Emp	0.906	0.827	0.575	0.369	0.627	0.682	0.595	0.910							
R	0.856	0.666	0.612	0.432	0.756	0.723	0.722	0.661	0.816						
Tan	0.873	0.698	0.420	0.281	0.648	0.517	0.608	0.479	0.585	0.835					
Res	0.867	0.685	0.575	0.351	0.697	0.607	0.647	0.677	0.667	0.434	0.828				
SC	0.836	0.631	0.520	0.184	0.364	0.271	0.407	0.369	0.386	0.373	0.319	0.794			
Eth	0.866	0.618	0.520	0.295	0.479	0.562	0.508	0.574	0.538	0.473	0.412	0.721	0.786		
ST	0.885	0.658	0.612	0.477	0.779	0.769	0.688	0.758	0.782	0.585	0.758	0.411	0.613	0.811	
COM	0.838	0.634	0.634	0.385	0.725	0.640	0.796	0.563	0.656	0.539	0.551	0.500	0.492	0.672	0.796
Unidimensionality															
Acceptable level	Absolute fit				Incremental fit				Parsimonious fit						
	$p < 0.05$								χ^2/df						
	≥ 0.9				≥ 0.9				Range 1-3						
Initial model (ALL)	$\chi^2=2282$; df = 941; $p < 0.0$				0.82	0.05	0.92		0.91						2.425
Re-specified model (ICC)	$\chi^2= 876.1$; df = 472; $p < 0.0$				0.823	0.063	0.929		0.916						1.856

The table shown above reveals that no discriminant problems are detected, because the correlations of the constructs are less than 0.85.

7.3.4 Model Re-Specification for Both

In this sub-section, model re-specification for the group using Both types of credit cards (i.e. excluding credit-card users who are using CCCs and ICCs) will be examined for the FSQ, TSQ, RESQ and Integrated models.

7.3.4.1 Model Re-Specification (FSQ-Both)

A factor analysis was conducted using a Promax rotation and thirteen items were found to be problematic. They were deleted because the factor loadings were below 0.5 or because they cross-loaded into other constructs. These items were r3, r5, as1, as2, as3, as4, emp2, emp3, res4, as1, tan3, st4 and tan4. Since there is no item loading in assurance, therefore, only five final constructs and 13 items will be used for further analysis.

This is similar to the findings of Han and Baek (2004) in the context of online banking, in which the assurance dimension was dropped because the items were not properly loaded. In addition, the CFA indicates a marginally good fit to the observed data ($\chi^2/\text{df}=2.314$; CFI=0.941; GFI=0.854, RMSEA=0.093; TLI=0.924) because the RMSEA is greater than 0.08 with a significant PCLOSE. The CFA factor loadings results for all the items in the Both group are acceptable (above the 0.7 threshold). Furthermore, the reliability, convergent and discriminant validity are shown in the following table.

Table 7-17: Reliability, Convergent and Discriminant Validity after Re-specification (FSQ-Both)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal				
	CR	AVE	MSV	ASV	Responsiveness	Reliability	Tangible	Empathy	Staff Conduct
Responsiveness	0.883	0.717	0.686	0.498	0.847				
Reliability	0.872	0.694	0.588	0.459	0.689	0.833			
Tangible	0.893	0.807	0.461	0.334	0.452	0.518	0.898		
Empathy	0.897	0.813	0.659	0.549	0.793	0.709	0.635	0.902	
Staff Conduct	0.884	0.718	0.686	0.599	0.828	0.767	0.679	0.812	0.847
Unidimensionality									
Acceptable level	Absolute fit			Incremental fit		Parsimonious fit			
	$p < 0.05$			GFI	RMSEA	CFI	TLI	χ^2/df	
				≥ 0.9	< 0.07	≥ 0.9	≥ 0.9	Range 1-3	
Initial model	$\chi^2=542.32$; $\text{df} = 297$; $p < 0.0$			0.839	0.039	0.941	0.93	1.826	
Re-specified model	$\chi^2= 146.42$; $\text{df} = 60$; $p < 0.00$			0.854	0.093	0.941	0.924	2.314	

There are no reliability, convergent and discriminant validity issues for the five constructs because a) CR > 0.7, b) AVEs > 0.5, c) the correlation is < 0.85.

7.3.4.2 Model Re-Specification (TSQ-Both)

Seven items were deleted because the factor loadings from the factor analysis were below 0.5. These items were com4, com2, eta1, eta2, eta3, tech1, and tech 2. In addition, ta5 was deleted because of a convergent problem. The ETA construct was deleted, therefore only four final constructs are relevant for Both.

The re-specified TSQ model for Both indicates a marginally good fit to the observed data ($\chi^2/\text{df}=2.130$; CFI=0.962; GFI=0.905, RMSEA=0.092; TLI=0.945). It is marginally fitted because the RMSEA is above 0.087 and the PCLOSE is significant at 0.008.

However, as shown in Table 7-18 below, the model does not have any reliability problems since the CR results are high, ranging from 0.838 to 0.919 (above the 0.7 threshold). Furthermore, the four constructs do not have any convergent issues since the CR results are greater than the AVEs, and the AVEs are greater than 0.5.

Table 7-18: Reliability, Convergent and Discriminant Validity after Re-specification (TSQ-Both)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal			
	CR	AVE	MSV	ASV	COM	TA	EK	TECH
COM	0.752	0.603	0.521	0.506	0.777			
TA	0.886	0.662	0.696	0.562	0.722	0.813		
EK	0.913	0.725	0.696	0.529	0.701	0.834	0.851	
TECH	0.873	0.776	0.506	0.458	0.711	0.684	0.632	0.881
Unidimensionality								
Acceptable level	Absolute fit			Incremental fit		Parsimonious fit		
	$p < 0.05$			GFI	RMSEA	CFI	TLI	χ^2/df
				≥ 0.9	< 0.07	≥ 0.9	≥ 0.9	Range 1-3
Initial model	$\chi^2=949.72$; df = 462; $p < 0.0$			0.86	0.044	0.942	0.928	2.056
Re-specified model	$\chi^2= 97.99$; df = 46; $p < 0.0$			0.905	0.092	0.962	0.945	2.130

In addition, no discriminant problems were detected because the correlations of the constructs are less than 0.85.

7.3.4.3 Model Re-Specification (RESQ-Both)

Since the RESQ model did not face any convergent and discriminant validity problems, there is no need to re-specify the model.

7.3.4.4 Model Re-Specification for Integrated Model (Both)

The three models were integrated and tested for the measurement model. The CFA indicates a marginal fit to the observed data ($\chi^2/\text{df}=1.711$; CFI=0.918; GFI=0.767, RMSEA=0.069; TLI=0.903). In addition, some items have factor loading problems. The problematic items were deleted and one construct was deleted (Com). The remaining items in the integrated model are 36 in total. Even though the model marginally fits, it does not have any reliability problems since the CR results are high, ranging from 0.841 to 0.908 (above the 0.7 threshold). Furthermore, the eleven constructs do not have any convergent issues since the CR results are greater than the AVEs, and the AVEs are greater than 0.5.

Table 7-19: Reliability, Convergent and Discriminant Validity after Re-specification (Integrated-Both)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal										
	CR	AVE	MSV	ASV	ST	EK	ETA	TECH	Emp	R	Tan	Res	SC	Eth	TA
ST	0.88	0.72	0.72	0.55	0.85										
EK	0.91	0.76	0.67	0.50	0.82	0.87									
ETA	0.83	0.62	0.72	0.48	0.85	0.74	0.80								
TECH	0.87	0.77	0.42	0.30	0.55	0.61	0.65	0.88							
Emp	0.89	0.81	0.66	0.49	0.81	0.77	0.73	0.57	0.90						
R	0.89	0.67	0.55	0.39	0.74	0.65	0.70	0.59	0.70	0.82					
Tan	0.89	0.80	0.45	0.33	0.67	0.66	0.54	0.58	0.64	0.55	0.90				
Res	0.87	0.68	0.69	0.42	0.83	0.74	0.77	0.48	0.80	0.67	0.45	0.83			
SC	0.88	0.60	0.61	0.19	0.48	0.43	0.36	0.20	0.39	0.21	0.37	0.34	0.78		
Eth	0.88	0.60	0.61	0.41	0.73	0.72	0.67	0.45	0.65	0.51	0.62	0.50	0.78	0.77	
TA	0.89	0.68	0.70	0.53	0.84	0.82	0.82	0.64	0.81	0.72	0.63	0.73	0.47	0.69	0.83

Unidimensionality						
Absolute fit			Incremental fit		Parsimonious fit	
Acceptable level			$p < 0.05$	GFI	RMSEA	χ^2/df
				≥ 0.9	< 0.07	Range 1-3
Initial model (ALL)			$\chi^2=3235.8$; $\text{df} = 1402$; $p < 0.0$	0.86	0.048	2.308
Re-specified model (Both)			$\chi^2= 909.44$; $\text{df} = 490$; $p < 0.0$	0.823	0.063	1.856

Furthermore, Table 7-19 reveals that no discriminant problems are detected because the correlations of the constructs are less than 0.85.

7.4 CONFIRMATORY FACTOR ANALYSIS – 2ND ORDER FACTOR

In contrast to the previous section, which focused on the CFA first-order models, the present section examines the CFA models that comprise of second-order factors. In this study, FSQ, TSQ, RESQ will be the second-order factors. The tests were conducted and are explained in the following sub-sections.

7.4.1 CFA 2nd Order Factor (FSQ)

An assessment to see whether the FSQ can be a second-order factor in the model developed by Parasuraman et al. (1988) and the new staff conduct dimension was conducted. FSQ was the second-order factor construct.

In addition, the factor loadings of the constructs are acceptable above the 0.7 threshold. As for the GOF indices, the second order CFA for the CCC, ICC and Both indicated a good fit to the observed data.

Table 7-20: Summary of Goodness Fit for 2nd Order FSQ Model

Models Measure	CCC		ICC		Both	
	Results	Indicator	Results	Indicator	Results	Indicator
Cmin/df	1.67	Good	1.95	Good	2.44	Good
N	188		220		152	
CFI	0.97	Good	0.96	Good	0.94	Good
NFI	0.92	Good	0.92	Good	0.91	Good
NNFI (TLI)	0.96	Good	0.95	Good	0.93	Good
GFI	0.90	Good	0.89	Marginally Good	0.88	Marginally Good
AGFI	0.86	Good	0.85	Good	0.81	Good
RMSEA	0.06	Good	0.06	Good	0.09	Not Good
PCLOSE	0.13	Good	0.02	Not Good	0.00	Not Good
AIC	300.00	Lower better	300.00	Lower better	208.00	Lower better
BCC	310.00	Lower better	308.00	Lower better	214.00	Lower better
BIC	445.00	Lower better	443.00	Lower better	302.00	Lower better

7.4.2 CFA 2nd Order Factor (TSQ)

An assessment to see if TSQ can be a second-order factor for the different credit card users is shown below:

Table 7-21: Summary of Goodness Fit for 2nd Order TSQ Model

Models Measure	CCC		ICC		Both	
	Results	Indicator	Results	Indicator	Results	Indicator
Cmin/df	1.54	Good	2.36	Good	2.18	Good
N	188		220.00		152.00	
CFI	0.98	Good	0.97	Good	0.96	Good
NFI	0.94	Good	0.94	Good	0.93	Good
NNFI (TLI)	0.97	Good	0.95	Good	0.94	Good
GFI	0.90	Good	0.93	Good	0.90	Good
AGFI	0.87	Good	0.89	Good	0.85	Good
SRMR		Good		Good		Good
RMSEA	0.05	Good	0.08	Good	0.09	Not Good
PCLOSE	0.35	Good	0.06	Good	0.01	Not Good
AIC	227.00	Lower better	173.00	Lower better	164.00	Lower better
BCC	235.00	Lower better	177.00	Lower better	170.00	Lower better
BIC	353.00	Lower better	268.00	Lower better	255.00	Lower better

7.4.3 CFA 2nd Order Factor (RESQ)

An assessment to see whether RESQ can be a second-order factor for the different credit card users revealed that there are some differences in the items, which load into SC and ETH between the CCC, ICC and Both groups. In addition, the GOF indices for the three groups are good, as shown in the following table:

Table 7-22: Summary of Goodness Fit for 2nd Order RESQ Model

Models Measure	CCC		ICC		Both	
	Results	Indicator	Results	Indicator	Results	Indicator
Cmin/df	0.75	Good	2.40	Good	2.18	Good
N	188		220.00		152.00	
CFI	1.00	Good	0.98	Good	0.96	Good
NFI	0.99	Good	0.97	Good	0.93	Good
NNFI (TLI)	1.00	Good	0.97	Good	0.94	Good
GFI	0.99	Good	0.97	Good	0.90	Good
AGFI	0.98	Good	0.93	Good	0.85	Good
SRMR		Good		Good		Good
RMSEA	0.00	Good	0.08	Good	0.07	Good
PCLOSE	0.74	Good	0.12	Good	0.18	Good
AIC	25.00	Lower better	45.00	Lower better	67.00	Lower better
BCC	25.70	Lower better	46.00	Lower better	69.00	Lower better
BIC	60.00	Lower better	89.00	Lower better	122.00	Lower better

The CFA results for the FSQ second order model for all three groups are good after re-specification of the original model. It is, however, vitally important to stress that the generic model could not be applied to the different groups without any modification.

7.4.4 CFA 2nd Order Factor (Integrated Model)

In this sub-section, an analysis of the integrated second order model for the three different groups of ICC users is presented. The FSQ, TSQ and RESQ will be the second order constructs and the three models will be integrated into a single model. Analysis of the respective different groups is explained in the following subsection and figure.

7.4.4.1 CFA Integrated Model 2nd Order Factor – All

Eleven constructs were tested with three 2nd order factors (FSQ, TSQ and RESQ). The factor loadings for the items are above the 0.7 threshold. Nevertheless, the integrated model GOF index results provide mixed findings. Some of the indicators are good and some are below the standard requirement. The results are shown in the following table:

Table 7-23: The Summary of GOF for the Integrated 2nd Order Model (All)

Models		All
Measure	Results	Indicator
Cmin/df	2.36	Good
N	560	
CFI	0.93	Good
NFI	0.89	Marginally Good
NNFI (TLI)	0.93	Good
GFI	0.85	Marginally Good
AGFI	0.83	Marginally Good
SRMR		Good
RMSEA	0.05	Good
PCLOSE	0.66	Good
AIC	2403.00	Lower better
BCC	2422.00	Lower better
BIC	2879.00	Lower better

7.4.4.2 CFA Integrated Model 2nd Order Factor - CCC

Twelve constructs were tested with three 2nd order factors (FSQ, TSQ and RESQ). The factor loadings for the items are above the 0.7 threshold. It is interesting to note from the model above that the regression path from RESQ to SC and Eth are not significant. This indicates that the RESQ as a 2nd order construct in the integrated model does not have any significant impact.

However, the directions for both constructs are positive. In addition, if the RESQ, SC and Eth constructs are excluded, the integrated model has a better goodness of fit values. The following Table 7-24 gives a comparison between the integrated model with and without RESQ.

Table 7-24: The Summary of GOF for the Integrated 2nd Order Model with and without RESQ

Models Measure	CCC with RESQ		CCC without RESQ	
	Results	Indicator	Results	Indicator
Cmin/df	1.54	Good	1.59	Good
N	188		188.00	
CFI	0.94	Good	0.94	Good
NFI	0.84	Marginally Good	0.86	Marginally Good
NNFI (TLI)	0.93	Good	0.94	Good
GFI	0.78	Not Good	0.80	Marginally Good
AGFI	0.75	Not Good	0.77	Not Good
SRMR		Good		Good
RMSEA	0.05	Good	0.06	Good
PCLOSE	0.18	Good	0.08	Good
AIC	1242.00	Lower better	977.00	Lower better
BCC	1294.00	Lower better	1015.00	Lower better
BIC	1553.00	Lower better	1243.00	Lower better

Even though there are some indices that are low, such as NFI (0.86), GFI (0.80) and AGFI (0.77), the other indices are acceptable and are above the minimum threshold. The CFI, RMSEA and PCLOSE for the CCC Integrated model are acceptable.

7.4.4.3 CFA Integrated Model 2nd Order Factor - ICC

In this sub-section, the integrated model's 2nd factor will be tested in the ICC group. Only eleven constructs were tested with the three 2nd order factors (FSQ, TSQ and RESQ). This is because the ETA was found to be problematic in the previous analysis and was therefore excluded.

The factor loadings for the items are above the 0.7 threshold. In addition, SC and ETH were found to be significant for the ICC group compared to the CCC. Table 7-25 shows the summary of the GOF indices of the integrated model for the ICC group. The GOF results are good, with Cmin/df of 1.89, CFI of 0.92, TLI of 0.92 RMSEA of 0.06. However, the NFI, GFI, AGFI and PCLOSE were below the thresholds of the study. We can, though, still accept the overall fitness of the model.

Table 7-25: The Summary of GOF for the Integrated 2nd Order ICC Model

Models Measure	Results	ICC Indicator
Cmin/df	1.89	Good
N	220.00	
CFI	0.92	Good
NFI	0.85	Marginally Good
NNFI (TLI)	0.92	Good
GFI	0.81	Marginally Good
AGFI	0.77	Not Good
SRMR		Good
RMSEA	0.06	Good
PCLOSE	0.00	Not Good
AIC	1070.00	Lower better
BCC	1100.00	Lower better
BIC	1345.00	Lower better

In the following sub-section, the integrated second order model for the group of Both credit card users will be evaluated and explained.

7.4.4.4 CFA Integrated Model 2nd Order Factor - Both

In this sub-section, the integrated model's 2nd factor will be tested for the Both group (i.e. credit card users who own CCC and ICC simultaneously). Eleven constructs were tested with the three 2nd order factors (FSQ, TSQ and RESQ). Assurance was excluded since it was found to be problematic in the previous analysis. The factor loadings for the items are above the 0.7 threshold. In addition, all the constructs were found to be significant for the Both group.

Table 7-26 shows the summary of the GOF indices of the integrated model for the "Both" group. The GOF results are fairly good, with Cmin/df of 1.80, CFI of 0.90, TLI of 0.89, RMSEA of 0.07. However, the NFI, GFI, AGFI and PCLOSE were below the thresholds of the study. However, we can still accept the overall fitness of the model.

Table 7-26: The Summary of GOF of the Integrated 2nd Order Both Model

Models	Both	
Measure	Results	Indicator
Cmin/df (1)	1.80	Good
N	152.00	
CFI	0.90	Good
		Marginally
NFI	0.81	Good
		Marginally
NNFI (TLI)	0.89	Good
GFI	0.74	Not Good
AGFI	0.70	Not Good
RMSEA	0.07	Good
PCLOSE	0.00	Not Good
AIC	1152.00	Lower better
BCC	1207.00	Lower better
BIC	1415.00	Lower better

In the following section, the structural model for the integrated model will be presented.

7.5 SEM FOR DIFFERENT GROUPS AND RELIGIOSITY

The structural model allows for the specification of the regression structure among the latent constructs. The impact of latent constructs on one another in the modelling of causal directions can be tested in the structural model as compared to the measurement model-CFA (Byrne 2010).

In this subsection, the integrated structural models will be presented for the three different credit card user groups (i.e. CCC, ICC and Both) and different religiosity level (i.e. highly religious, moderately religious, casually religious and liberal). This subsection aims to answer H 25: Different credit card credit groups moderate overall customer satisfaction and

H 24: Religiosity moderates overall customer satisfaction.

7.5.1 SEM for Different Groups of Credit Card Users

This section explains the results found for the different types of credit card users. The results for all the respondents including CCC, ICC and Both are presented. The results for CCC model, ICC and Both users are presented before the integrated model is compared between the different groups. Specifically, this subsection aims to answer H 25: Different credit card credit groups moderate overall customer satisfaction.

7.5.1.1 Integrated Model (All)

The structural model for the ALL will be based on the measurement model as presented earlier in p. 211. All second order construct were evaluated. The GOF results are good, with Cmin/df of 2.489, CFI of 0.92, TLI of 0.915, RMSEA of 0.052 and PCLOSE of 0.1298. In addition, some indicators were below the threshold of the study with NFI of 0.87, GFI of 0.83, AGFI of 0.81.

However, we can still accept the overall fitness of the model as this can be regarded as the initial study (future studies with improvements in the model are considered as progressive, as Bollen mentions (1989)). The structural model is shown in Appendix 35, p. 417.

It is interesting to take note of the positive directions of the FSQ => FSQ Satis of 0.84, TSQ => TSQ Satis of 0.78, RESQ => *Shari'ah* Compliance of 0.92 and RESQ => ethical dimension of 0.31. In addition, the directions of FSQ Satis, and TSQ Satis, *Shari'ah* Satis and Ethical Satis to customer satisfaction (Overall Satis) are also positive at 0.06, 0.19, 0.39 and 0.31 respectively.

One unanticipated finding was that the relationship between FSQ Satis and Overall Satis is not significant (p-value of 0.1541). The standardised regression and the critical ratios of the individual items and constructs are listed in the following table:

Table 7-27: The Standardised Regression for the Integrated Model (ALL)

Constructs/Items		Standardised Regression	C.R.	P	Hypotheses
	R	0.9158	20.1494	***	H1 Supported
	Emp	0.8457	19.2079	***	H4 Supported
	ST	0.9323	Fixed	***	H16 Supported
	Tan	0.7456	13.9057	***	H3 Supported
FSQ	Res	0.8209	17.6163	***	H5 Supported
	EK	0.8566	Fixed		H9 Supported
	TECH	0.734	14.3495	***	H17 Supported
	TA	0.9182	17.1256	***	H8 Supported
TSQ	COM	0.832	14.4035	***	H18 Supported
	SC	0.9242	Fixed		H13 Supported
RESQ	Eth	0.645	11.8397	***	H19 Supported
TSQ	TSQ Satis	0.7804	17.2406	***	H11 Supported
	<i>Shari'ah</i> Satis	0.9214	17.0499	***	H14 Supported
RESQ	Ethical Satis	0.4754	10.5932	***	H20 Supported
FSQ	FSQ Satis	0.8381	21.9442	***	H6 Supported
	ek3	0.7691	Fixed	***	
	ek2	0.9295	24.1603	***	
EK	ek1	0.9036	23.4739	***	
	tech1	0.5758	24.2483	***	
	tech4	0.8429	20.6450	***	
	tech3	0.8639	24.4360	***	
TECH	tech2	0.7657	20.6454	***	
	as1	0.7288	19.7567	***	
	as2	0.7216	19.4813	***	
	r4	0.8486	Fixed	***	
	r3	0.7258	23.1871	***	
	r2	0.7469	20.4646	***	
R	r1	0.7545	20.7662	***	
	tan1	0.7229	Fixed	***	
	tan2	0.778	23.3987	***	
	tan3	0.7353	15.4596	***	
Tan	tan4	0.7964	16.4155	***	
	emp5	0.8822	Fixed	***	
	emp4	0.8974	28.7807	***	
EMP	emp3	0.7712	22.4083	***	
	res1	0.8325	Fixed	***	
	res2	0.8094	22.0818	***	
RES	res3	0.8613	24.0505	***	

Constructs/Items		Standardised Regression	C.R.	P	Hypotheses
SC	sc1	0.7536	Fixed	***	
	sc2	0.6682	15.925	***	
	sc3	0.8763	21.5726	***	
	sc4	0.6781	16.1851	***	
	sc5	0.8561	21.025	***	
ETH	eth1	0.7359	Fixed	***	
	eth2	0.5964	13.755	***	
	eth3	0.6623	15.3611	***	
	eth4	0.7542	17.4454	***	
	eth5	0.8587	20.1156	***	
ST	res4	0.6754	17.2862	***	
	st1	0.8254	Fixed	***	
	st3	0.8817	25.4948	***	
	st4	0.8484	24.0666	***	
	ta3	0.8361	23.7265	***	
TA	ta2	0.8619	30.3237	***	
	ta1	0.8356	Fixed	***	
	ta5	0.8478	24.226	***	
COM	com2	0.7491	Fixed	***	
	com3	0.7893	17.9439	***	
	com4	0.7099	16.1245	***	
	com5	0.7243	16.4615	***	
	Overall				
TSQ Satis	Satis	0.1883	4.68	***	H12 Supported
	Overall				
<i>Shari'ah</i> Satis	Satis	0.3857	10.8901	***	H15 Supported
	Overall				
Ethical Satis	Satis	0.3091	8.9915	***	H21 Supported
	Overall				
FSQ Satis	Satis	0.0577	1.4251	0.1541	<i>H7 Not Supported</i>

As shown in the above table, the standardised regression of 0.026 between FSQ Satis and Overall Satis is not significant because the p-value is 0.1541. Even though H7 is not significant, the direction is marginally positive as expected. In addition, the direction between FSQ and FSQ Satis (H6) is significant.

The insignificant result shows that the credit card users (including ICC, CCC and Both credit card users) perceived that the functional service quality do not affect overall satisfaction as compared to how the TSQ Satis (H12), *Shari'ah* Satis (H15) and Ethical Satis (H21) affect overall satisfaction.

The results show that the Muslim credit card users perceived TSQ Satis, *Shari'ah* Satis and Ethical Satis as important in comparison to FSQ Satis. This has proven that the post behavioural consumption of consumers of the religious group in a different context or country can be different from other contexts.

However, as mentioned earlier, the FSQ dimensions do affect FSQ Satisfaction (H6) showing that FSQ is also important. One can also derive that FSQ dimensions can be considered as the minimum service quality that banks have to provide but in the overall customer satisfaction model, FSQ Satis will not necessarily increase the overall satisfaction. Nevertheless, it requires further clarifications and justifications from future studies.

7.5.1.2 Integrated Model (CCC)

The structural model for the CCC will be based on the measurement model as presented earlier in p. 200. In this model, RESQ was excluded because the factor did not form significantly in the second order measurement. Therefore, only two-second order factors will be evaluated with overall customer satisfaction through FSQ satisfaction (FSQ SATIS) and TSQ Satisfaction (TSQ Satis). The GOF results are good, with Cmin/df of 1.563, CFI of 0.938, TLI of 0.933, RMSEA of 0.055 and PCLOSE of 0.117. In addition, some indicators were below the threshold of the study with NFI of 0.847, GFI of 0.791, and AGFI of 0.760.

However, we can still accept the overall fitness of the model as this can be regarded as the initial study (future studies with improvements in the model are considered as progressive, as Bollen mentions (1989)). The structural model for the CCC is shown in Appendix 36, p. 418.

It is interesting to take note of the positive directions of the FSQ => FSQ SATIS of 0.82 and TSQ => TSQ Satis of 0.72 from the above figure. In addition, the directions of FSQ SATIS and TSQ Satis to customer satisfaction (Overall Satis) are also positive at 0.37 and 0.03 respectively.

One unanticipated finding was that the relationship between FSQ SATIS and Overall Satis is not significant (p-value of 0.755). The standardised regression and the critical ratios of the individual items and constructs are listed in the following table:

Table 7-28: The Standardised Regression for The Integrated Model (CCC)

Constructs	Items	Standardised Regression	C.R.	P	Hypotheses
FSQ	R	0.853	12.047	***	Proxy H1 Supported
	Emp	0.88	12.642	***	Proxy H4 Supported
	ST	0.927	12.296	***	Proxy H16 Supported
	Tan	0.685	8.484	***	Proxy H3 Supported
	Res	0.858	11.617	***	Proxy H5 Supported
	COM	0.802	10.873	***	Proxy H18 Supported
	EK	0.887	9.8	***	Proxy H9 Supported
	ETA	0.89	12.065	***	Proxy H10 Supported
TSQ	TECH	0.644	8.416	***	Proxy H17 Supported
	TA	0.912	10.578	***	Proxy H8 Supported
FSQ	FSQ Satis	0.819	13.515	***	Proxy H6 Supported
TSQ	TSQ Satis	0.719	11.183	***	Proxy H11 Supported
EK	ek3	0.701	Fixed	***	
	ek2	0.938	11.964	***	
	ek1	0.886	11.457	***	
	eta3	0.845	Fixed	***	
ETA	eta2	0.837	12.066	***	
	tech4	0.855	Fixed	***	
	tech3	0.883	14.932	***	
TECH	tech2	0.767	12.206	***	
ETA	eta1	0.833	13.065	***	
	r4	0.879	Fixed	***	
	r3	0.731	11.775	***	
	r2	0.814	13.955	***	
R	r1	0.789	13.265	***	
	tan1	0.795	Fixed	***	
	tan2	0.876	12.368	***	
	tan3	0.701	9.72	***	
Tan	tan4	0.741	10.4	***	
	emp5	0.884	Fixed	***	
	emp4	0.842	14.996	***	
Emp	emp3	0.821	14.342	***	
	res1	0.844	Fixed	***	
	res2	0.817	13.417	***	
	res3	0.865	14.641	***	
Res	res4	0.755	11.914	***	
	st1	0.822	Fixed	***	
	st3	0.884	14.681	***	
ST	st4	0.862	14.136	***	
	ta4	0.733	Fixed	***	
	ta3	0.865	11.995	***	
	ta2	0.88	12.172	***	
TA	ta1	0.866	11.963	***	
	ta5	0.855	11.84	***	
	com2	0.878	Fixed	***	
	com3	0.716	9.529	***	
FSQ Satis	Overall Satis	0.026	0.312	0.755	Proxy H7 Not Supported
TSQ Satis	Overall Satis	0.37	4.51	***	Proxy H12 Supported

As shown in the above table, the standardised regression of 0.026 between FSQ SATIS and Overall Satis is not significant because the p-value is 0.755.

7.5.1.3 Integrated Model (ICC)

The structural model for the ICC is taken from the measurement model for the ICC as presented on p. 204. All three second-order factors were tested because they are significant in the measurement model. The overall level of customer satisfaction was assessed through the FSQ (FSQ SATIS), TSQ (TSQ Satis) and RESQ (consist of *Shari'ah Satis* and Ethical Satis).

The GOF results are good, with Cmin/df of 1.924, CFI of 0.913, TLI of 0.905, RMSEA of 0.065 and PCLOSE of 0.00. In addition, some indicators were below the threshold of the study with an NFI of 0.836, GFI of 0.778, and AGFI of 0.774.

However, we can still accept the overall fitness of the model as this can be regarded as the initial study (Bollen (1989) mentioned that future studies with improvements in the model are considered as progressive).

The structural model for the ICC is shown in Appendix 37, p. 418. It is interesting to note from the above figure the significant positive directions of the FSQ => FSQ SATIS of 0.85, TSQ => TSQ Satis of 0.87 and RESQ => Shari'ah Satis of 0.67 and RESQ => Ethical Satis of 0.87 in the case of ICC.

In addition, the directions of FSQ SATIS, TSQ Satis, Shari'ah Satis and Ethical Satis to customer satisfaction (Overall Satis) are also positive at 0.2, 0.09, 0.39 and 0.3 respectively. Surprisingly, the relationship between TSQ Satis and Overall Satis is not significant (p-value of 0.117) for ICC. The standardised regression and the critical ratios of the individual items and constructs are listed in the following table:

Table 7-29: The Standardised Regression for the Integrated Model (ICC)

Constructs	Items	Standardised Regression	C.R.	P	Hypotheses
FSQ	ST	0.895	13.332	***	Proxy H16 Supported
	Tan	0.669	9.641	***	Proxy H3 Supported
	R	0.869	13.763	***	Proxy H1 Supported
	Emp	0.768	11.41	***	Proxy H4 Supported
	Res	0.755	10.249	***	Proxy H5 Supported
TSQ	EK	0.815	11.204	***	Proxy H9 Supported
	TECH	0.865	12.483	***	Proxy H17 Supported
	TA	0.876	13.41	***	Proxy H8 Supported
RESQ	COM	0.805	10.486	***	Proxy H18 Supported
	SC	0.714	8.646	***	Proxy H13 Supported
	Eth	0.877	10.661	***	Proxy H19 Supported
FSQ	FSQ Satis	0.846	15.328	***	Proxy H7 Supported
TSQ	TSQ Satis	0.865	15.875	***	Proxy H12 Supported
RESQ	<i>Shari'ah</i> Satis	0.669	10.012	***	Proxy H14 Supported
RESQ	Ethical Satis	0.872	12.853	***	Proxy H20 Supported
EK	ek3	0.786	Fixed	***	
	ek2	0.962	16.739	***	
	ek1	0.913	15.832	***	
TECH	tech4	0.84	Fixed	***	
	tech3	0.874	15.623	***	
	tech2	0.767	12.998	***	
R	r4	0.904	Fixed	***	
	r3	0.783	14.336	***	
	r1	0.753	13.471	***	
Tan	tan1	0.881	Fixed	***	
	tan2	0.894	16.145	***	
	tan4	0.72	12.258	***	
Emp	emp5	0.894	Fixed	***	
	emp4	0.925	17.861	***	
Res	res1	0.805	Fixed	***	
	res2	0.833	13.217	***	
	res3	0.844	13.389	***	
SC	sc1	0.765	Fixed	***	
	sc3	0.827	12.361	***	
	sc5	0.784	11.686	***	
Eth	eth1	0.846	Fixed	***	
	eth2	0.791	13.307	***	
	eth3	0.854	14.651	***	
ST	st1	0.849	Fixed	***	
	as3	0.811	14.715	***	
	st3	0.883	16.942	***	

Constructs	Items	Standardised Regression	C.R.	P	Hypotheses
TA	st4	0.786	14.005	***	
	ta2	0.878	17.267	***	
	ta1	0.877	Fixed	***	
	ta5	0.811	15.113	***	
COM	com3	0.778	Fixed	***	
	com4	0.82	12.245	***	
	com5	0.789	11.774	***	
FSQ Satis	Overall Satis	0.199	3.291	0.001	Proxy H7 Supported
TSQ Satis	Overall Satis	0.093	1.566	0.117	Proxy H12 Not Supported
<i>Shari'ah</i> Satis	Overall Satis	0.388	7.617	***	Proxy H15 Supported
Ethical Satis	Overall Satis	0.305	5.533	***	Proxy H20 Supported

As shown in the above table, the standardised regression between TSQ Satis and Overall Satis is not significant because the p-value is 0.117 (i.e. greater than 0.05).

7.5.1.4 Integrated Model (Both)

The structural model for the Both group is taken from the measurement model for Both as presented on p. 208. All three second-order factors will be tested because they are significant in the measurement model. The overall customer satisfaction level will be assessed through the FSQ (FSQ SATIS), TSQ (TSQ Satis) and RESQ.

Most of the GOF results are below the thresholds with Cmin/df of 1.814, CFI of 0.892, TLI of 0.79, RMSEA of 0.073 and PCLOSE of 0.00, NFI of 0.79, GFI of 0.704, and AGFI of 0.661. However, as this is a new finding, we can still accept the overall fitness of the model as a cut off for future studies (future studies with improvements in the model are considered as progressive, as Bollen mentions (1989).

The structural model for the Both group is shown in Appendix 38, p. 420. It is interesting to take note from the above figure the significant positive directions of the FSQ => FSQ SATIS of 0.829, TSQ => TSQ Satis of 0.762 and RESQ => Shari'ah Satis of 0.796 and RESQ => Ethical Satis of 0.785 in the case of the ICC group.

In addition, the directions of FSQ SATIS, TSQ Satis, Shari'ah Satis and Ethical Satis to customer satisfaction (Overall Satis) are also positive at 0.047, 0.215, 0.197 and 0.372 respectively. Surprisingly, the relationship between FSQ SATIS and Overall Satis is not

significant (p-value of 0.556). The standardised regression and its critical ratios of the individual items and constructs are listed in the following table:

Table 7-30: The Standardised Regression for the Integrated Model (Both)

Constructs	Items	Standardised Regression	C.R.	P	Hypotheses
	R	0.806	10.966	***	Proxy H1 Supported
	ST	0.94	10.954	***	Proxy H16 Supported
	Tan	0.733	8.432	***	Proxy H3 Supported
	Emp	0.879	11.352	***	Proxy H4 Supported
FSQ	Res	0.847	9.65	***	Proxy H5 Supported
	EK	0.883	10.642	***	Proxy H9 Supported
	ETA	0.879	11.193	***	Proxy H10 Supported
	TECH	0.706	9.188	***	Proxy H17 Supported
TSQ	TA	0.921	10.664	***	Proxy H8 Supported
	SC	0.9	8.975	***	Proxy H13 Supported
RESQ	Eth	0.908	11.083	***	Proxy H19 Supported
FSQ	FSQ Satis	0.829	12.408	***	Proxy H6 Supported
TSQ	TSQ Satis	0.762	10.901	***	Proxy H11 Supported
	<i>Shari'ah</i> Satis	0.796	11.249	***	Proxy H14 Supported
RESQ	Ethical Satis	0.785	11.002	***	Proxy H20 Supported
	ek3	0.832	Fixed	***	
	ek2	0.881	13.43	***	
EK	ek1	0.9	13.877	***	
	eta3	0.88	Fixed	***	
ETA	eta2	0.761	10.886	***	
	tech4	0.952			
TECH	tech3	0.804	10.449	***	
ETA	eta1	0.717	10.001	***	
	r4	0.944	Fixed	***	
	r3	0.845	15.116	***	
	r2	0.745	11.811	***	
R	r1	0.73	11.394	***	
	tan1	0.852	Fixed	***	
Tan	tan2	0.941	12.738	***	
	emp5	0.89	Fixed	***	
Emp	emp4	0.913	15.442	***	
	res1	0.815	Fixed	***	
	res2	0.74	12.221	***	
Res	res3	0.921	12.625	***	
	sc1	0.728	Fixed	***	
	sc3	0.794	9.83	***	
	sc4	0.677	8.307	***	
SC	sc5	0.753	9.259	***	

Constructs	Items	Standardised Regression	C.R.	P	Hypotheses
Eth	eth1	0.86	Fixed	***	
	eth2	0.756	10.95	***	
	eth3	0.81	12.192	***	
	eth5	0.82	12.428	***	
	st1	0.805	Fixed	***	
ST	st2	0.825	11.633	***	
	st3	0.908	13.286	***	
	ta4	0.804	Fixed	***	
	ta3	0.903	13.065	***	
TA	ta2	0.842	11.876	***	
	ta1	0.753	10.163	***	
FSQ Satis	Overall Satis	0.047	0.589	0.556	Proxy H7 Not Supported
TSQ Satis	Overall Satis	0.215	2.763	0.006	Proxy H12 Supported
<i>Shari'ah</i> Satis	Overall Satis	0.197	2.462	0.014	Proxy H15 Supported
Ethical Satis	Overall Satis	0.372	4.678	***	Proxy H21 Supported

As shown in the above table, the standardised regression between FSQ SATIS and Overall Satis is not significant because the p-value is 0.556 (i.e. greater than 0.05).

7.5.1.5 A Comparative Results of the 2nd Order Constructs Between Credit-Card Users

Comparing the three results of the second order constructs and the latent constructs, some interesting findings have emerged from the data supporting the research hypotheses.

Table 7-31 is quite revealing in several ways. Firstly, unlike the other tables, it compares the results of all three groups of credit card users and at the same time, it presents whether the results support or reject the hypotheses.

The majority of the hypotheses are supported with a few exceptions; Proxy H2, Proxy H13 and Proxy H18 are not supported for the CCC group; Proxy H2 and Proxy H10 are not supported for the ICC group; Proxy H2 and Proxy H18 are not supported for the Both group. In addition, Proxy H2 (Assurance) is found to be consistent with all three groups.

Table 7-31: The Relationships between second Order Constructs and Latent Constructs
(Credit Card Groups)

2 nd Order Construct	Latent Construct	B	CCC	β	ICC	β	Both
FSQ	Reliability	0.853	Proxy H1 Supported	0.869	Proxy H1 Supported	0.806	Proxy H1 Supported
	Assurance	n/a	Proxy H2 Not Supported	n/a	Proxy H2 Not Supported	n/a	Proxy H2 Not Supported
	Tangible	0.685	Proxy H3 Supported	.669	Proxy H3 Supported	0.733	Proxy H3 Supported
	Empathy	0.88	Proxy H4 Supported	0.768	Proxy H4 Supported	0.879	Proxy H4 Supported
	Responsiveness	0.858	Proxy H5 Supported	0.755	Proxy H5 Supported	0.847	Proxy H5 Supported
	Staff Conduct	0.927	Proxy H16 Supported	0.895	Proxy H16 Supported	0.94	Proxy H16 Supported
	Technical ability	0.912	Proxy H8 Supported	0.876	Proxy H8 Supported	0.921	Proxy H8 Supported
TSQ	Employee Knowledge	0.887	Proxy H9 Supported	0.815	Proxy H9 Supported	0.883	Proxy H9 Supported
	Communication	0.802	Proxy H18 Supported	0.805	Proxy H18 Supported	n/a	Proxy H18 Not Supported
	Employee Technical Ability	0.89	Proxy H10 Supported	n/a	Proxy H10 Not Supported	0.879	Proxy H10 Supported
	Technology	0.644	Proxy H17 Supported	0.865	Proxy H17 Supported	0.706	Proxy H17 Supported
	<i>Shari'ah</i> Compliance	n/a	Proxy H13 Not Supported	0.714	Proxy H13 Supported	0.9	Proxy H13 Supported
RESQ	Ethical dimension	n/a	Proxy H19 Not Supported	0.877	Proxy H19 Supported	0.908	Proxy H19 Supported

Secondly, the table provides the standardised regression (β) results of the second-order constructs (FSQ, TSQ and RESQ) and the latent constructs. All the β (s) are positively related to the second-order constructs. Thirdly, the table shows the trend of the service and religious and ethical service quality dimensions trend. For example, RESQ latent constructs are found to be insignificant for CCC. In contrast, they are found to be significant for ICC and Both. Turning now to the relationships of the second-order constructs with the dependent variable satisfaction, these results will be explained in the following sub-section.

7.5.1.6 A Comparative Results of the Overall Satisfaction Between Groups

This section attempts to reveal if different groups moderate the relationships between service quality and customer satisfaction. Specifically, it aims to answer the hypothesis “H25 Different credit card groups moderate overall satisfaction”. The three different groups are the credit card users who subscribe certain types of credit card such as the conventional credit card, Islamic credit card and those who subscribe to both types of credit cards. The

relationship between the 2nd order constructs or the service quality dimensions with overall customer satisfaction will be explained based on the following table:

Table 7-32: The Relationships between 2nd Order Constructs and Overall Satisfaction

Latent Construct	B	CCC	β	ICC	β	Both
RESQ => <i>Shari'ah</i> Satis	n/a	Proxy H15 Not Supported	0.669	Proxy H15 Supported	0.796	Proxy H15 Supported
RESQ => Ethical Satis	n/a	Proxy H20 Not Supported	0.872	Proxy H20 Supported	0.785	Proxy H20 Supported
FSQ => FSQ Satis	0.819	Proxy H6 Supported	0.846	Proxy H6 Supported	0.829	Proxy H6 Supported
TSQ => TSQ Satis	0.719	Proxy H11 Supported	0.865	Proxy H11 Supported	0.762	Proxy H11 Supported
<i>Shari'ah</i> Satis => Overall Satis	n/a	Proxy H15 Not Supported	0.388	Proxy H15 Supported	0.197	Proxy H15 Supported
Ethical Satis => Overall Satis	n/a	Proxy H21 Not Supported	0.305	Proxy H21 Supported	0.372	Proxy H21 Supported
FSQ Satis => Overall Satis	0.026	Proxy H7 Not Supported	0.199	Proxy H7 Supported	0.047	Proxy H7 Supported
TSQ Satis => Overall Satis	0.37	Proxy H12 Supported	0.093	Proxy H12 Not Supported	0.215	Proxy H12 Supported

The results presented in the above table strongly suggest that compliance with *Shari'ah* and ethical dimension constructs are not of importance in accessing CCC customer satisfaction. In addition, FSQ did not contribute significantly towards customer satisfaction for the CCC holders. Similar result was found by Liu (2010) in which she found that FSQ was not significant but TSQ was significant in her research context of call centre industry.

However, technical quality satisfaction has a significant impact on CCC satisfaction. In contrast to CCC, compliance with *Shari'ah* and ethical dimension constructs are important for the satisfaction of ICC holders. Here, religious and ethical service quality plays a significant role in ICC satisfaction. However, technical service quality did not play a significant role in ICC satisfaction.

Instead, the FSQ affects ICC satisfaction significantly. Turning now to the credit card users who own both ICC and CCC (Both), the results are similar to those for the ICC group except that all the service quality dimensions, FSQ, TSQ and RESQ are supported. Therefore, we can conclude that H25 Different credit card groups moderate overall satisfaction.

7.5.2 Integrated Model Multigroup Analysis - Religiosity

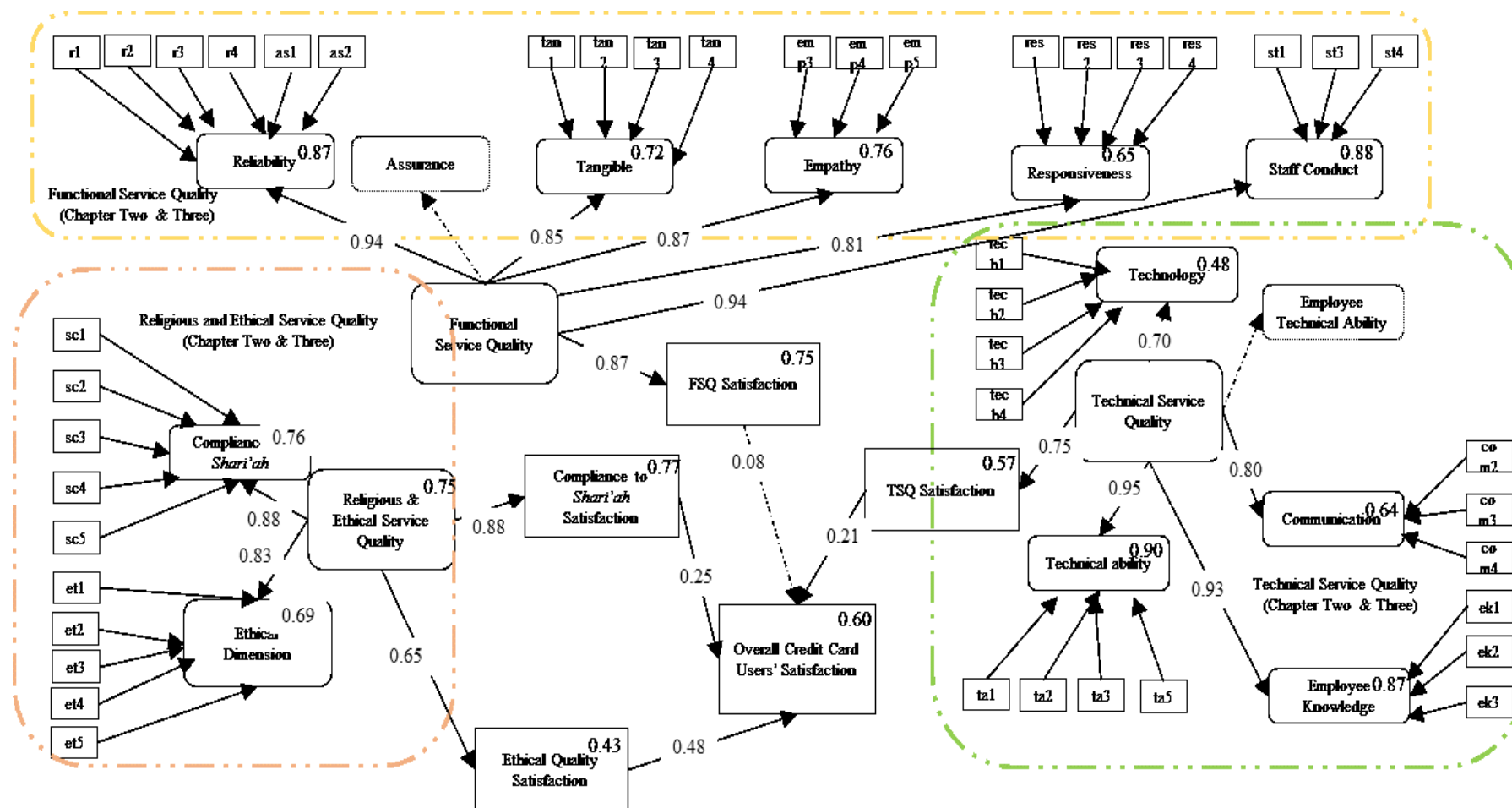
In this section, comparison is made based on the levels of religiosity of the respondents. The data are divided into four religious groups: 1) highly religious, 2) moderately religious, 3) casually religious and liberal. This subsection aims to answer the following hypothesis, H 24 Religiosity moderates overall customer satisfaction. The four religious groups were segregated using the religiosity index as presented earlier in chapter six.

The hypothesized relationships between 11 latent variables and credit card users' satisfaction are explored. The full structural models for group-1 (highly religious; n= 110), for group-2 (moderately religious; n= 170), for group-3 (casually religious; n=130) and group-4 (liberal; n=150) are presented in Figure 7-5 (p. 228) until 7-8 (p. 231) respectively.

In addition, Most of the GOF results are below the thresholds with Cmin/df of 1.7787, CFI of 0.85, TLI of 0.84, RMSEA of 0.037 and PCLOSE of 1.00, NFI of 0.71, GFI of 0.65, AGFI of 0.61. Even though the results are relatively low, they provide some theoretical insight into the impact of religiosity towards customer satisfaction. This study suspects that the low GOF index problems are due to the liberal group results having a negative covariance, which provide an inadmissible solution in AMOS.

This might be due to the model not being suitable for the liberal group or in simple terms, that it is wrong but the model is good for the other three groups. However, as this is a new finding, we can still accept the overall model fitness as the cut off for future studies. The most important part is that the relationship between the constructs and customer satisfaction for the various religious groups provides a model fit summary for each dataset. The structural equation coefficients and their critical ratios are summarized in Table 7-34.

Figure 7-5: Structural Model and Significant Coefficients (Solid Lines) for Highly Religious Group



Highly Religious

Figure 7-6: Structural Model and Significant Coefficients (Solid Lines) for Moderately Religious Group

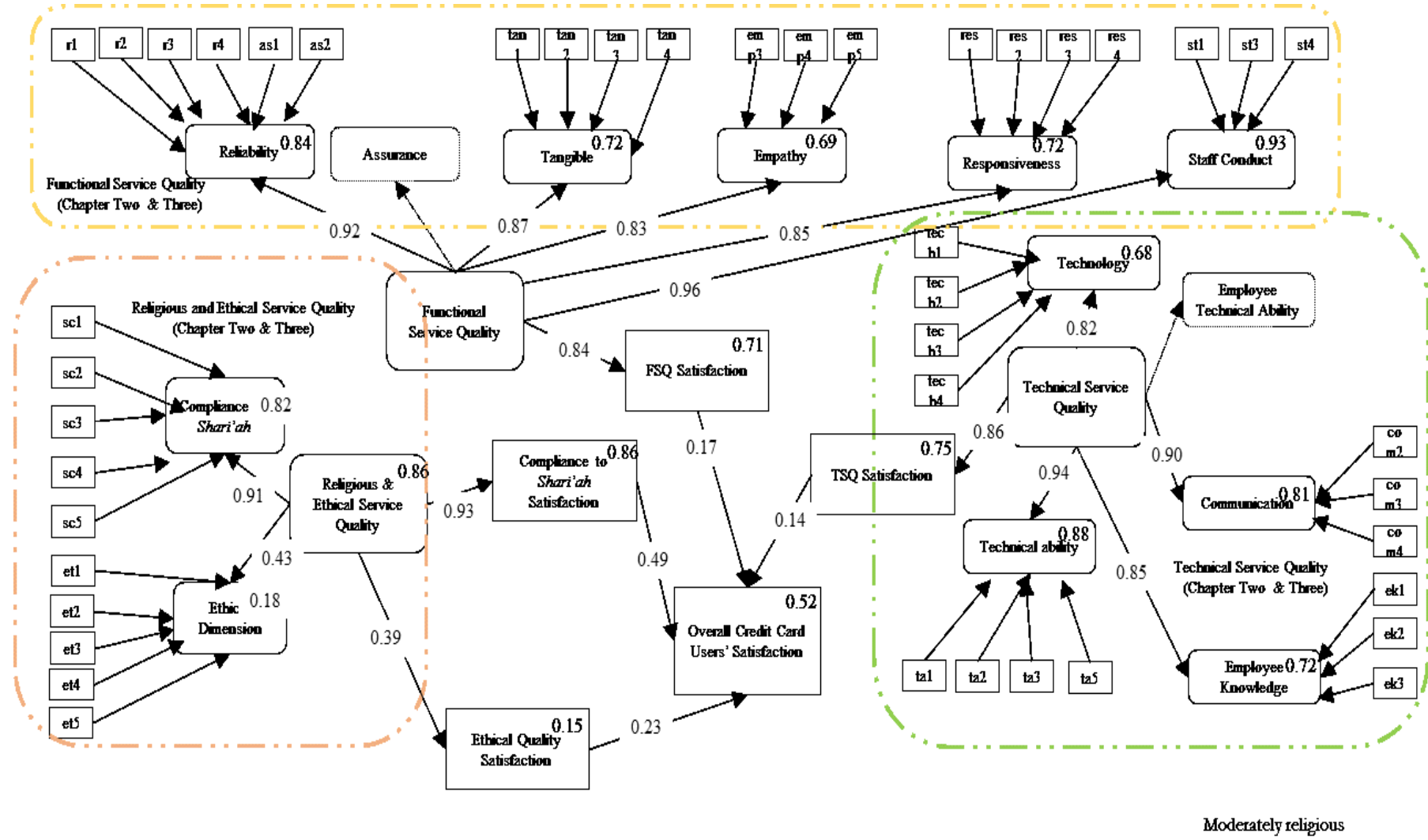
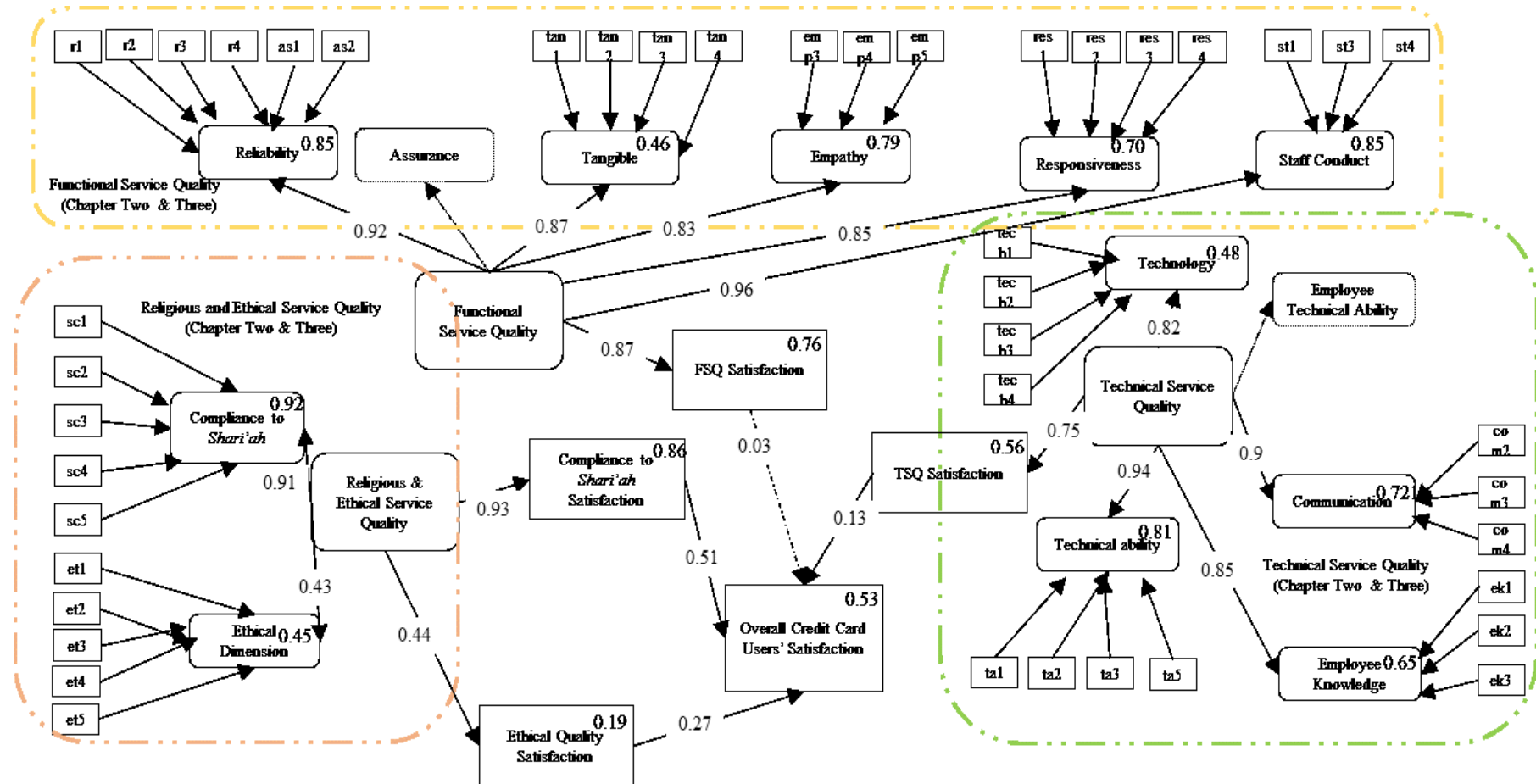


Figure 7-7: Structural Model and Significant Coefficients (Solid Lines) for Casually Religious Group



Casually religious

Table 7-33: The Relationships between 2nd Order Constructs and Latent Constructs (Religiosity)

2 nd Order Construct	Latent Construct	β	Highly Religious	β	Moderately Religious	β	Casually Religious	β	Liberal
FSQ	Reliability	0.9352	Proxy H1 Supported	0.9192	Proxy H1 Supported	0.9192	Proxy H1 Supported	.8700	Proxy H1 Supported
	Assurance	n/a	Proxy H2 Not Supported	n/a	Proxy H2 Not Supported	n/a	Proxy H2 Not Supported	n/a	Proxy H2 Not Supported
	Tangible	0.8489	Proxy H3 Supported	0.8713	Proxy H3 Supported	.8713	Proxy H3 Supported	.6123	Proxy H3 Supported
	Empathy	0.8714	Proxy H4 Supported	0.8335	Proxy H4 Supported	0.8335	Proxy H4 Supported	.8003	Proxy H4 Supported
	Responsiveness	0.8062	Proxy H5 Supported	0.8494	Proxy H5 Supported	.8494	Proxy H5 Supported	.7677	Proxy H5 Supported
	Staff Conduct	0.9403	Proxy H16 Supported	0.9626	Proxy H16 Supported	.9626	Proxy H16 Supported	.9011	Proxy H16 Supported
	Technical solution ability	0.949	Proxy H8 Supported	0.9355	Proxy H8 Supported	.9355	Proxy H8 Supported	.8727	Proxy H8 Supported
TSQ	Employee Knowledge	0.9330	Proxy H9 Supported	0.8493	Proxy H9 Supported	.8493	Proxy H9 Supported	.8085	Proxy H9 Supported
	Communication	0.8001	Proxy H18 Supported	0.9005	Proxy H18 Supported	.9005	Proxy H18 Supported	.7306	Proxy H18 Supported
	Employee Technical Ability	n/a	Proxy H10 Not Supported	n/a	Proxy H10 Not Supported	n/a	Proxy H10 Not Supported	n/a	Proxy H10 Not Supported
RESQ	Technology	0.6961	Proxy H17 Supported	0.8237	Proxy H17 Supported	.8237	Proxy H17 Supported	.6693	Proxy H17 Supported
	<i>Shari'ah</i> Compliance	0.8782	Proxy H13 Supported	0.9057	Proxy H13 Supported	.9057	Proxy H13 Supported	.8848	Proxy H13 Supported
	Ethical dimension	0.6531	Proxy H19 Supported	0.4281	Proxy H19 Supported	.4281	Proxy H19 Supported	.5782	Proxy H19 Supported

Table 7-33 shows the results from the multi-group analysis of the different religious groups. The three 2nd order constructs (FSQ, TSQ and RESQ) are shown in the first column and the latent constructs for the 2nd order constructs are shown in the second column. The standardised regression weights (β s) for the respective constructs are shown in the 3rd column, and the hypotheses for the four different religious groups are shown in the 4th, 6th, 8th and 10th columns.

Now, turning to the β s for the individual constructs in the FSQ (across all four religious groups) it is revealed that all the hypotheses (Proxy H4, Proxy H1, Proxy H5, Proxy H3 and Proxy H16) were supported except for the assurance construct (Proxy H2). All the β s for the individual construct were above 0.7 except for the tangible dimension (0.6123) as shown for the liberal group.

Turning to the TSQ's 2nd order constructs, only four latent constructs hypotheses were supported (Proxy H8, Proxy H9, Proxy H17 and Proxy H18). The Employee Technical Ability (ETA) did not converge successfully, and H10 was rejected. In addition, all of the β s were above 0.7 except for technology construct (0.6961 – highly religious and 0.6693 – liberal).

As for the RESQ second order construct, both latent constructs (SC and ethical dimensions) were supported. The β s for SC were above 0.7. However, the β s for the ethical dimension were below 0.7 for the groups (i.e. 0.4281 – moderately religious, 0.4281 – casually religious and 0.5782 – liberal). Nevertheless, the β s for the highly religious group was high at 0.8331.

In examining all the models (FSQ, TSQ and RESQ) as an integrated model, 10 out of 12 hypotheses were supported as shown in Table 7-34. Even though the model GOF is marginally accepted, the causal relationship between the constructs and the dependent variable were more beneficial for understanding the human behavioural effects for the banking industry taking religiosity as a moderating variable. These relationships are shown in the following table.

Table 7-34: The Relationships between 2nd Order Constructs and Overall Satisfaction (Religiosity)

Latent Construct	β	Highly Religious	β	Moderately Religious	B	Casually Religious	B	Liberal
RESQ => <i>Shari'ah</i> Satis	.8782	Proxy H14 Supported	.9299	H14 Supported	.9297	H14 Supported	.9588	H14 Supported
RESQ => Ethical Satis	.6531	Proxy H20 Supported	.3872	H20 Supported	.4355	H20 Supported	.4289	H20 Supported
FSQ => FSQ Satis	.8667	Proxy H6 Supported	.8422	Proxy H6 Supported	.8711	Proxy H6 Supported	.7745	Proxy H6 Supported
TSQ => TSQ Satis	.7520	Proxy H11 Supported	.8634	Proxy H11 Supported	.7454	Proxy H11 Supported	.7253	Proxy H11 Supported
<i>Shari'ah</i> Satis => Overall Satis	.2518	Proxy H15 Supported	.4891	Proxy H15 Supported	.5090	Proxy H15 Supported	.2515	Proxy H15 Supported
Ethical Satis => Overall Satis	.4847	Proxy H21 Supported	.2268	Proxy H21 Supported	.2656	Proxy H21 Supported	.3312	Proxy H21 Supported
FSQ Satis => Overall Satis	.0839	Proxy <i>H7</i> Not Supported	.1743	Proxy H7 Supported	.0348	Proxy <i>H7</i> Not Supported	-.0899	Proxy <i>H7</i> Not Supported
TSQ Satis => Overall Satis	.2082	Proxy H12 Supported	.1379	Proxy H12 Marginally Supported	.1304	Proxy H12 Marginally Supported	.2328	Proxy H12 Supported

The above table presents the relationships between the 2nd order constructs and customer satisfaction. The first column shows the directions of the causal relationships between the 2nd order constructs and customer satisfaction. The standardised regression weights (β s) are presented in the 2nd, 4th, 6th and 8th columns for the individual religious groups (i.e. highly religious – column 3, moderately religious – column 5, casually religious – column 7, and liberal – column 9).

Turning to the causal relationships between the 2nd order constructs and customer satisfaction, the constructs were mediated by the observed variables entitled FSQ satisfaction (FSQ Satis), Technical Service Quality Satisfaction (TSQ Satis) and Religious and Ethical Service Quality Satisfaction (*Shari'ah* compliance satisfaction – *Shari'ah* Satis and Ethical Dimension – Ethical Satis).

The relationships of RESQ => *Shari'ah* Satis were positive for all four religious groups. The relationships of RESQ => Ethical Satis were also positive and significant for all four religious groups. However, the β s were lower compared to the relationships between RESQ => *Shari'ah* Satis. As for the relationships of FSQ => FSQ Satis, all the β s were positive across

all four religious groups. In addition, the relationships of TSQ => TSQ Satis were all positive and were also significant across all four religious groups.

Turning now to the relationships of *Shari'ah* Satis, Ethical Satis, FSQ Satis and TSQ Satis with overall satisfaction (Overall Satis), four hypotheses were tested (Proxy H15, Proxy H21, Proxy H7 and Proxy H12). Proxy H 15 and Proxy H21 were supported across all four different religious groups (i.e. *Shari'ah* Satis => Overall Satis and Ethical Satis => Overall Satis). However, the degree of the relationships varies between the religious groups.

For instance, the degree of the *Shari'ah* Satis relationship towards Overall Satis for the highly religious and liberal groups was lower compared to the moderately and casually religious groups. In contrast, the relationships of Ethical Satis => Overall Satis were the opposite of this.

Turning to the degree of the relationships between FSQ Satis=> Overall Satis, the results show that the impact of FSQ Satis were minimal (low β s), although they were also not significant towards Overall Satis across the religious groups except for the moderate religious group. As for the relationships of TSQ Satis => Overall Satis,

Proxy H12 was supported for the highly religious group, marginally supported for the moderate and casually religious groups and not supported for the liberal group. Nevertheless, the strengths of the relationships are relatively low, being in the range of 0.104 to 0.2082.

In summary, only the relationships between TSQ Satis => Overall Satis for the liberal group and FSQ Satis => Overall Satis for the highly religious group were not significant. Proxy H7 were not supported for the liberal and highly religious groups.

All of the other relationships hypotheses across the religious groups were positive (except for Proxy H7 – liberal) and significant. Based on the results, religiosity moderates overall customer satisfaction (H 24).

7.6 CHAPTER SUMMARY

This chapter has described and explained the data preparation and screening. Missing data, outliers and normality issues have been addressed. The data was analysed using structural equation modelling for the FSQ, TSQ, RESQ, Integrated model, and religiosity. The measurement models were tested using confirmatory factor analysis and the models' GOFs are acceptable. However, the measurement models have faced some problems with discriminant validity.

The religiosity index was also presented in the chapter, where four different religious groups were identified (and named highly, moderately, casually religious and liberal). In addition, CFA multigroup comparisons were also conducted for three different groups of credit card users (i.e. CCC, ICC and Both). The multigroup invariance analysis showed that the models are different at the model levels.

In order to solve the invariance problems, the models were re-specified individually for All, and for the CCC, ICC and Both groups. The re-specified models have shown better reliability, convergence and discriminant. The structural models were also tested for the different groups (i.e. All, CCC, ICC and Both) and the comparative results of the 2nd order constructs and satisfaction were presented.

The measurement model results revealed that the *Shari'ah* compliance and ethical dimension for the CCCs do not support the hypotheses developed for this study. However, both constructs were supported for the ICC and Both groups. As for the relationships of the 2nd order constructs with satisfaction, the results are mixed. For instance, the results for the CCC group revealed that *Shari'ah* satisfaction, ethical quality satisfaction and functional quality satisfaction were not supported. In contrast, technical quality satisfaction was not supported for the ICC group. Interestingly, they were all supported for the Both group.

The chapter also conducted a multigroup analysis using religiosity as the moderator. The results of this analysis revealed that the model's GOFs was marginally accepted. The measurement models for the four different religious groups were consistent (and most of the hypotheses were supported). However, the results of the relationships between the 2nd order constructs and satisfaction vary in terms of the degrees of the strength of each.

CHAPTER 8 : DISCUSSION OF FINDINGS, CONCLUSIONS, IMPLICATIONS AND FUTURE RESEARCH DIRECTIONS

"Acquire knowledge, it enables its professor to distinguish right from wrong; it lights the way to heaven. It is our friend in the desert, our company in solitude and companion when friendless. It guides us to happiness, it sustains us in misery, it is an ornament amongst friends and an armour against enemies." (Widely attributed to the Prophet Mohammed p.b.u.h.)

8. INTRODUCTION

The exponential growth of Islamic banking often connotes the resurgence of religious affiliated consumers. The Malaysian banking and financial system authorities acknowledge this trend and support the Islamic banking to co-exist with the conventional banking. The existence of Islamic banking system provides an alternative for Muslim consumers who want to comply with *Shari'ah* rules. One of the major reasons for not using conventional banking system is the divine revelation on the prohibition of taking and giving of interest in loan transactions.

Nevertheless, the Islamic banking products are comparable to conventional banking products. Varieties of conventional banks' products offered in the market are also offered by the Islamic banks such as home mortgages, individual personal financing, credit cards and other products. The major difference between the conventional and Islamic banking products is the elimination of interest, uncertainty (*gharar*), gambling (*maisir*) and unlawful (*haram*) elements in the underlying contracts of the products being offered. However, even though the Islamic banks have succeeded in producing *Shari'ah* compliant products, it does not a guarantee maximum customer satisfaction unless the Islamic banks meet all customers' expectations.

Since this study is the first attempt to discuss customer satisfaction from the credit card users' perspectives, it produces both a theoretical justification and the empirical evidence. The

present study makes an effort to examine the relationships between the antecedents of customer satisfaction in the banking industry, with a focus on the credit card industry. In addition, the study develops an integrated customer satisfaction model and provides a comparative examination between the conventional credit card, the ICC and holders of both types of credit cards.

The study also aims to identify whether an individual religiosity level can affect customers' pre and post purchase behaviours. The findings are beneficial for the marketing of IB in ensuring that they know what elements actually affect their customers' satisfaction. It also provides useful insights into whether religion plays an important role in the banking industry. This chapter will provide a recap about religion, service quality and customer satisfaction and highlight the thesis key findings and contributions, research implications and recommendations, its limitations and end with suggestions for future research.

8.1 RELIGION, SERVICE QUALITY AND CUSTOMER SATISFACTION

This research, despite its exploratory in nature, has provide some insights on the relationships between religion, service quality and customer satisfaction in the banking context. The role of religion in the world economy is not an alien subject, as much literature has shown the influence of religious behaviour in many different aspects of the economy (Lindridge 2005). Religious behaviour depends on the users' level of religiousness or religiosity.

Individuals who are very faithful to their religion are different from those with a liberal religious attitude. Many researchers (For example Alberhairi and Demerdash, 1988; Alsanie, 1989; Albelaikhi, 1997; Khraim, 2010; Nazlida and Dick, 2010) have tried to understand the mechanics of religious behaviour and to formulate ways to measure individual religiosity because it is an important factor in understanding consumer behaviour.

Different religions will have different effects on individual beliefs, which in turn determine their consumption patterns. Islam is a religion that is governed by the *Shari'ah* law in every aspect of life, including politics, the economy and spirituality. However, the religious level is different from one person to another, which will affect the perception of whether or not a bank complies with *Shari'ah*.

In addition, a systematic literature review conducted by this study has revealed that studies in the measurement of the Islamic religiosity are limited. In response, this study offers a new measure of Islamic religiosity scale as one of its contribution towards the academic world.

A major contribution of this thesis is the methodological development of Islamic religiosity scale measurement in the context of Islamic banking industry. Even though the scale is developed as part of a bigger research in evaluating customer satisfaction in the Islamic banking industry, the researcher believes that it can also be applied in other contexts in Islamic marketing in its original form or with some modifications.

The introduction of the Islamic religiosity scale is timely and appropriate since religion is a part of the application of values to consumer behavioural research in many countries, which are highly populated with Muslims. This thesis, defines religion *“as a complete way of life, the way of thinking, ideology and way of actions that is not confined to beliefs and ritual only.”*

The definition is looking at religion in total. It will include all aspects such as politic, economy, social, law and governance. Specifically, the study’s definition can be applied to Islam as Gleason (1997) quoted in Gunn (2003) states that, “Muslim believers stress that Islam is not only a religious doctrine but also a way of life.”

Islam does not make distinctions between doctrine and life, between thought and action, between word and deed. Islam demands total commitment of the individual since it is a living doctrine. Nevertheless, religiosity is normally left aside in determining consumer behaviours even though in many parts of the world religions do affect consumers’ behaviours (Wilkes et al. 1986; Delener 1990; McDaniel and Burnett 1990; Delener 1994; Mokhlis 2006) and attitudes (Hosein 1997; Weaver and Agle 2002) through a set of rules and regulations (Weaver and Agle 2002).

Religion is also used as an explanatory variable to account for differences in the consumption habits of consumers in different parts of the globe (Moschis and Ong 2011) but it will depend on an individual commitment to adhere or not to adhere or comply or not to comply to/with the rules and regulations.

The individual has to use the religious values, beliefs or practice daily. This implies that religiosity requires consistent adherence to the rules and regulations in daily practice. One must have faith in religious value and beliefs (guided by rules and regulations) as well as put them into practice.

This thesis has provided a thorough systematic religiosity measurement for the Muslim consumers in which two dimensions were found to be highly interdependence as promulgated in the Quran, hadiths and academic literature. The religiosity dimensions are faith (*iman*) and commitment to practice (*amal*).

Another major contribution of this thesis is by providing empirical evidences supporting religiosity playing a significant role in contributions towards customer satisfaction. This theory builds on the integration of revealed and acquired knowledge as the epistemological foundation embedded in the Islamic worldview of reality (Barise 2005).

Customer satisfaction is conceptualised differently as compared to the major theory such as disconfirmation paradigm (Aldlaigan and Buttle 2002), attribution theory (Mizerski et al., 1979; Weiner, 2000), and equity theory (Aldlaigan and Buttle 2002). As the banking sector is in the services industry, customer satisfaction in this study context refers to the service performance of the service provider. This thesis has discussed the relationships between these two concepts and they are defined in the study's context.

Numerous studies *have attempted to explain* the concept of customer satisfaction and service quality (For example, Parasuraman et al., 1988; Rust and Oliver, 1994; Bitner, 1990). The difference between service quality and customer satisfaction can be simplified by defining service quality as meeting customer expectations while customer satisfaction means exceeding the customers' expectations, affected by cognitive and affective responses pertaining to a service received.

Service quality is categorised into three different dimensions in this thesis and named as functional service quality (Parasuraman et al. 1988), technical service quality (Groenroos 1984) and religious and ethical service quality (Othman and Owen 2001; Sadek et al. 2010).

The distinction between these three dimensions is perceived to be theoretically justified because there will be instances in which the process or how the service will be provided will be less significant than its outcome and vice versa. In addition, this study has introduced a new dimension named religious and ethical service quality (RESQ), in which it aims to capture the perceptions of the consumers whether service providers (i.e. credit card issuers) fulfil *Shari'ah* and ethical obligations as proposed by Othman and Owen (2001) and Sadek et al. (2010).

Nonetheless, customer satisfaction theory according to the Islamic perspectives expands beyond the finite lifetime duration. It extends to the infinite days of hereafter, which is based on the strong faith of the Muslims on the existence of the judgement day whereby all good and bad deeds will be rewarded and punished accordingly.

In consequences, Muslim consumer behaviours seem irrational because religious factor considerations postulate their actions. Ultimately, the Muslims want to achieve God's satisfaction and this can only be achieved by obeying the rules and forsaking the prohibitions as an obedience servant to Allah (Al-Badawi 2002).

Despite being conceptually different, this thesis does not falsify the existing theory developed by many, such as by Parasuraman et al. (1988), Groonros (1982), Othman and Owen (2002) and many more. It adds a fresh perspective, complements the existing models, and is comprehensive and inclusive.

Inevitably, customer satisfaction is very important for Islamic banks in being able to attract new customers and most importantly in retaining existing customers. However, there is a gap in the literature in providing a total customer satisfaction survey on compliance with *Shari'ah* and religion and its relationship with satisfaction in the context of the IB industry. This study used credit cards as the scope of the research because it is one of the fastest growing products of IB.

The study of IB is limited to this area. In addition, it is in high demand from consumers along with other products such as home financing. IB can focus on a few factors affecting the credit card user when it comes to designing their preferred credit card to make sure customers are satisfied with the quality of the services they choose. In Malaysia, ICCs are developed using

three different contracts: *tawarruq*, *ujrah* and *bay' al 'inah*. A systematic study of the ICC literature reveals that there has been a lack of studies conducted looking into customer satisfaction.

A comprehensive review of the background to customer satisfaction and the models used by previous researchers revealed that there are two major generic models of customer satisfaction. The first model developed by Fornell et al.(1996) has been used to measure the national customer satisfaction index e.g. the American Customer Satisfaction Index (ACSI).

The second model has been used to measure specific product customer satisfaction e.g. the Servqual, Technical and Carter models. However, these dimensions are not integrated with the religious factor, which is considered important in the context of IB and in particular, the ICC industry.

Another contribution is the additional dimensions that were proposed into the model that influence service quality dimensions. The additional dimensions that are frequently found to affect service quality are staff conduct (Avkiran, 1994; Abduh et al., 2012; Shahzad, 2013) communication (Johnston, 1997; Gounaris et al., 2003) and technology (Moutinho 1992; Moutinho and Smith 2000). Staff Conduct has an impact on the FSQ while technology and communication have an impact on the TSQ.

The FSQ is based on six dimensions of reliability, assurance, tangible, empathy, responsiveness and staff conduct (RATERS), and TSQ is based on five dimensions of technical ability, employee knowledge, communication, employee technical ability, and technology (TECET). There are therefore eleven (11) dimensions that affect overall customer satisfaction, both in technical and functional ways. In addition, two RESQ dimensions, which are *Shari'ah* compliance and the ethical dimension of satisfaction, will complete the integrated customer satisfaction model.

Another major contribution is the integration of functional, technical, religious and ethical service quality is an attempt to understand whether these three service quality dimensions affect customer satisfaction. This thesis has provided evidences that these dimensions, if integrated in a single measurement model, significantly affect customer satisfaction. This

thesis has extended the service quality and customer satisfaction theories into a new perspective. Specifically, the thesis findings can be listed as follows.

8.2 KEY FINDINGS

The research was conducted within the Islamic banking, service quality and customer satisfaction research where many of these stress on the significance and the associated religiosity elements in marketing (Naser et al. 1999; Jamal and Naser 2002). The empirical findings in this study provide a new understanding of religion in banking industry.

8.2.1 Key Finding No 1 - Factor Structure of SQ Models

This study has contributed a novel discovery on the SQ factors/dimensions structures that shaped the second order constructs (i.e. FSQ, TSQ, and RESQ). The confirmation factor analysis (CFA) has undergone a thorough and rigorous content, discriminant and convergent validity and goodness of fit tests.

The research has gone from a confirmatory mode to exploratory mode once the model factor structures were found to be having discriminant and convergent problems. The final factor results were then used in SEM analysis to determine the relationships between the dimensions found, constructs and overall satisfaction. The findings of the final factors structure for FSQ, TSQ and RESQ are explained in the following sub-sections.

8.2.1.1 Five Factors Structure of FSQ Dimensions

The FSQ process or how the service is provided is important and operates through four to six dimensions including reliability, assurance, tangible, empathy, responsiveness and staff conduct (Parasuraman et al. 1988; Avkiran 1994). Nevertheless, the study found that assurance dimension did not affect FSQ Satisfaction due to discriminant validity problem detected during the validity test (H_2 was dropped).

The problem is detected across all three different groups of credit card users. Perhaps, the problem arises due to the similarity of the assurance with staff conduct concept and items. This is because both dimensions dealt with the banks' staff behaviour.

This is consistent with the findings by prior researchers which stated that Servqual dimensions in its original form face validity problems (Cronin and Taylor 1992; Cronin and Taylor 1994; Engelland et al. 2000; Brady et al. 2002; Cui et al. 2003). Therefore, assurance dimension was dropped from FSQ.

The result is similar to Han and Baek (2004), Kumar et al. (2009) and Arasli et al. (2005) in which they eliminated assurance dimension because the original items in the dimension did not converge. Some authors also have included the assurance dimension but could not find significant relationship with satisfaction (Parasuraman et al. 1988; Lassar et al. 2000; Jamal and Anastasiadou 2009). After eliminating assurance from the hypothesised FSQ model structure, this research found that the remaining five dimensions positively affect functional service quality and the results support the findings from the previous literature.

For example, reliability dimension (H1) is positive and consistent with the findings from Jamal and Anastasiadou (2009) in Greece, Parasuraman et al. (1988) in the US, Levesque and McDougall (1996) in Canada, Han and Baek (2004) in Korea, Arasli et al. (2005b, 2005c) in Turkey and Greece, Muslim and Zaidi (2008) in Malaysia, and Ladhari (2009) in Canada.

The consistency of the reliability dimension affecting customer FSQ satisfaction across countries revealed that accuracy and consistency of performance are vital for banks and credit card issuers in the study context including the ICC issuers. The accuracy and consistency of the bank's performance will become positive once the credit card users perceive that their banks keep their promises, provide service at the promised time, perform the service right, sincere in solving their problems, the behaviour of employees instils confidence and they feel safe performing transactions using their credit card. It is also important to take note that the last two items are originally from assurance dimension.

In addition, the results from the data add to the extant literature by providing evidence that the credit card users perceive the physical environment as a part of the process of service quality. Tangible dimension (H3) coefficients are positively significant in affecting functional service quality satisfaction for all groups. This is in line with the findings from studies conducted by Jamal and Anastasiadou (2009) in Greece, Angur et al. (1999) in India, Han and Baek (2004) in Korea and Muslim and Zaidi (2008) in Malaysia. Therefore, for the

context of credit card industry, ICC and CCC, the physical environment will become positive once the credit card users perceive that the bank has modern equipment, physical facilities, the bank's staff appearance and the materials such as pamphlets or statement are visually appealing that can influence the customers' affective response (Jamal and Anastasiadou, 2009).

Moreover, empathy or the level of caring and individualised attention the bank provides to its customers (H4), recorded significant positive coefficients. This is in line with the previous studies conducted in many countries such as Levesque and McDougall (1996) in Canada, Angur et al. (1999) in India using Servqual. Jamal and Anastasiadou (2009) in Greece also found that empathy was positively related to customer satisfaction.

The study's findings corroborate the previous literature that indicates that customers require individualised attention from the staff of the banks. The customers perceive that the empathy dimension will be positive if the bank's employees give the customers individualised service, personal attention and the bank has operating hours which is convenient.

Similarly, the responsiveness dimension (H5) also recorded positive significant coefficients for all groups of credit card users. The willingness to help customers and prompt service are important in the process of service quality.

The data revealed that the higher the customers perceive that the bank is willing to help them and provide prompt service tend to become positive if they perceive that the bank call back the customers if required, call the customers immediately when there is an error, set an appointment for the customers quickly and never too busy to respond. This corroborates the previous findings from Angur et al. (1999) in India, Han and Baek (2004) in Korea, Muslim and Zaidi (2008) in Malaysia and Ladhari et al. (2009) in Canada.

Moreover, staff conduct or civilised conduct and presentation will project a professional image to the customers was found to be positively significant. This finding corroborates the ideas of Abduh (2012) and Shahzad (2013), who suggested that staff conducts dimension (H16) affects customer satisfaction.

In other words, the customers perception on the staff civilised conduct and presentation of staff that will portray professional image of the bank will be positive if the customers perceive

that the bank staff are polite, helpful and they are satisfied with the promptness of service from the staff. The findings provide an urgency for the bank to train their employees with good manners and always being helpful to the customers. The study has discovered that all FSQ dimensions are positively significant in influencing functional service quality except for Assurance dimension.

This research concludes that for FSQ, even though assurance dimension was dropped from the model, the result corroborates with the findings by several authors who found that assurance dimension was not significant such as Parasuraman et al. (1988) themselves. Despite of the assurance dimension being dropped from FSQ, the research can confirm that the other dimensions of Servqual model developed by Parasuraman et al. almost three decades ago still prevail in measuring FSQ with some modifications needed. Therefore, this study concludes that the FSQ has a five factors structure which comprise of reliability, tangible, empathy, responsiveness and staff conduct.

8.2.1.2 Four Factors Structure of TSQ Dimensions

The TSQ is the outcome or what service is provided. TSQ was found to be significant in influencing service quality (Kang and James, 2004). The research found that it operates through four to five dimensions including technical ability, employee knowledge, employee technical ability, technology and communication.

The dimensions of TSQ mentioned above reflect a technical industry operational activities which involve computerised software, internet technology and high-security cash machines (Al-Hawari et al. 2005). The research context of the credit card industry involves with all the above-mentioned operational activities. However, one of the dimensions were dropped out because it has convergent and discriminant problems.

Contrary to the expectation, employee technical ability (ETA) dimension has to be dropped from TSQ (All) and ICC model (H10 was dropped). Nevertheless, ETA was not dropped for CCC model. A possible explanation for this might be that ETA was found to be almost similar to staff conduct dimension in FSQ. Therefore, only four remaining dimensions were tested in the ICC integrated model and all of them were found to be positively affecting technical service quality.

Despite TSQ not frequently being investigated as compared to FSQ, the four dimensions in TSQ are important for credit card users. This is in line with prominent authors in technical service quality such as Gronroos (1982; 1984), Mentzer et al. (1999), Aldlaigan and Buttle (2002) and Kang and James (2004).

For instance, the positive results of the technical solution ability dimension (H8) found in this study revealed that the ability of the bank in dealing with, handling and solving technical problems encountered by their customers is very important in affecting TSQ. This is in line with the study conducted by Aldlaigan and Buttle (2002) in United Kingdom. The results revealed that the customers' perception on the ability of the bank in dealing with, handling and solving technical problems encountered by their customers will become positive if the customers perceive that they are given accurate technical advice, offered a flexible solution to problems and technical problems encountered are normally solved immediately and within a short period of time.

This research also found that the employee knowledge dimension (H9) is positively significant in revealing that the employee knowledge (general and product knowledge) is very important in affecting TSQ. This is true especially for the Islamic banking products which are different from the conventional banking products. For example, the employees' knowledge regarding technicality of the products offered by the Islamic banks significantly affects customer satisfaction. The employees should be able to explain the differences of conventional products and the contracts or financial instruments used (i.e. *mudharabah*, *musyarakah* and etc.) which can be highly technical (Asyraf Wajdi and Nurdianawati Irwani 2007).

This research findings show that the customers' perceptions that the level of the general and product knowledge will be positive if the customers perceive that the employees are knowledgeable about the products, can give satisfactory explanation regarding the products and the employees have the knowledge of the current economic conditions. This implies that the banks need to send their employees for training in order to increase their knowledge on current economic condition and the bank's products itself.

In addition, the positive results of technology dimension (H17) affecting TSQ were supported by Stafford (1996) and Moutinho and Smith (2000) who confirmed that the usage of ATMs plays an important role in customer satisfaction. Perhaps, technology is an integral part of service mix affecting TSQ Satisfaction (Joseph and Stone 2003). This is probably caused by the exponential growth of technology savvy consumers in Malaysia who prefer to conduct banking transactions via online and ATM.

The data revealed that the customers' perception on the technological advancement will become positive once they perceive that the credit card can be accessed in most of the ATM machines, has the latest technology, has a reliable online service and informative and updated website service.

This research also found that the communication dimension (H18) is positively significant in revealing that the ability of the service to communicate with the customer in a way he or she will understand is very important in affecting TSQ. This is in line with the study conducted by Abdullah et al. (2010), Frochot and Hughes (2000), Avkiran (1994), Johnson (1997) and Guo et al. (2008).

The data from this research revealed that the customers' perception on the ability of the bank to communicate effectively will become positive once the customers perceive that they can always make complaints to the bank regarding any problems, they are provided with telephone and web helpline and a help desk is provided in the bank's branch. Therefore, the bank has to increase its communication ability by providing effective mediums of communication for the customers to be able reach the bank at their convenience.

Therefore, this study concludes that the TSQ has a four factors structure which comprise of technical ability, employee knowledge, technology and communication. This study has provided a novel contribution in providing for the first time, a four factors structure of the TSQ dimensions affecting customer satisfaction in the banking industry.

The findings suggest that banks need to give attention to the four TSQ dimensions by preparing their employees with general and product knowledge, providing effective mediums of communication, preparing the staff with technical solution ability and equipping the bank with the latest technological advancement facilities and security. Nevertheless, the

moderating analysis (i.e. using religiosity and different credit card users groups) revealed that employee technical ability can be important for certain groups of credit card users.

8.2.1.3 Two Factors Structure of RESQ

RESQ is the intangible non related service quality construct which consists of the customers' cognitive perceptions on the ability of the bank to fulfil *Shari'ah* rules and regulations and whether the bank operates ethically either in its fund deposit or financing. This study found that both dimensions i.e. compliance with *Shari'ah* and Ethical Dimension are positively affecting RESQ. Since RESQ is a newly introduced construct by this study, no direct reference to RESQ can be made.

Nevertheless, Othman and Owen (2002) were the first to add Compliance with *Shari'ah* as one of FSQ dimensions in an Islamic banking setting. Instead of including Compliance with *Shari'ah* to FSQ as Othman and Owen (2002), it is categorised under RESQ because the customers' perception on the bank's ability to comply with *Shari'ah* rules and regulations is not a process of service quality. It also cannot be categorised as an outcome of service quality since it involves with the customers' cognitive assessment of *Shari'ah* obligations fulfilment.

The data revealed that the customers' perception on the ability of the bank to comply with *Shari'ah* rules and regulation will be positive once the customers perceive that the bank's products are using Islamic law and principles and no elements of interest, the bank provides other Islamic products, services, interest free loans and profit-sharing investment products. Therefore, the banks will have to ensure that they provide all the aspects mentioned above to increase customer satisfaction.

Similarly, ethical dimension is not often being used as a dimension affecting RESQ. Ethical dimension is a commitment to the responsible sourcing and distribution of funds (Wilson 1997). Nevertheless, reference can be made to Sadek et al. (2010) in which they found that the conventional banking users ranked ethics as having a higher importance towards customer satisfaction.

The data from this research revealed that commitment to the responsible sourcing and distribution of funds will be become positive once the customers perceive that the bank has an ethical policy, no investment in environmentally harmful businesses, the bank does not

support organisation/countries with poor human rights record, customer oriented customer services and provides all banking products.

This research found that both dimensions are significantly positive in affecting RESQ construct. Therefore, this study concludes that RESQ has a two factors structure which comprises of Compliance to *Shari'ah* and ethical dimension. This research has provided a novel contribution in the establishment of a new construct (RESQ) in the academic literature.

8.2.2 Key Finding No 2 - Role of SQ Constructs Affecting Satisfaction Constructs

The research found that the role of the SQ constructs such as FSQ, TSQ and RESQ positively affects their respective satisfaction constructs. This is an important finding showing the importance of the SQ constructs contributing towards satisfaction. The following subsections will explain the findings in greater detail.

8.2.2.1 Role of FSQ Dimensions Affecting FSQ Satisfaction

The research found that FSQ positively influences FSQ Satisfaction. The result is similar to those of Kang and James (2004), Groenroos (1982; 1984) and Kang (2006) in which they found that FSQ affects overall satisfaction significantly and is more important than TSQ. The only difference between their findings and the research finding is that the FSQ in their studies affects directly to overall satisfaction whereas in this research, FSQ affects its specific satisfaction construct (FSQ Satisfaction) and later on affects overall satisfaction.

Nevertheless, the data revealed that FSQ dimensions influence positively FSQ Satisfaction which means that if the bank wants to increase FSQ Satisfaction, the bank needs to meet the customers' expectation in increasing its performance on FSQ dimensions focussing on staff conduct reliability, empathy, responsiveness and tangibility.

8.2.2.2 Role of TSQ Dimensions Affecting TSQ Satisfaction

The research found that TSQ positively influences TSQ Satisfaction. The result is similar to those of Kang and James (2004), Groenroos (1982; 1984) and Kang (2006) in which they found that TSQ affects overall satisfaction significantly. The data revealed that TSQ dimensions influence positively TSQ Satisfaction which means that if the bank wants to

increase TSQ Satisfaction, the bank needs to meet the customers' expectation in increasing its performance on TSQ dimensions focussing on technical solution ability, employee technical knowledge, communication and technology.

8.2.2.3 Role of RESQ Affecting *Shari'ah* Satisfaction and Ethical Quality Satisfaction

The research found that RESQ positively influences *Shari'ah* and Ethical Quality Satisfaction. This is the first time that the relationships between RESQ and *Shari'ah* and Ethical Quality Satisfaction are reported and thus, no previous empirical literature can support the results of this research.

The data revealed that customers are more satisfied if they perceived that banks are able to comply with *Shari'ah* rules and regulations and commit to the responsible sourcing and distribution of funds. Therefore, the positive significant result of Compliance to *Shari'ah* and ethical dimension affecting *Shari'ah* satisfaction and ethical quality satisfaction through RESQ provides a new direction in Islamic banking research.

8.2.3 Key Finding No 3 - Role of Respective SQ Satisfaction Affecting Overall Satisfaction

The research also found that all the specific service and non-service related quality affect overall satisfaction except for FSQ Satisfaction. Surprisingly, FSQ Satisfaction is not significantly affecting overall satisfaction. The result is in contradiction with Kang and James (2004) and Groenroos (1982; 1984) in which they found that FSQ affects overall satisfaction significantly and is more important than TSQ (Kang 2006).

The results from this study however provide new evidence on the relationships of the functional and technical service quality. For instance, De Keyser and Lariviere (2014) in their study on consumer happiness found that both FSQ and TSQ affect positively consumer happiness but they have different impacts on consumer happiness depending on the channels used (De Keyser and Lariviere 2014).

Traditionally, the functional service quality is the centrum of service quality and since the service quality process is inseparable, how the process is being conducted affects customer satisfaction. In addition to functional quality, technical quality or the outcome of the process is also important in affecting customer satisfaction.

Perhaps in a highly technical industry such as the credit card industry, in which customers are accustomed with the service provided, the functional quality or the process does not affect satisfaction as the interactions between the service providers and customers shift from process to outcome.

On the other hand, this study found that TSQ Satisfaction affects overall satisfaction. The result supported earlier findings by Kang and James (2003) who found that customer satisfaction is multi-dimensional and technical quality affects overall satisfaction significantly. Nevertheless, TSQ coefficient is small in comparison to *Shari'ah* and ethical quality satisfaction.

Even though the result for FSQ Satisfaction is positive but not significant, the results found for different groups of credit card users and religiosity levels as the moderator provide another new perspective in understanding the consumers' post purchase behaviour in a dual banking system such as Malaysia.

As mentioned earlier, the *Shari'ah* and ethical quality satisfaction are positive and significant in affecting overall customer satisfaction and their coefficients are bigger than TSQ and FSQ Satisfaction. The data revealed that *Shari'ah* and Ethical Quality Satisfaction play an important role in affecting overall customer satisfaction. The results support the semi structured interview findings conducted in the early phase of this research in which all seven respondents answered that religion had an impact on their level of satisfaction; something that is not captured in the service quality models developed by Parasuraman et al., (1988) and Groenroos (1982; 1990).

This is a novel contribution in the academic literature explaining that the Malaysian banking consumers take *Shari'ah* compliance as part of their expectations. Quoting one of the respondents saying when asked regarding his or her religion affecting his or her satisfaction:

"Yes. Even if the service quality is subpar, I would stick to the Islamic principle as much as I can."

8.2.4 Key Finding No 4- Moderating Role of Different Credit Card Groups

Different credit card user is hypothesised to have a different impact towards satisfaction and will have a different impact to the degree of satisfaction (H25). This research has provided empirical evidence that the level of satisfaction of a customer can be affected by the types of credit cards that he or she uses. The data revealed that for the FSQ, TSQ and RESQ dimensions are relatively similar to those found for the entire credit card users being studied. However, interestingly for the constructs, they revealed concrete evidence in explaining the post behaviour of a credit card user.

Firstly the results confirmed that FSQ and TSQ satisfaction affect positively on the overall satisfaction for the CCC users supporting the service quality models developed by Parasuraman et al. (1988) and Groenroos (1982; 1990) except for FSQ Satisfaction. Secondly, *Shari'ah* and ethical satisfaction do not affect overall satisfaction for the CCC users whereas they are positively significant for the ICC and Both credit card users. The result implies that even though one can assess customer satisfaction using a general measurement, a specific customer satisfaction assessment for different credit card users is warranted to provide better alignment with what the customers really expect from the bank.

8.2.5 Key Finding No 5 - Moderating Role of Religiosity

In order to see that different religiosity will have a different impact to the degree of satisfaction, this research has provided empirical evidence using religiosity as a moderating factor. The research found that religiosity moderates overall satisfaction (H24). The result is almost similar with the results found for the entire samples of credit users but FSQ Satisfaction is found to be significantly positive for only one group namely, the moderately religious group.

In addition, the degree of satisfaction also varies for the different religiosity groups. For example, the moderately and casually religious groups are more satisfied if the bank is able to comply with *Shari'ah* in comparison with the highly religious and liberal groups. Furthermore, the highly religious and liberal groups have a higher degree of satisfaction if the bank operates ethically in comparison with the moderately and casually religious groups.

8.3 KEY CONTRIBUTIONS

Apart from the four major contributions as listed in the beginning of this chapter, this research has contributed in many other aspects too such as listed in the following subsections.

8.3.1 Expands ICC Customer Satisfaction in a New Context

This thesis contributes to the existing theoretical and practical knowledge by providing, for the first time, an Islamic religiosity scale measurement as a continuum of the religiosity scale developed by several authors (Wan-Ahmad et al. 2008; Ateeq-ur and Muhammad Shahbaz 2010; Hassan et al. 2010). It provides evidences about relationships between religious and ethical service quality (i.e. *Shari'ah* compliance and ethical dimensions) supporting the previous findings by Othman and Owen (2001) and Sadek et al. (2010) and the thesis provides a new contextual benchmark for Islamic credit card satisfaction in Malaysia.

8.3.2 The Development of Two New Models

The findings from this study contribute to the current literature. This thesis has succeeded in developing two new models namely the Islamic Religiosity Scale and the Integrated Customer Satisfaction Model. The models can be used separately on their own or analysed together, in which the Islamic Religiosity Scale religiosity groups can be used as the moderator in the Integrated Customer Satisfaction model.

8.3.2.1 The Islamic Religiosity Scale in Banking Industry

This study has successfully developed a measurement scale to measure the religiosity in Islamic Banking context. The scale developed can be attributed to several studies attempts to measure Islamic religiosity with the mollification that the scale developed has taken consideration all the items used by those studies (Alberhairi and Demerdash 1988; Alsanie 1989; Albelaikhi 1997; Khraim 2010; Nazlida and Dick 2010). The religiosity scale is multi-dimensional incorporating belief and commitment to practice as its dimensions.

With the introduction of the new scale, banking users could be segmented into different religious groups such as liberal, casually religious, moderately religious and highly religious groups. The findings of this study is similar with religiosity studies conducted for other

religions such Filsinger et al. (1979) and Allport (1966) who categorised individuals into different groups based on their religiosity levels.

As for the dimensions used by the study, the findings from the thesis supported Wan-Ahmad et al. (2008), Ateeq-ur and Muhammad Shahbaz (2010) and Hassan et al.'s (2010) studies suggesting that beliefs or faith (*iman*) and commitment to practice (*amal*) are antecedents for Islamic religiosity. The study has gone some way towards enhancing our understanding of these two dimensions. This study exerts that these two dimensions are interdependence with one to another and could not be measured separately.

It is also interesting to point out that age, education and religious education do influence religiosity significantly. The findings are consistent with several authors who stated that the consumers' level of commitment might be different from one individual to another based on their education background, and age (McDaniel and Burnett 1990; Assadi 2003). However, this study found that age, education and religious education background do not only affect the commitment to practice but they influence belief too.

8.3.2.2 Integrated Customer Satisfaction Model

This is the first time that FSQ, TSQ and RESQ have been used together to explore customer satisfaction theory. This study has successfully integrated three different models assessing different aspects of service quality, i.e. functional (process), technical (outcome) and religious and ethical service quality dimensions. The integrated customer satisfaction model is one of the fresh contributions to knowledge and the banking industry that are presented by the study.

The integrated models for different types of credit card users have been analysed, and the model has acceptable GOF indices. Even though some of the GOF indices are below the threshold, the study results can be seen as a cut off for future studies. Any future results can then be seen as progressive ones (Bollen, 1989).

The present study provides additional evidence with respect to the inclusion of *Shari'ah* compliance, ethical dimensions, technology and communication as first order constructs and FSQ, TSQ and RESQ as second order constructs. The study has gone some way towards

enhancing our understanding of religiosity, customer satisfaction and Islamic banking literature and thus provides a complete model within the banking context.

Despite its exploratory nature, this study offers some insight into the applicability of Islamic theory to the modern banking, in which has been supported with the empirical findings from this study.

8.3.3 Islamic Banks' Compliance with *Shari'ah* Law and its Relationships with Satisfaction

This research extends our knowledge of the relationships between complying with *Shari'ah* and customer satisfaction (For example Othman and Owen (2002) and Sadek et al. (2010)). The comparison between ICCs, conventional credit cards and those who used both types of credit cards revealed that the conventional credit card users (consisting of liberals) did not see *Shari'ah* compliance as an antecedent to customer satisfaction.

In contrast, the ICC users and users of both types of credit cards perceived the ability of the banks in complying with *Shari'ah* as a significant antecedent to customer satisfaction. There are three implications that can be derived from the findings, which are listed as follows:

- 1) The evidence from this study suggests that different types of credit-card users have different perceptions of satisfaction. For example, ICC users perceived that the employees' technical ability was relatively less important but that *Shari'ah* compliance and ethical dimensions are important.

As for the CCC users, the RESQ constructs (*Shari'ah* compliance and ethical dimensions) were found to be irrelevant in determining customer satisfaction. The constructs were found to be insignificant towards customer satisfaction. In contrast to the CCC group, the Both group of credit card users found the RESQ constructs as significantly positive to customer satisfaction.

In addition, the findings of this study suggest that the relationships between *Shari'ah* compliance and ethical constructs with satisfaction are stronger for the Both credit-card users compared to similar relationships for ICC users. This is the first study

reporting higher degree of satisfaction for *Shari'ah* compliance and ethical dimensions in those who use ICC and CCC interchangeably.

- 2) The results of this study indicate that different religious groups will also have a different perception of satisfaction. This is the first time that religiosity has been used to explore its impacts towards customer satisfaction. An implication of this is the possibility that the level of religiosity affects customer satisfaction.
- 3) The empirical findings in this study provide a new understanding that *Shari'ah* compliance will only have a significant impact on satisfaction for IB products (for example, ICCs, in this study). *Shari'ah* compliance, however, does not have any significant impact on conventional banking products (for example, conventional banking products in this study). The findings of the current study are consistent with those of Sadek et al. (2010) who found that *Shari'ah* compliance was important for Islamic banking users.

8.3.4 Religion Has a Significant Impact on IB.

The study has gone some way towards enhancing our understanding of the impacts of religion on Islamic banking. Religion has a significant impact on the perceptions of customers on IB during the pre-purchase period or when selecting credit cards and on the post-purchase satisfaction. This study found that consumers who are highly religious are more likely to select ICCs than the liberal consumers.

This is similar to the findings reported by Wan-Ahmad et al. (2008) who conducted a study on banking users instead of credit-card users. However, their respondents' sample selection was limited to a small urban area in Malaysia (i.e. the Klang valley). In addition, this study also found that the liberal consumers tend to select conventional credit cards.

Similarly, in terms of the pre purchase behaviour, this study has provided evidence that religion also has a significant impact during post purchase. This implies that the consumers' perception of whether the bank is complying with the *Shari'ah* or the ability of the bank to fulfil divine laws and regulations have been satisfied is an important aspect of post purchase behavioural impacts of religion.

Nonetheless, the customer satisfaction model for Islamic banking is different from conventional banking as suggested by many researchers (For example Othman and Owen (2001) and Sureshchandar et al. (2002)). This study summarises the impact of religion on the pre-purchase or selection of credit cards, the post purchase satisfaction and the impact of different levels of individual religiosity upon customer satisfaction.

8.3.4.1 Pre Purchase/Selection of Credit Cards and Religiosity

The previous literature on banking selection has proved that religion or religiosity plays an important factor in selecting a bank (Gerrard and Cunningham, 1997; Metawa and Al-Mossawi, 1998; Naser, Jamal and Al-Khatib, 1999; Abbas, Hamid, Joher and Ismail, 2003). Notably, Islamic banking relies on consumers' religious faith as one of its key selling points. Similarly, ICCs benefit from religious banking.

The study found that highly religious people are more attached to selecting ICCs. This is similar to the findings reported by Abduh and Omar (2012) who found that the religious factor was the most important selection criteria for Islamic banking users despite possible variances in costs and benefits. Notably, many have found a positive relationship between the two (Gerrard and Cunningham, 1997; Metawa and Al-Mossawi, 1998; Naser, Jamal and Al-Khatib, 1999; Abbas, Hamid, Joher and Ismail, 2003).

8.3.4.2 Post Purchase – *Shari'ah* Compliance Positively Affecting Customers' Satisfaction.

This is an interesting finding contribution for the academic community because, firstly, the findings of the study show that not only does religion affect consumers' pre-purchase decision-making and their consumption, but it also affects their post-purchase behaviour too (i.e. their levels of satisfaction).

Secondly, a positive relationship with the ability of a bank to comply with the *Shari'ah* rules and regulations shows that banks' customer satisfaction can be increased with the organisation's effort toward fulfilling religious obligations. This is in support with the study conducted for a single Islamic bank's customers in Kuwait by Othman and Owen (2002)

using Servqual and compliance with *Shari'ah* and the Carter model. Their study has replicated Carter in the Malaysian context by several authors such as Muslim and Zaidi (2008), Osman et al. (2009) and Sadek et al. (2010) and strengthened the argument that banks' compliance with *Shari'ah* positively affects customer satisfaction.

However, this study has extended Othman and Owen (2002) by including technical service quality and segregating the compliance with *Shari'ah* into a separate second order construct with another construct (i.e. the ethical dimension). The second order construct is labelled religious and ethical service quality satisfaction. In addition, the respondents were representative of various credit card users from different bank institutions in Malaysia, including Islamic and conventional banks' customers.

However, the current study has only examined and focussed on Muslim consumers and thus, the application of the study to other religions might not provide similar results. Nevertheless, the application of a similar study to other Muslim countries would be relatively similar if the respondents have similar demographic profiles. Furthermore, different levels of religiosity affect customers' satisfaction and they vary between different groups.

For instance, this study has found that the levels of religiosity have different degrees of impact on levels of satisfaction. It is interesting to note that the highly religious group was reported of having a lower impact on their perceptions on the ability of the banks to comply with *Shari'ah* rules and regulations towards satisfaction compared to the moderate and casually religious groups.

In addition, the highly religious group has a higher degree of positive relationship between the ethical dimension and satisfaction compared to the moderately, casually religious and liberal groups. This implies that the highly religious people are more satisfied if the banks operate ethically. While the highly religious group puts more emphasis onto the ethical dimension, the moderately and casually religious groups put more emphasis on *Shari'ah* compliance.

8.3.5 Customers' Perceptions of IB Complying with *Shari'ah* and Customer Satisfaction.

This study offers two different approaches in determining and understanding customer perceptions of IB complying with *Shari'ah* and its impact on satisfaction. Firstly, different groups of credit card users had different perceptions of the banks' ability to fulfil *Shari'ah* rules and regulations. *Shari'ah* Compliance is perceived as important for Islamic banking users as well as banking users who use both types of banking services and it has positive effects towards their satisfaction. This is in agreement with Sadek et al. (2010) who state that the customers of an Islamic bank based in the United Kingdom ranked *Shari'ah* compliance highest in importance.

Unlike the case of Islamic banking credit card users, this study strongly argues that *Shari'ah* compliance is not relevant or important for conventional credit card users. The conventional credit card users express no concern about whether their bank is complying with *Shari'ah* or not. Nevertheless, the impact of the ability of the banks to fulfil *Shari'ah* rules and regulations varies in strength between the ICC users and credit card users who use both credit card services.

Unsurprisingly, based on the findings, this study claims that credit card users who only use an ICC have a higher positive relationship between *Shari'ah* compliance and satisfaction. *Shari'ah* compliance is still important to the group who use both types of banking but to a lesser extent than those who embrace IB only

Secondly, the levels of religiosity also play an important role in influencing customers' perceptions of the ability of the banks to fulfil *Shari'ah* rules and regulations, which in turn positively affects customer satisfaction. As mentioned earlier, the moderately and casually religious groups have a higher degree of positive relationship between *Shari'ah* compliance and satisfaction.

8.4 RESEARCH IMPLICATIONS AND RECOMMENDATIONS

This research focuses on ICC users' satisfaction, comparing them with conventional credit card users and credit card users who use both types (i.e. conventional cards and ICCs) specifically in identifying whether the RESQ (*Shari'ah* compliance and ethical dimension)

affects customer satisfaction. In addition, the roles of religiosity towards customer satisfaction were also examined. This section now presents the implications of this study's findings for the academic knowledge of this subject, and also for bankers, consumers (i.e. credit card users) and policy makers.

8.4.1 Implications for Theory Development

One of the major contributions of this study is its development of an Islamic religiosity scale, which has gone through a systematic and scientific approach. An implication of this is the possibility that the multidimensional Islamic religiosity scale developed in this study to be replicated. The two dimensions, beliefs (*iman*) and commitment to practice (*amal*), are two important factors in Islamic religiosity.

Many verses in the Quran mentioned these two dimensions and these two dimensions must be used interdependently (See example *Surah Al Asr*, Verse 1 – 3). Therefore, the firm beliefs of Muslims will affect their actions and daily practices.

It is hoped that the religiosity measurement developed in this study will be used and applied by other researchers in the same field or indeed in other contexts in accessing the impacts of religiosity towards consumption and satisfaction.

Another significant contribution is that the findings support that religiosity has an effect towards the selection of products in the banking industry and the effects of RESQ (consisting of *Shari'ah* compliance and the ethical dimension) towards overall customer satisfaction. The findings from this study make several implications to the current literature.

- a) Islamic economic theory offers two-dimensional infinite timeline in which consumption and satisfaction decisions is not limited during lifetime but extended to the days hereafter. This theory was supported from the findings of this study implying that the ontological and epistemological perspectives of the Islamic worldview should be included in the mainstream academic philosophical teachings.

This provides a clear justification on why Muslim consumers behave irrationally according to the conventional economic theory. Profit maximisation might not always hold true in the Islamic economics setting; *falah* maximisation on the other hand, can

explain the Muslim behavioural in consumption. *Falah* or success in the world and the hereafter requires Muslims to have a strong belief in the day of judgement, which will have a significant impact on their behaviours.

- b) The results of this research support the idea that different types of credit card users are not homogeneous in satisfaction. There is no prior theory linking between pre purchase behaviour and post purchase behaviour especially in the context of Malaysian banking consumers. Hence, this research contributes a new knowledge of this subject matter, which provides empirical evidence of the linkage between pre purchase behaviour (i.e. the banking or credit card selection) and the post purchase behaviour (i.e. customer satisfaction). For example, a consumer who prefers Islamic credit card will be satisfied if the bank is able to fulfil *Shari'ah* obligations. In contrast, a consumer who prefers conventional credit card does not care if the bank is able to fulfil *Shari'ah* obligations. This implication might strongly work in the Malaysian context and it cannot be generalised in other countries.
- c) The findings of this study suggest that the different levels of religiosity will produce different levels of satisfaction. The results show that the highly religious group has a lower satisfaction level as compared to the casual and moderate groups. This implies that the more religious the consumers are, the higher the expectation they have regarding the banks' performance especially in the bank's ability to comply with *Shari'ah* standards and thus have a lower satisfaction level. This is totally in contrast with the liberal group who disregard *Shari'ah* compliance as one of their expectations. Nevertheless, majority of the consumers who are in the casual and moderate in religiosity have a higher satisfaction level since the banks has met their expectations especially in *Shari'ah* compliance.
- d) This research has also provided new evidence to the customer satisfaction theory by integrating the functional model, technical and religious and ethical service quality into a single model. This implies that a comprehensive customer satisfaction model, taking into account the process, outcome and non-service quality related such as *Shari'ah* compliance and ethical dimensions is possible and viable in the context of Islamic banking. Its implication is very strong for any Islamic banking institutions in

measuring customer satisfaction. The existing customer satisfaction models might be best working for conventional banks but the integrated model as suggested in this research is suitable for Islamic banks.

8.4.2 Implications for Credit-Card Issuers/Bankers

Several implications from this study can be taken into account by bankers (i.e. either Islamic bankers or conventional bankers). These implications can be used by the banks to formulate their marketing strategies for different types of credit card users or for the different types of religious groups. The implications based on the types of credit card users are detailed in the next sections

8.4.2.1 Banking Strategy Implications for Conventional Credit-Card Users

The findings from this study make several implications for the conventional banking users. For instance, RESQ is not a significant antecedent to customer satisfaction for conventional credit card users. The conventional banks should therefore be focussing on the TSQ, which was found to be significant towards customer satisfaction. The technical dimensions in the TSQ, which are deemed important to satisfaction, are technical ability, employee knowledge, communication and technology.

Even though the relationship of the functional service satisfaction (FSQ SATIS) is not significant towards satisfaction (Overall Satis), the 2nd order constructs (FSQ) are significant towards the functional service satisfaction (FSQ SATIS). Therefore, the banks should place more emphasis on technical quality without jeopardising their levels of functional service quality.

This can be done by increasing the technical solution ability of the bank employees in overcoming and reducing any technical difficulties encountered by the customers through enhancing the knowledge of the bank's employees about the bank's other products and services for cross selling and up selling. The bank could also increase its communication efficiency and effectiveness between itself and its customers by using the most convenient communication vehicles preferred by the customers. The bank also could enhance the

technological aspects of its products and services in terms of its ATM machines, website and online systems.

8.4.2.2 Banking Strategy Implications for ICC Users

In contrast to CCC users, ICC users perceived that RESQ (i.e. *Shari'ah* compliance and the ethical dimension) are important and affect their satisfaction. Therefore, the Islamic banks in particular have to ensure that they have the ability to fulfil *Shari'ah* obligations. In addition, ethical banking is also relevant for this type of credit card user. It is interesting to note that the Islamic bankers have to place emphasis on the functional quality (the process) rather than the technical quality (the outcome) because the ICCs are still new to most consumers.

This is shown from the evidence, that technical quality satisfaction did not significantly affect overall satisfaction. However, the 2nd order construct (FSQ) significantly affect technical quality satisfaction. Therefore, even though the Islamic banks should emphasise functional, religious, and ethical service quality, at the same time technical service quality should not be ignored. Technical service quality will become important as Islamic banking products, such as the ICC, become mature and more fully accepted in the market. Then, the outcome (TSQ) will become more important than the process.

8.4.2.3 Banking Strategy Implications for Users of Both Credit Cards

As for credit card users who prefer both ICC and CCC, the banks have to employ a hybrid of strategies mentioned above for ICCs and CCCs. Accordingly, the banks could use different strategies for different types of religious groups, perhaps using categories similar to those used in this study (For example highly religious, moderately religious, casually religious and liberal). Now turning to implications based on the different levels of religiosity, the implications for credit card issuers from the religious groups are detailed in the following sections.

8.4.2.4 Banking Strategy Implications for the Highly Religious Group

The FSQ satisfaction does not affect the overall satisfaction for the highly religious group because Islam does not encourage its followers to involve themselves in debt. Therefore, the banks, instead of offering credit cards to the highly religious group, should offer debit or

charge cards to them. However, the TSQ and RESQ satisfaction significantly affect overall satisfaction. Thus, the bank could increase its efforts in service quality.

For instance, highly religious people would be more interested and satisfied if the bank could explain the technical part of the contract being used for the credit card. The banks should also increase the knowledge of their staff of Islamic banking contracts (such as *bay' al 'inah*, *kafalah*, *tawarruq*, *mudharabah*, *musyarakah*, *ujrah* and etc.) so that they can explain them clearly to the customers.

8.4.2.5 Banking Strategy Implications for the Moderately and Casually Religious Groups

These two groups are almost identical in terms of their characteristics, and the integrated model seems to work very well for both groups. The TSQ and RESQ satisfaction levels affect overall customer satisfaction except for FSQ. However, the banks could strengthen or reinforce their efforts in increasing *Shari'ah* compliance and ethical dimensions because these have a greater impact on customer satisfaction. An increase in the RESQ will increase the overall satisfaction by a larger proportion compared to increases in TSQ and FSQ.

8.4.2.6 Banking Strategy Implications for the Liberal Group

The liberal group indicated that FSQ satisfaction did not affect overall customer satisfaction but TSQ satisfaction affects their overall satisfaction. This finding was similar to the finding for the conventional credit card users. However, contrary to the CCC users, the RESQ satisfaction affects overall customer satisfaction for the liberal group. With this information, the banks should focus on technical satisfaction (the outcome) and their religious and ethical service quality. For instance, Islamic banks should emphasise technical service quality (as an outcome) if they are to target the liberal group.

8.4.3 Implications for Consumers

Consumers select products based on their personal religiosity level, which in turn will affect their consumption and satisfaction. For instance, if the consumers' religiosity level is high, they will select Islamic banking products and if their religiosity level is low, they will select conventional credit cards. Consumers who are moderately and casually religious will be

indifferent between the two banking systems since they might choose to adopt a combination of both systems.

Therefore, consumers' decision-making is derived partly from their religiosity level. In addition, a new banking customer will demand more explanation of the functionality of the banking products compared to existing customers. The existing customers demand more information on the technical aspects or the processes of the banking products.

8.4.4 Implications for Policy Makers

The evidence from this study suggests few implications. Firstly, the policy makers such as those at the Central Bank of Malaysia have to ensure that the Islamic banks comply with *Shari'ah* guidelines, as this is an important aspect that affects customer satisfaction in the Islamic banking industry. Nevertheless, new research questions arise from the findings of the studies especially when the degree of satisfaction level for highly religious groups is lower compared to the casual and moderate religious groups.

Moreover, will the highly religious people's satisfaction be increased if the Islamic banks use *Mudharabah* and *Musyarakah* contracts in formulating banking products? If so, the central bank has to closely monitor the Islamic banking operations in the country and promote the usage of *mudharabah* and *musyarakah* contracts in their products.

For instance, in offering of ICCs in the industry, none of the contracts mentioned above is being used by any of the Islamic banks. The existing contracts used by the Islamic banks are *bay' al 'inah*, *ujrah*, and *tawarruq* which are less preferred by the Middle East Islamic banks compared to the *Mudharabah* and *Musyarakah* contracts. Nevertheless, even though the usage of *Mudharabah* and *Musyarakah* are preferable by the Islamic scholars, the usage of *ujrah*, and *tawarruq* are still acceptable in the context of Malaysia.

In addition, the central bank also has to monitor the satisfaction index of banking users. The satisfaction index can be used to determine the banks that are providing the best service quality to their customers. The index could become a benchmark for the minimum service quality of a bank to its customers based on industry performance. The integrated model

developed in this study could serve the purpose of determining the Islamic credit card satisfaction index.

8.5 LIMITATIONS

The findings in this report are subject to at least six important limitations that need to be considered. Firstly, the constructs of the integrated model was measured cross sectional at one point in time or named as market standing survey. Therefore, it limits the ability to generalise the results because customer satisfaction is dynamic. It evolves over time. Therefore, it is worthwhile to conduct longitudinal research using the same constructs employed in this research to take into account the dynamics in consumer behavioural and attitudinal patterns (Jamal and Anastasiadou 2009)

Secondly, the religiosity scale developed in this study measures self-assessed external aspects only and Allah alone knows the true religiosity level. In addition, the religiosity scale developed only covers two dimensions, which are beliefs (*iman*), and commitment to practice (*amal*). The scale does not measure a dimension named *ehsan* to complement the two dimensions. The inclusion of *ehsan* dimension could not be done by this study because the concept is too abstract and difficult to measure. In simple word, *ehsan* is the quality of *iman* and *amal*.

Thirdly, this study has limited its scope only to Malaysia, therefore it should only be used as guidance for future studies in other countries taking into consideration the cross cultures comparison and values among different countries. For instance, the results might not be similar for Muslim minority countries such as United Kingdom, USA and many European countries. Nevertheless, similar results might be obtained in Muslim majority countries.

Fourthly, the sample was nationally representative of Muslims who subscribe to the *Shafii* school of thought but would tend to miss people who subscribe to *Hanafi*, *Maliki* and *Hambali* schools of thought. The other three major schools of thought in the Islamic world might well produce different findings and implications. Therefore, the findings need to be interpreted with cautions in other different settings.

Another further limitation is the study only focuses on credit card users who have internet access. Even though the study has taken all necessary steps to avoid sampling bias, the inclusion of the credit card users who are non-internet users will be useful to validate the conclusion. In addition, the study only focus on a single product of that is the credit card. The model can be replicated to test other products of the banks including all products from deposit and financing sides.

Lastly, the study only focus on a single religious group. The inclusion of other religious groups will provide cross religious affiliation comparison which permit the generalisation of the impact of different religious affiliated groups towards their satisfaction.

8.6 SUGGESTIONS FOR FUTURE RESEARCH

Firstly, the study suggests that the Islamic religiosity scale to be further improved by including *ehsan* dimension. This will enable us to identify the quality of the religiosity of a Muslim. Thus, even though the existing scale developed in this study has gone through a very systematic scale process development, the inclusion of *ehsan* dimension will make the scale more comprehensive.

Secondly, since this research will serve as a base for future studies in integrating customer satisfaction with service quality and non-service quality related dimensions, (For example compliance to *Shari'ah* and ethical dimensions) this study suggests that future studies in other Muslim countries should be conducted. In addition, one can also examine if religiosity moderates the integrated model. Hence, comparison can be made and enable us to understand the mechanics that affect Muslim consumptions.

Furthermore, as the study found that age, education and religious education significantly influence religiosity, future studies should be conducted to see if these variables also affect customer satisfaction. It would be interesting to find out if age, education and religious education play an important factor in affecting customer satisfaction. Moreover, it would be beneficial if we could determine the relationships of these variables with religiosity and customer satisfaction.

Moreover, future work should be conducted taking into consideration the different four schools of thought. It would be interesting to find out if the consumers subscribed to the four major sects react similarly or differently

In addition, studies in extended post behavioural research could enrich the knowledge in academia. In particular, the study suggests that future studies on customer loyalty, customer satisfaction and religiosity should be conducted. Future work can be done in examining whether religiosity moderates the effects of the integrated service quality model towards customer satisfaction and loyalty.

Furthermore, a further detailed study on the impact of religiosity on the selection of the banking products and mediating variables should be explored. Other measurement issues which are worth researching, but which have not been the focus of this study, such as the flexibility to account for the changing nature of customer perceptions, directions for improvement in service quality and suitability to develop a link for the measurement of customer satisfaction, could all be explored.

In addition, issues around the need for training and education of banks' employees, the measurement flexibility for modifications as per changes in the environment/conditions and the use of IT in services and capabilities to be used as a tool for benchmarking are also subjects which are well worthy of research.

Another possible research would be on the differences between conventional and Islamic credit card usage segmentation in respect to spending and borrowing behaviour. Shefrin and Nicols (2014) suggest that the credit card users can be categorised based on their monthly payment behaviour, the importance to be in control of their finances and how they mentally categorise their wealth into particular mental accounts.

The inclusion of price element in the integrated customer satisfaction model is worthy of research in the context of banking industry specific. However, cautions while comparing price between conventional and Islamic banking products should be made because they are different philosophically and operationally.

SELF-REFLECTIVE STATEMENT

My PhD journey was a wonderful journey of my life. Having the opportunity to pursue my PhD at Cardiff University in a foreign land with five children was a breath taking life experience. I am grateful to God that with His blessings I managed to finish this thesis in which is only a small contribution of knowledge in the world of academia. The PhD journey is not the end of my research journey but it is the beginning point of my research endeavours.

During my PhD, as I went deeper on certain research issues, I was amazed with the vast of knowledge that I did not know. The more I read, the more I became unknowledgeable. That is the beauty of research in social science, knowledge is abundant and waiting for us to discover. However, with the guidance of my supervisors who have gone through the PhD process, I have managed to conduct a systematic research, avoiding myself from drowning in the vast sea of knowledge.

My PhD journey taught me in achieving a goal in our life, we need to be strong physically and mentally while managing my PhD research, my supervisors, my family members and the community members. The inner self must be prepared to face the challenges and hurdles that we need to encounter. Time and stress management is very important especially when I have to juggle between PhD work and my huge family.

My wife and children need my attention; my children need education, my parents and parents in laws, siblings, relatives and my friends too. Even though I have to spend a large amount of energy and time for my PhD work, I cannot make it as an excuse to avoid my responsibilities towards my family. They are important figures in my life and communicating to them about my PhD work was vital to ensure that they understand hence give their moral support to me.

In terms of academic development, my PhD journey has provided with the opportunities to present papers in many conferences and to publish my papers in journals. This is a recognition from the academic world in which all my hard work spent for my PhD research does really pay off. I presented 11 conference papers, published 2 journal papers and a chapter in a book while 3 more indexed journal papers are in the pipeline. I believe that a research must be disseminated to the public or the academic world other than my

supervisors, internal and external examiners. In doing so my learning curve will increase and the society benefited from it.

Even though I have research experience before my PhD journey, but my PhD journey has enable me to discover the real potential of me. I have attained so many skills along the way. For instance, I have learned how to conduct a systematic database search for the literature review. In addition, my mind become more creative and a simple research at the beginning become an innovative research with the application of scientific statistical tools.

I have the opportunity to explore the Structural Equation Modelling, which seems too complicated and impossible for me to digest initially. I also learned that unexpected events sometimes could not be avoided in our life. It is how we manage the situations that will ensure that success in our hands. Inevitably, after putting the highest excellent effort, it is up to God almighty that shape our destiny. Finally, I found out that ensuring a customer to be satisfied is not an easy task making me ponder have I perform all my duties to satisfy God almighty. I am thankful to God almighty to show me the end of the PhD journey and I am grateful to have my supervisors who have guided me in PhD journey. Thank you so much.

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APPENDICES

Appendix 1: Islamic Terms Glossary

<i>Al-wadiah</i>	= Safe keeping.
<i>Al-Hisbah</i>	= A system of state inspection to ensure fair practices in the markets. The term also includes checking minor crimes on the streets.
<i>Amanah</i>	= Trust, with the associated meanings of trustworthiness, faithfulness and honesty.
<i>Awqaf</i>	= The plural of the word <i>Waqf</i> . It refers to property that has been transferred to a charity or a trust on a voluntary and permanent basis. The purpose is so that its <i>usufruct</i> may benefit other people.
<i>Bay' al 'inah</i>	= Sell and buy back. Refers to a contract which involves selling and buying back transactions of an asset by a seller to the customer. The seller will sell the asset on a cash basis but the customer will buy back the asset on deferred payment at a price higher than the cash price.
<i>Bay Bithaman</i>	
<i>Ajil</i>	= Deferred Instalment Payment
<i>Bay' muajjal</i>	= Deferred-payment sale
<i>Bay' salam</i>	= Pre-paid purchase
<i>Bayt ul Mal</i>	= The Islamic state treasury.
<i>Falah</i>	= Success in the world and the days hereafter by obeying the divine rules and regulations.
<i>Fiqh</i>	= Islamic jurisprudence. In addition to issues like the five pillars of Islam, it covers family law, inheritance and commerce, to name just a few areas. <i>Fiqh</i> is based primarily on <i>Al-Quran</i> and <i>Sunnah</i> .
<i>Fiqh Muamalat</i>	= Islamic rules on business transactions
<i>Gharar</i>	= The uncertainty and ambiguity in transactions which comes from events that are subject to chance and as a result is unknown to the parties of a transaction at the time of the contract.
<i>Gharim</i>	= A person who is in debt and cannot pay the debt from his wealth.
<i>Hadith</i>	= The sayings and actions of the Prophet Muhammad along with the <i>Qur'an</i> ; these forms the core of Islamic law (<i>fiqh</i>), the earthly representation of the <i>Shari'ah</i> (Divine Path) that all Muslims must follow.

<i>Hajj</i>	= Pilgrimage
<i>Halal</i>	= Permissible or not prohibited according to Islamic law
<i>Haram</i>	= That which is against Islamic law.
<i>Ijarah</i>	= A contract involving hiring or leasing through which the services of a person or a legal entity or organization is rented out or leased against a mutually agreed-upon fee (the rent or leasing fee). This contract is somewhat like a leasing and instalment loan, or a hire-purchase agreement. It can eventually lead to the ownership of buildings.
<i>Istihsan</i>	= To deem something preferable. In its juristic sense, <i>Istihsan</i> (discretion) is a method of exercising personal opinion (<i>ray</i>) in order to avoid any rigidity and unfairness that might result from the literal application of the law (Available at http://www.witness-pioneer.org/vil/Books/SH_Usul/istihsan_and_maslahah.htm).
<i>Iman</i>	= Faith
<i>Ijma' ulama'</i>	= The ruling outcomes based on the discussions and consensus agreement of Islamic scholars about certain issues.
<i>Istishab</i>	= Courtship or companionship. In <i>Usul-al-Fiqh</i> , <i>Istishab</i> means presumption of existence or non-existence of facts. It can be used in the absence of other proofs (<i>dalil</i>).
<i>Infuq</i>	= Spending in Allah's way, especially assisting the poor and needy.
<i>Kafalah</i>	= Kafalah bi al-mal could be divided into: Kafalah bi al-dayn, is a guarantee for a debt owed by a party, Kafalah bi al-`ayn, is a guarantee for a tangible property or for the delivery of an object of a contract, Kafalah Al Darak, is a guarantee for a property that is free from any encumbrance or claim.
<i>Juaalah</i>	= An agreement which involves hiring optional services. In this contract, the person who does the designated job becomes entitled to receive the promised compensation.
<i>Mithl</i>	= Like
<i>Maisir</i>	= Gambling
<i>Al-Masalih Mursalah</i>	<i>al-</i> = A propounded principle of legislation according to which, in all such matters about which the <i>Shari'ah</i> has not made an express prescription, laws should be proposed and implemented with a view to the general well being

of the people and with a view to safeguarding them from any potential harm. *Maslahah* literally means benefit or interest. When qualified as *Maslahah Mursalah* it refers to the unrestricted public interest. Al Ghazali thinks *Maslahah* consists of considerations which secure a benefit or prevent a harm. Protection of life, religion, intellect, lineage and property is *Maslahah* (Available at http://www.witness-pioneer.org/vil/Books/SH_Usul/istihsan_and_maslaha.htm).

<i>Mazhabs</i>	= There are four major schools of thought based on four Islamic scholars (<i>Hanafi, Maliki, Hambali</i> and <i>Shafii</i>).
<i>Muamalah</i>	= Commercial transactions
<i>Mudarabah</i> (also called <i>Qirad</i>)	= This is a profit sharing contract. In such a contract, one party provides capital, and the other manages the enterprise. If there is a loss, the provider of capital bears the financial loss while the worker loses his labour. If there is profit, both parties share it in accordance with the proportions agreed upon at the time of the contract.
<i>Mudarib</i>	= Entrepreneur
<i>Muhaqalah</i>	= The sale of wheat while it is still growing. It also refers to the sale of unharvested crop. This sales contract is not allowed in Islam.
<i>Mukhabarah</i>	= A share-cropping contract whereby the landowner reserves the crop of a certain area for himself. The share-cropping contract of this nature is not permitted in Islam.
<i>Muqarada</i>	= <i>Mudarabah</i>
<i>Murabaha</i>	= A contract of sale in which payment is made some time after the delivery of the goods transacted. Used as the basis of modern IB since the amount charged for deferred payment is in excess of the current market price (usually by an amount approximately equivalent to the prevailing rate of interest).
<i>Musharaka</i>	
<i>Mutanaqisoh</i>	= Diminishing equity participation
<i>Musharakah</i>	= A partnership. This is like a joint-venture agreement, which stipulates the conditions of a partnership. In order to be in line with Islamic law, both

parties must participate in profits and losses, not just in profits. This technique can be used for short-term financing.

<i>Nisab</i>	= The minimum amount of property liable to Zakat payment.
<i>Qard Hasan</i>	= A goodly loan. In Islamic economics, it refers to a loan without any return.
<i>Qirad</i>	= <i>Mudarabah</i>
<i>Qiyas</i>	= The analogical deduction of laws applied to the current situations.
<i>Rabbul-mal</i>	= Owner of capital
<i>Riba</i>	= Interest. More specifically, it refers to any pre agreed excess paid or received over and above the principal in a loan contract.
<i>Riba al-Fadhl</i>	= Interest in barter transactions. Exchange transactions of similar commodities such as gold, silver, wheat, salt, barley and dates. The exchange of similar commodities must be on the spot and equal in weight. Barter transactions were common during the time of Prophet Muhammad (peace and blessings be upon him) and he did not restrict the application of <i>Riba</i> only to the credit transaction of cash, but to all types of barter.
<i>Riba Nasia</i>	= Interest in debt. <i>Nasia</i> means a delay given to the debtor. This type of <i>Riba</i> occurs in all credit transactions in which a loan is advanced to a person on a payment of interest over and above the principal for the time of the debt.
<i>Rikaz</i>	= This is ancient wealth found buried in a land whose owner is unknown,
<i>Sadaqah al-Fitr</i>	= An Islamic obligatory charity paid in the month of Ramadan.
<i>Sadaqah</i>	= Anything which is given or help offered to others to seek Allah's Pleasure. It also refers to a good act. If it involves spending income, this must have been earned in an Islamically permissible way.
<i>Shari'ah</i>	= Islamic canonical law based on the teachings of the <i>Al-Quran</i> and the traditions of the Prophet Muhammad p.b.u.h. (<i>Hadith</i> and <i>Sunnah</i>), prescribing both religious and secular duties and sometimes retributive penalties for law breaking. It has generally been supplemented by legislation adapted to the conditions of the day, though the manner in which it should be applied in modern states is a subject of dispute between Islamic fundamentalists and modernists (<u>The Oxford Pocket Dictionary of Current English</u> , 2009). <i>Shari'ah</i> literally means 'a way' – the source of all life – and

signifies the way to God, as given by God. It is the way which encompasses the totality of man's life. Being God-given, the *Shari'ah* is the manifestation of His infinite mercy. It is thus also the only true embodiment of, and the best way to, justice (Alsanie 1989). God revealed laws that arrange the relationship between man with God, man with man, and man with the environment.

<i>Shirka</i>	= <i>Musharaka</i>
<i>Sukuk</i>	= Similar characteristics to that of a conventional bond, but it is asset backed.
<i>Sunnah</i>	= The sayings, deeds and approvals of Prophet Muhammad p.b.u.h.. <i>Sunnah</i> is also referred to as <i>Hadith</i> .
<i>Takaful</i>	= A scheme of mutual support, which offers insurance to people against the dangers of falling into unexpected and dire need.
<i>Tawarruq</i>	= Buying a commodity with deferred payment and selling it to a person other than the buyer for a lower price with immediate payment.
<i>Ummah</i>	= Muslim society
<i>Ujrah</i>	= Contracts that are based on fee based.
<i>Urbun</i>	= Earnest money/Down payment. A non-refundable deposit paid by the client (buyer) to the seller upon concluding a contract of sale, with the provision that the contract will be completed during the prescribed period.
<i>Uruf</i>	= The matter on which a community of people agrees in the course of their daily life. It also refers to specific actions that are repeated and performed by individuals and communities.
<i>Usul Fiqh</i>	= The roots of Islamic jurisprudence
<i>Zakat</i>	= A compulsory levy on each Muslim who has wealth, which is equal to or more than a minimum called <i>Nisab</i> . It is one of the five pillars of Islam. There are eight categories of those who receive <i>Zakah</i> , including the poor and needy

Appendix 2: The Definitions of Islamic Banks

No	Author(s)/Organisation/Act	Definition(s)
1.	Haque (2010b)	“(an) Islamic bank is a financial institution that operates with the objective to implement and materialise the economic and financial principles of Islam in the banking arena”.
2.	Organisation of Islamic Countries (OIC)	“A financial and social institution whose objectives and operations as well as principles and practices must conform to the principles of Islamic <i>Shari’ah</i> (Jurisprudence), and which must avoid ... interest in any of its operations”.
3.	Ahmad & Hassan (2007)	“Islamic bank implements a new banking concept in that it adheres strictly to the ruling of <i>Shari’ah</i> in the fields of finance and other dealings. The foundation of IB is based on the Islamic faith. All the actions and deeds of its practitioners are bound by the limits of Islamic law or the <i>Shari’ah</i> ”.
4.	Islamic Banking Act 1983 of Malaysia (1983), part I, section 2.	“means any company which carries on Islamic banking business and holds a valid licence; and all the offices and branches in Malaysia of such a bank shall be deemed to be one bank”.

Appendix 3: Definitions of IB System

No	Author(s)/Organisation/Act	Definition(s)
1.	Islamic Banking Act 1983 of Malaysia (1983), part I, section 2.	“IB business means banking business whose aims and operations do not involve any element which is not approved by the religion of Islam.”
2.	I. Ahmad & Shabbir (undated, p. 4)	“IB is defined as [a] banking system that is in consonance with the spirit, [the] ethos and value system of Islam and governed by the principles laid down by Islamic <i>Shari’ah</i> ”.
3.	OECD (2003, p. 426)	“Activities of Islamic financial institutions differ from those of standard commercial depository corporations in that predetermined interest on financial transactions is prohibited. The non-payment of interest on liabilities does not in itself preclude instruments from being classified as external debt”.

Appendix 4: ICC Issuance Rules by AAOIFI (2010)

1. ICC issuers are authorised to join the membership of international credit-card regulatory organisations, provided the credit-card issuers avoid any violations of *Shari'ah* that may be imposed by those organisations.
2. The ICC issuers are allowed to pay service charges, membership fees and other fees to the international credit-card regulatory organisations, as long as these do not include interest payments.
3. The ICC issuers are allowed to charge a commission to the merchants accepting the credit card. The commission should be charged at a percentage of the purchase price.
4. The ICC issuers are entitled to charge membership fees, renewal fees and replacement fees.
5. The ICC users are allowed to withdraw an amount of cash within the limit of their available funds, or more with the agreement of the ICC issuers, provided no interest is charged.
6. The ICC issuers are allowed to charge a fixed cash withdrawal fee. The fees cannot vary according to the amount withdrawn.
7. The ICC users are not allowed to use the card for purchasing prohibited products or purchasing an entrance ticket for prohibited places. They are also not entitled to privileges that are prohibited by *Shari'ah* such as conventional life insurance.
8. ICC users are entitled to privileges such as provided by the conventional card issuers unless these are prohibited by Islam (AAOIFI 2010).

Appendix 5: List of the Customer Satisfaction Research Findings in Banking Industry

No	Authors/Country/ (Year Conducted)	Sample	Analysis	Findings and Gaps
1.	(Parasuraman et al. 1988)/USA	200	Focus group, Factor Analysis - Oblique Rotation, Regression	The authors have developed Servqual to measure service quality based on the gap theory of disconfirmation. There are five service quality dimensions that affect customer satisfaction which are reliability, assurance, tangible, empathy and responsiveness (RATER). There is only one dimension, which is significant to overall quality of the bank. The dimension is reliability ($\beta=0.39$, $p=0.00$).
2.	(Cronin and Taylor 1992)/USA	188	Factor Analysis, CFA, Correlation.	They claimed that Servperf is a superior measure of service quality construct, relative to Servqual.
3.	(Blanchard and Galloway 1994)/UK	439 and 39 staff	Descriptive	The failure of the Servqual model to provide any particularly useful insights into how service might be improved (Guo et al. 2008).
4.	(Avkiran 1994)/Australia	795	Factor analysis and Man Whitney Test	Creation of BANKSERV, a 17-item inventory with four dimensions emerged in the study, which are staff conduct, credibility, communication and access to teller services.
5.	(McDougall Levesque 1994)/Canada	325	Cluster analysis – post hoc segmentation	The research attempts to answer whether the major service quality dimensions (process and outcome) can be used to identify segments in the banking system. The dimensions measured were outcome, process, tangibles, competitive rate and convenience. The respondents are grouped into two different clusters and labelled as the performance and convenience groups. The performance group weighs larger importance on the outcome dimension and the convenience group weighs convenience dimension the largest.
6.	(Newman and Cowling 1996)/UK/1993-1995	30 (A) 12 (B) 85850	Case Study- Semi-structured interviews and content analysis	A comparative study of two different banks, which used two different quality approaches. Bank A used Servqual while Bank B used TQM. A longitudinal study of a national market survey conducted for Bank A was also reported. It was found out that during the 3-year study the performance of Bank A was better as compared to its other 7 competitors.
7.	(Levesque McDougall 1996)/Canada	325	Factor Analysis and regression	The authors have tested empirically that the determinants of customer satisfaction in a retail bank are relational performance, core performance, features performance, competitive rates, skilled employees, problem encountered, satisfaction with problem recovery, and hold mortgage and loan (Significant at $p= 0.05$, R square 0.71).

No	Authors/Country/ (Year Conducted)	Sample	Analysis	Findings and Gaps
8.	(Stafford 1996)/USA	243	Exploratory Factor Analysis and Discriminant analysis	The author has identified 7 key elements of bank quality, which are bank atmosphere, relationship, rates and charges, available and convenient services, ATM, reliability and honesty and lastly tellers. It was also found out that service quality is more important to women than to men. Age also was found as a discriminator.
9.	(Johnston 1997)/UK	323	Frequency and Spearman Correlation	The author has conducted two separated surveys to identify the importance and effect of service quality. Determinants of service quality can be divided into 18 service quality attributes such as access, aesthetics, attentiveness, availability, care, cleanliness, comfort, commitment, communication, competence, courtesy, flexibility, friendliness, functionality, integrity, reliability, responsiveness and security. All of the determinants were further classified into three dimensions, which are dis-satisfiers, satisfiers and dual factors. The author has managed to integrate the effect and the importance in 6 difference zones of priorities in improving customer satisfaction.
10.	(Angur et al. 1999)/India	143	CFA	Based on data gathered from customers of two major banks, overall results support a multidimensional construct of service quality and suggest that the Servqual scale provides greater diagnostic information than the Servperf scale. However, the five-factor conceptualization of Servqual does not seem to be very applicable, and no significant difference was found in the predictive ability of the two measures. Further, although Servqual and Servperf have identical convergent validity, Servperf appears to have higher discriminant validity than Servqual.
11.	(Naser et al. 1999)/Jordan	206	Descriptive and Anova	A large majority of the respondents were satisfied with the Islamic bank's name and image and with the bank's ability to provide confidentiality. The findings also indicate that a large majority of the respondents banked with the Islamic bank because of its reputation.
12.	(Bahia and 2000)/ Canada	Nantes 106	Factor analysis	Developed a model, which includes the 7Ps named Banking service quality (BSQ), and compared it with Servqual.
13.	(Lassar et al. 2000)/ USA and South America	65	Factor analysis, Correlation, regression	The Technical/Functional Quality-based model compared with the Servqual model is better suited to predict customer satisfaction.

No	Authors/Country/ (Year Conducted)	Sample	Analysis	Findings and Gaps
14.	(Othman and Owen 2001)/Kuwait/2000	306	Factor Analysis,	Developed Carter model, which includes compliance with Islamic Law as addition to Servqual. The findings from this study revealed that religiosity is significant for the Islamic banks. This is the first study connecting religion and customer satisfaction in the IB context.
15.	(Aldlaigan and Buttle 2002)/UK	975	Factor analysis and Anova	The authors have proposed a new scale for banking service quality measurement named SYSTRA-SQ. The factors are service system quality, behavioural service quality, machine service quality and service transactional accuracy.
16.	(Sureshchandar et al. 2002)/India	277	CFA	There are five dimensions found in this study, which are the core service, human elements of service, systemisation of service delivery, tangible and social responsibility.
17.	(Cui et al. 2003)/Korea	153	Confirmatory Factor Analysis and EFA	The Servqual scales lacked validity with the sample. Both Servqual and Servperf were multidimensional (Guo et al. 2008).
18.	(Han and Baek 2004)/Korea	740	EFA, SEM	They conducted an empirical investigation in Korea on the impact of service quality and customer satisfaction of online banking customers. They have used the original Parasuraman et al. (1988) model except that they have taken out assurance dimension since online banking users would have less human interaction while conducting online banking (Han and Baek 2004). However, taking this dimension out without replacing it with a suitable dimension, which could cater the problems encountered by the online customers, would be fallacious for online banking customer satisfaction but a modification to the existing assurance questions should be considered as an option. In addition, the Servqual dimensions model were tested using SEM and were found to be reliable and valid with the second order model.
19.	(Malhotra et al. 2005)/USA, Philippines and India	1069	Scheffe's multiple comparison test	Developed 14 hypotheses, which differentiate service quality between countries (developed and developing countries). The findings revealed that there are differences between the developed and developing countries probably due to culture.
20.	(Gounaris 2005)/Greece	257	CFA, SEM	The author found out that Servqual suffers from methodological problems for B2B business context and proposed IND SERV, which comprises of four dimensions. The dimensions are potential quality, hard quality, soft quality and output quality.

No	Authors/Country/ (Year Conducted)	Sample	Analysis	Findings and Gaps
21.	(Mukherjee and Nath 2005)/India	410	Factor analysis- Promax Rotation	The authors have compared Gap, TOPSIS and Loss Function models and found out that the three models revealed the same result. Therefore, the 3 techniques can be used in complementary to achieve better result.
22.	(Arasli et al. 2005c)/Cyprus	260	Factor Analysis and regression	The assurance dimension was eliminated from the factor analysis procedure and responsiveness and empathy dimensions were collapsed into one dimension. The reliability dimension has the highest impact to customer satisfaction.
23.	(Arasli et al. 2005b)/Turkey	268	Regression	The replication of Servqual for two groups of bank customers revealed that responsiveness dimension was not captured in the factor analysis. In addition, there was a significant difference between the Greek and Turkish speaking customers on their perception of the service quality dimensions. Assurance dimension has the higher ranking as compared to other dimensions. The differences of the findings could come from the difference between the culture between the Greek and Turkish speaking customers.
24.	(Petridou et al. 2007)/Greece and Bulgaria	223	T-test, CFA	Analysed customers from two Balkan countries, Greece and Bulgaria, using Banking service quality developed by Bahia and Nantel (2000) using Factor analysis and T-test to identify whether there is any significant difference between customers in different countries (Petridou et al. 2007). The researchers identified that bank customers in Greece perceived that they received higher service quality as compared to the service quality perception of bank customers in Bulgaria. In addition, there are two additional variables as additional to Parasuraman et al. (1988) Servqual model. The variables added are service portfolio and price (Petridou et al. 2007). Even though the researchers have attempted to show on the differences of the service quality perceptions of the Bank customers in Greece and Bulgaria, there should be a further analysis to support the arguments such as trying to make some analytical connections and interpretation between the results found with Hofstede's model.
25.	(Yavas and Benkeinstein 2007)/ Turkey and Germany	156 T, 226 G	Factor Analysis, Factor Congruency Technique	The authors found out that there are 3 factors, which are congruent between the cultures of the two countries, which imply that the multinational banks could standardise their operation in these two countries. However, no further analysis is conducted for the impact to customer satisfaction. The findings show that the Turkish and German customers are the same in terms of their culture.

No	Authors/Country/ (Year Conducted)	Sample	Analysis	Findings and Gaps
26.	(Baumann et al. 2007)/Australia/2002	1874	Factor analysis, regression	The authors try to link between service quality, satisfaction and loyalty in the retail-banking context. The study adds to the discussion of the relationship between perceived satisfaction, service quality and a customer's intentions to recommend a bank and/or remain a customer. The results also contribute to the development of more parsimonious models, suggesting that affective attitude, overall satisfaction, empathy and responsiveness together explain a large percentage of the variation in customers' intentions.
27.	(Muslim and Zaidi 2008)	440	CFA and SEM	The authors have used Carter model and found out that service quality has positive affect to customer satisfaction. All the six dimensions are significant and <i>Shari'ah</i> compliance was identified to be positively affecting service quality. Their findings also supported Parasuraman et al. (1988) where the reliability dimension has the highest impact on service quality. They also used Servperf instead of Servqual in their methodology.
28.	(Guo et al. 2008)/ China	18 + 259	Factor Analysis, in-depth interview	Factor analysis identifies that service quality in Chinese corporate banking is measured by a nested model, consisting of two higher-order constructs (i.e. functional quality and technical quality) and four lower-order dimensions (i.e. reliability, human capital, technology and communication).
29.	(Wong et al. 2008)/ Australia	706	CFA, Quadrant	Re-examined the traditional Servqual model in the context of e-banking service. They identified that banks are performing relatively well in terms of their appearances (tangibles), and in building trust and confidence with their customers (assurance), while relatively poorer in terms of performance in providing prompt service (responsiveness), individualized attention (empathy), and dependability and accuracy (reliability). The findings are different in terms of the order sequence as suggested by Parasuraman et al. (1988) The differences between their findings with Servqual probably due to the differences between the Australian and the American culture.

No	Authors/Country/ (Year Conducted)	Sample	Analysis	Findings and Gaps
30.	(Ladhari 2009)/ Canada	193	CFA, Correlation, Regression	The results support the dimensionality of Servqual, its reliability, convergent reliability, discriminant validity and predictive validity of the scale in this service setting. The results also show that responsiveness and empathy are the most important dimensions of overall service quality in the Canadian banking context. Findings show that the service provided by employees makes the largest contribution to bank customer satisfaction. In view of the study's findings, Canadian bank managers must recognise that frontline employees are crucially important in establishing and maintaining a competitive position for their institution.
31.	(Kumar et al. 2009)/Malaysia	308	Exploratory Factor Analysis and Dominance analysis	The authors have added another dimension convenience to the existing Servqual model but only 4 dimensions emerged in the factor analysis, which are tangible, reliability, competence and convenience.
32.	(Kanning and Bergmann 2009)/Germany	351	Regression analysis	The authors have found that Locke's model of product importance do not perform better than the disconfirmation PE model, absolute P-(E-P) performed better than relative P-E and performance alone would be the best predictor to customer satisfaction excluding expectation and importance.
33.	(Masood et al. 2009)		Frequencies	A case study on the selection factors by customers of IBB is conducted to identify the customers' selection behaviours. The authors have found that low service charges were ranked the highest priority, followed by bank reputation, while religiosity is ranked fourth. However, there is no indication or link between the selection and customer satisfaction.
34.	(Osman et al. 2009)/Malaysia	141	Mean and Kruskall Wallis Test	The authors have replicated Carter model and surveyed Islamic banks customers in Malaysia comparing between Muslim and non-Muslim customers. They found out that the Carter model is reliable since all the dimensions are having means above 4. In addition, the customer satisfaction varies if compared to the different banks in Malaysia (between full Islamic fledge banks and conventional Islamic windows).
35.	(Sadek et al. 2010)/UK	Small number of respond ents	Percentage, frequency and mean	The authors have compared two banks customer satisfaction (Islamic Bank of Britain and Co-operative Bank) using Carter. They found that the IBB customers ranked compliance with <i>Shari'ah</i> as the highest while the Co-operative Bank ranked ethics as the highest rank.

No	Authors/Country/ (Year Conducted)	Sample	Analysis	Findings and Gaps
36	(Haque 2010a)/Malaysia	473	Anova	The author has conducted a survey in Malaysia measuring the banking customers' attitudes towards IB. The results show that males' attitudes are more positive than females towards IB and the three races; Malay, Chinese and Indians attitudes are positive towards IB. However, there is a difference in terms of what influenced their positive attitude; Malays are influenced by religion while Chinese are influenced by added value services (what about the Indians?). The study, however does not empirically suggest that customer satisfaction is related to positive attitudes.
37	(Khattak and Rehman 2010)/Pakistan	156	Mean and Kruskal-Wallis One Way Anova	The authors have conducted a survey in Pakistan to identify the reasons why customers embrace the IB system, the reasons why they subscribe to both banking system and the demographic factors that differentiate their level of satisfaction with the IB system. Their findings show that the demographic factors such as gender, age, religion, occupation, academic qualification and income are significantly different with the dependent variables. The implication from their findings revealed that customer demographic factors could affect the level of satisfaction.
38	(Mohammed and Shirley 2009)/Qatar	120	Mean	The study has replicated Servqual but eliminated Servqual two dimensions (i.e. Responsiveness and Assurance). They proposed a dimension named Competence. Tangible was found to be the highest importance for Qatari banking consumers.
39.	(Foscht et al. 2009)/Austria	242	Factor analysis and SEM	The results indicate that there are differences among the different subgroups in the determinants of customer satisfaction. Moreover, this study found that while satisfaction has a relationship with loyalty for all groups, the intensity of the loyalty varied by group. The outcome of testing the linkage between customer loyalty and behavioural intentions by group varied with some groups displaying a significant relationship and others, not at all.

No	Authors/Country/ (Year Conducted)	Sample	Analysis	Findings and Gaps
40.	(Armstrong and Seng 2000)/Singapore	206	SEM	This study examined customer satisfaction at the business-to-business level of banking industry in Singapore. The study proposed a comprehensive model of satisfaction at the business-to-business level incorporating guanxi (Chinese business relationships), relationship marketing and the disconfirmation paradigm. The study highlighted the importance of relational constructs, in addition to the disconfirmation paradigm, in impacting customer satisfaction at the business-tobusiness level.
41.	(Poolthong and Mandhachitara 2009)	275	EFA, CFA and PLS	

Appendix 6: List of the Countries Customer Satisfaction Research Conducted in Various Industries

Country	# of Studies	Σ Samples	Country	# of Studies	Σ Samples
USA	19	16855	Canada	7	9342
Turkey	1	456	Ethiopia	1	250
Australia	5	4212	Greece	2	257
China	3	1113	Bulgaria	1	XX
India	5	1049	Germany	2	577
Vietnam	1	XX	Philippines	1	XX
Korea	5	1667	Kuwait	1	306
United Kingdom	10	88653	Brazil	1	900
Taiwan	1	413	Isle of man	1	XX
Norway	1	2755	Sweden	1	22300
Mauritius	1	140	Jordan	1	206
Israel	1	172	Cyprus	3	1618
Malaysia	4	889++	Egypt	1	332
The Netherland	1	226	Belgium	1	70
Hong Kong	1	209	UAE	1	230
Pakistan	1	156	Austria	1	242
Singapore	1	206	Thailand	1	275
Total	61	118032 ++	Total	26	36630 ++

Appendix 7 : List of the Customer Satisfaction Research in Banking Context

Country	# of Studies Conventional Banks	Σ Samples	Country	# of Studies Islamic Banks	Σ Samples
USA	5	1755	Kuwait	1	306
Canada	4	949	Malaysia	3	1054
Australia	3	3375	UK	2	Unknown
India	3	830	Pakistan	1	156
Greece	2	490	Jordan	1	206
Korea	2	893			
UK	4	87658			
Cyprus	1	268			
Turkey	1	156			
Germany	2	577			
China	1	277			
Austria	1	242			
Singapore	1	206			
Thailand	1	275			
Total	31	97951	Total	8	1722

Appendix 8: List of Customer Satisfaction Research

No	Authors/Country/ (Year Conducted)	Sample	Subject Type	Analysis	Findings
1	(Parasuraman et al. 1988)/USA	800	Bank, credit card, repair and maintenance, long distance telephone customers.	Focus group, Factor Analysis, Regression	The authors have developed Servqual model with five factor structure such as reliability, assurance, tangible, empathy and responsiveness. The authors applied disconfirmation theory comparing the consumers' expectation with perceived performance of the service quality.
2	(Berry et al. 1988)/USA	55 employees and 138 customers	Bank employees and customers	Focus group, Factor Analysis, Regression	The study replicated Servqual. The authors emphasised that the customers are sending a clear message to the service providers on the importance of the service processes. Reliability was ranked as the most important dimension. In addition, the authors emphasised the importance of people factors in service quality.
3	(Knuston et al. 1990) /USA	201	Lodging industry	Confirmatory factor analysis	The authors have developed a 26-item instrument which can help hotels measure, assess and manage the quality of their guest service named as Lodgserv. The study also tested the impacts of lodgserv on price segment: economy, mid-price, and luxury hotels.
4	(Saleh and Ryan 1991)/Canada	217	Hotel Guest and management staff	EFA	This study replicated Servqual in the context of hotel industry. The study identified the existence of gaps between clients' and management perceptions of attributes of the hotel, and between client expectation and perception of the services offered. The study also revealed five factors structures explaining 78 per cent of variance, but the model differed from the original Servqual model.
5	(Bounman and van der Wiele 1992)/The Netherlands	226	Car service industry	EFA, Regression, Correlation and Path analysis	A new scale was developed and 3 dimensions were identified for the car service industry. The dimensions were faith, tangible (2 nd order constructs) and customer kindness (1 st order construct) affecting customer satisfaction.
6	(Vandamme and Leunis 1993) /Belgium	70	Health care	EFA	The authors replicated Servqual in the hospital setting. Hospital patients' satisfaction were measured using Access model with 5 dimensions such as availability, accessibility, accommodation, affordability and acceptability. The dimensions obtained only partially represented Servqual.

No	Authors/Country/ (Year Conducted)	Sample	Subject Type	Analysis	Findings
7	(McDougall and Levesque 1994)/Canada	325	Bank customers – church members	Cluster analysis – post hoc segmentation	The authors identified two distinct segments. The first, the performance segment, sought outcome, a financial institution that “got it right the first time”. The second, the convenience segment, sought financial institutions that were conveniently located.
8	(Avkiran 1994)/Australia	791	Australian Trading Bank’s Customers	Factor Analysis, Man Whitney U Test-Wilcoxon Rank Test	The dimensions to emerge are staff conduct, credibility, communication, and access to teller services. The instrument’s reliability, dimensionality and validity have been empirically tested; the results are encouraging both in their own right and when compared with other studies.
9	(Blanchard and Galloway 1994a)/UK/1991 and 1992	431 and 37	Bank customers	Survey, 5 Interviews and (4x8members) focus group	The authors proposed a model based on the three dimensions of process/outcome, subjective/objective, and soft/hard as the consequences of the failure of Servqual to provide meaningful insight on how to improve service quality.
10	(Stevens et al. 1995)/USA	596	Restaurant industry	CFA	The authors have developed a restaurant service quality measurement named Dineserv supporting the five dimensions of Servqual. The authors proven the validity and reliability of the measurement suggesting to restaurant owners some practical guidelines.
11	(Tomes and Ng 1995)/UK	132	Patients of hospital	EFA	The authors have conducted EFA and found 5 dimensions affecting hospital service quality. The dimensions are divided into two major dimensions intangible and tangible. The intangible dimensions are empathy, mutual relationship, dignity, understanding of illness and religious needs while the tangible dimensions are food and physical environment.
12	(Dabholkar et al. 1996)/USA	227	Retail service	CFA	The authors have used four new different dimensions in the retail service context. Only reliability dimension was retained from the Servqual model. The authors have used three-step analysis testing 1) the five dimensions, 2) the second order constructs and 3) the sub-dimensions constructs.
13	(Newman and Cowling 1996)/UK/1993-1995	30 (A) 12 (B) 85850	Bank staff and Banks Customers	Case study-Semi-structured interviews and content analysis.	The authors have compared two banks, which used different service quality orientation i.e. Servqual and TQM. The bank using Servqual found to perform better compared to the previous years performance and better compared to the bank using TQM.

No	Authors/Country/ (Year Conducted)	Sample	Subject Type	Analysis	Findings
14	(Levesque and McDougall 1996)/Canada	325	Retail banking	Oblique Factor Analysis and regression	The authors have developed a model measuring service quality, service features and customer satisfaction and future intention. Service quality was measured from three dimensions such as core, relational and tangible. Service features was measured by two dimensions, enabling and competitive while customer satisfaction and future intentions were measured by satisfaction and future intention dimensions. Specifically, customer satisfaction was positively significant with Relational performance, Core performance, Features performance, Competitive rates, Employees, Problem encountered, Satisfaction with problem recovery and Hold mortgage and loan dimensions.
15	(Stafford 1996)/USA	243	Banking	Exploratory Factor Analysis and Discriminant analysis	The authors have found that age and gender are significant in segmenting the service quality dimensions. The study found bank atmosphere, relationship, rate and charges, available and convenient service, ATM, reliability/honesty, and tellers.
16	(Johnston 1997)/UK	323	Banks customers	Frequency and Spearman Correlation	The author has classified between the satisfiers and dis-satisfiers dimensions that affect customer satisfaction. The factors that may delight customers tend to be concerned more with the intangible nature of the service, commitment, attentiveness, friendliness, care and courtesy. The main sources of dissatisfaction appear to be cleanliness, aesthetics, integrity, functionality, reliability and security, which are, associated with either the more tangible aspects of the service or systemic issues.
17	(Carman 1999)/USA	756 +	Customers of a dental school patient clinic, a business school placement centre, a tyre store and a hospital	Factor Analysis-Oblique Rotation	The author has conducted a study comparing different contextual customers using Servqual dimensions with the aim to improve Servqual. Servqual was criticised for its problems in perception expectation gaps. It was recommended that perception was used instead of P-E.

No	Authors/Country/ (Year Conducted)	Sample	Subject Type	Analysis	Findings
18	(Naser et al. 1999)/Jordan	206	Bank customers	Descriptive and Anova	The authors have conducted a customer satisfaction study for IB in Jordan and found that reputation and religious factors contribute to the selection of IB while bank's name and image, the variety of product offered and customer confidentiality were ranked the highest for customer satisfaction.
19	(Angur et al. 1999)/India	143	Bank customers	Confirmatory Factor Analysis- Oblimin Oblique Rotation, Regression.	The authors compared alternative measures of service quality in Indian banking context using Servqual scale, importance weighted Servqual, the Servperf scale, and importance weighted Servperf and assesses related issues in that context. The overall result based on data gathered two major banks support a multidimensional construct of service quality. In addition, they claimed that Servqual scale provides greater diagnostic information than Servperf scale. However, their findings showed that Servqual has a poor model fit in the context of Indian banking. Further, although Servqual and Servperf have identical convergent validity, Servperf appears to have higher discriminant validity than Servqual.
20	(Lam and Zhang 1999)/Hong Kong	209	Users of travel agents	EFA, regression	The authors have replicated Servqual with an additional dimension named as Resources and Corporate Image. The Assurance and Responsiveness dimensions merged into a single factor. The regression results showed that all the dimensions were positively significant towards overall satisfaction.
21	(Mentzer et al. 1999)/USA	5531	Defence logistic service	CFA	The authors have developed a multi dimensional logistic service quality measurement incorporating information quality, ordering procedures, ordering release quantities, timeliness, order accuracy, order quality, order condition, order discrepancy handling, and personnel contact quality. Their study shows that a unique service quality measurement should be employed for a specific industry.
22	(Shemwell and Yavas 1999)/USA	218	Patients of Hospital	CFA	The authors have developed a unique/specific service quality measurement for hospital using three endogenous latent variables such as credence, search and experience attributes using a second order model.

No	Authors/Country/ (Year Conducted)	Sample	Subject Type	Analysis	Findings
23	(Engelland et al. 2000)/USA	499	Students	EFA and CFA	The authors replicated Servqual in the campus setting and found that the model has a poor fit. However, the remodified versions of Servqual have better model fit.
24	(Frochot and Hughes 2000)/UK	790	Tourist	EFA, One-way Anova	The authors have modified the Servqual scale and named the modified Servqual as Histoqual. The Histoqual dimensions were responsiveness, tangible, communication, consumables, and empathy. The research strongly suggests, through the identification of different service quality dimensions, that SERVQUAL, in its original form, cannot be replicated to service contexts other than the ones upon which it was developed.
25	(Lassar et al. 2000)/ South America and USA	65	Private Banking customers	Factor analysis, Correlation, regression	The authors have compared two service quality models namely Servqual and Technical model and investigate their ability to predict customer satisfaction.
26	(Bahia and Nantes 2000)/ Canada	106	Banking	Factor analysis	Developed a model, which includes the 7Ps named Banking service quality (BSQ), and compared it with Servqual.
27	(Othman and Owen 2001)/Kuwait	306	KFH Banking Users	Factor Analysis,	Developed Carter model, which include compliance with Islamic Law in addition to five SERVQUAL dimensions.
28	(Bei and Chiao 2001)/Taiwan	635	Auto repair and maintenance service	Correlation and regression	Perceived service quality (reliability, tangibility and convenience) $\beta = 0.220^{**}$, product quality $\beta = 0.379^{**}$ and perceived price fairness $\beta = 0.326^{**}$ were antecedents to satisfaction.
29	(Burton et al. 2001)/UK	Not reporter	Customers of UK utility and sewerage removal company.	11 focus groups and 19 interviews	The authors criticised Parasuraman et al. (1988) SERVQUAL model focus on the process of service quality and fails to include other antecedents such image of the corporation. They found out there are three main antecedents to customer satisfaction, which are product, process and image.
30	(Cook and Thompson 2001)/USA	4407	Library users	EFA and Correlation	The authors developed Libqual replacing Servqual in the context of library service quality. The library service quality has four dimensions, which are affect of service, place, access of collection and reliability.
31	(Sower et al. 2001)/USA	663	Patients of hospital	EFA	The development of KQCAH measurement scale for service quality of hospital. The dimensions for KQCAH were respect and caring, information, first impression and staff diversity.

No	Authors/Country/ (Year Conducted)	Sample	Subject Type	Analysis	Findings
32	(Vaughan and Shiu 2001)/UK	72	Disabled service users	EFA	Developed ARCSECRET for the voluntary sector. The original Servqual framework was found to be inappropriate for services that had no close analogue with the private sector. Analyses of the pilot survey data resulted in a set of 27 distinct statements across ten hypothesised service quality dimensions. These are Access, Responsiveness, Communication, Humaneness, Security, Enabling/Empowerment, Competence, Reliability, Equity, and Tangibles.
33	(Aldlaigan and Buttle 2002) /UK	975	Banking users	Factor analysis and Anova	The authors developed a new service quality measurement for banking industry named SYSTRA, which are the combination of system and transactional scales. The dimensions are system service quality, behavioural service quality, machine service quality and service transactional accuracy with high reliability and validity.
34	(Janda et al. 2002)/USA	446	Internet retail service users	CFA	IRSQ scale was developed by the authors using five dimensions different from traditional Servqual. The dimensions are performance, access, security, sensation and information.
35	(Sureshchandar et al. 2002)/India	277	Banking users	CFA	The authors try to light some of the critical determinants of service quality that have been overlooked in the literature and proposes a comprehensive model and an instrument framework for measuring customer perceived service quality. The instrument has been designed with specific reference to the banking sector. Data have been collected from customers of banks in a huge developing economy. The proposed instrument has been empirically tested for unidimensionality, reliability and construct validity using a confirmatory factor analysis approach. The present study offers a systematic procedure that could form the cornerstone for providing further insights on the conceptual and empirical comprehension of customer perceived service quality and its constituents.

No	Authors/Country/ (Year Conducted)	Sample	Subject Type	Analysis	Findings
36	(Iwaarden et al. 2003)/USA	293	Web users	Correlation Coefficient	The authors have applied the Servqual in evaluating the service quality of perceived by web users. The 5 dimensions Parasuraman et al. (1988) were used by the questions were constructed based on web service quality. The findings show that the 5 dimensions of service quality were positively correlated to the frequencies of use.
37	(Cui et al. 2003)/South Korea	153	3 Banks' customers	Confirmatory Factor Analysis and EFA	The Servqual scales lacked validity with the sample. Both Servqual and Servperf were multidimensional.
38	(Han and Baek 2004)/Korea	740	Online Banking	EFA, SEM	The authors replicated Servqual except for assurance dimension. Servqual dimensions model were tested using SEM and were found to be significant and valid with the second order model.
39	(Kang and James 2004)/Korea	464	Mobile phone users	Confirmatory factor analysis, SEM modelling	The authors reported the overall service quality is 0.41 affecting customer satisfaction and significant at 0.01 level. In addition, the authors supported the Gronroos's model of service quality which implies that technical and functional quality affect the overall service quality. Furthermore, image also being found to be significantly affecting service quality.
40	(Long and McMellon 2004)/USA	477	Internet consumers	Factor analysis and regression	The authors have replicated Servqual in the internet consumers context and found a new dimension affecting customer satisfaction. Purchase process was identified to be significant positive towards internet consumers' satisfaction. The human element, empathy dimension was dropped from the final model.
41	(Sahney et al. 2004)/India	219	Education	Factor analysis, correlation coefficients	The authors have employed the Servqual disconfirmation techniques with QFD to assess what the customers need and how the management deliver the service in the education system context.
42	(Mostafa 2005)/Egypt	332	Patients of hospitals	Factor analysis, T-test, discriminant analysis and Anova	The authors have replicated Servqual but the results of factor analysis did not support the five-factors structure. There were only three factors found and named as human performance quality, human reliability and facility quality.

No	Authors/Country/ (Year Conducted)	Sample	Subject Type	Analysis	Findings
43	(Jabnoun and Khalifa 2005)/UAE	115	Customers of Islamic banks	EFA	The authors developed a 30-item questionnaire comprising the five dimensions of SERVQUAL and two other dimensions called values and image. Their findings showed that only four dimensions: personal skills, reliability, values, and image affect service quality.
44	(Karatepe et al. 2005)/Cyprus	1220	Bank Customers	EFA and CFA	The authors developed a 20-item four-dimensional scale consisting of service environment (four items), interaction quality (seven items), empathy (five items), and reliability (four items). The scale exhibits sound psychometric properties.
45	(Mukherjee and Nath 2005)/India	410	Banks	Factor analysis-Promax Rotation	The authors have compared Gap, TOPSIS and Loss Function models and found out that the three models revealed the same result. Therefore, the 3 techniques can be used in complementary to achieve better result.
46	(Arasli et al. 2005c)/Cyprus	260	Bank customers	Factor analysis, regression	The authors have replicated Servqual and found out that the assurance dimension was eliminated from the factor analysis procedure and responsiveness and empathy dimensions were collapsed into one dimension. The reliability dimension has the highest impact to customer satisfaction.
47	(Arasli et al. 2005b)/Cyprus	268	Banking Turkish and Greek Speaking Area	Regression	The replication of Servqual for two groups of bank customers revealed that responsiveness dimension was not captured in the factor analysis. In addition, there was a significant difference between the Greek and Turkish speaking customers on their perception of the service quality dimensions. Assurance dimension has the highest ranking as compared to other dimensions. The differences of the findings could come from the difference between the culture between the Greek and Turkish speaking customers. The findings from this study was different in comparison to the authors' findings in Arasli et al. (2005b)
48	(Silvestro 2005)/UK	32	Patients of Breast Screening Unit	Descriptive analysis	The author has used Johnston's (1995) comprehensive list quality of quality factors to investigate the patient priorities.
49	(Malhotra et al. 2005)/USA, Philippines and India	1069	Banking services	Scheffe's multiple comparison test	Developed 14 hypothesis which differentiate service quality between countries (developed and developing countries).

No	Authors/Country/ (Year Conducted)	Sample	Subject Type	Analysis	Findings
50	(Gounaris 2005)/Greece	257	Consulting firms, banks, software development and maintenance companies, freight shipping	Regression	The authors claimed that SERVQUAL appears to suffer from significant methodological problems when applied to b2b services. They provide an alternative measurement named indserv for b2b context.
51	(Petridou et al. 2007)/Greece and Bulgaria	223	Banks Customers	T-test, CFA,	The authors replicated BSQ and analysed customers from two Balkan countries, Greece and Bulgaria using Factor analysis and T-test. The findings showed that the perception of service quality received customers from different countries vary.
52	(Prayag 2007)/Mauritius	140	Airline customers	Factor analysis, regression	The authors replicated Servqual in the airline industry and found that service quality structural dimensions are context- and culture-specific. They found four factors as antecedents to service quality which are perceived as influencing perceptions of service, service efficiency and affect being the most important, service personalisation, reliability and tangibles the least important.
53	(Yavas and Benkeinstein 2007)/Turkey and Germany	156 T, 226 G	Bank customers	Factor Analysis, Factor Congruency Technique	The authors found out that there are 3 factors, which congruent between the cultures of the two countries, which imply that the multinational banks could standardise their operation in these two countries. However, no further analysis is conducted for the impact to customer satisfaction.
54	(Lai et al. 2007)/China	118	Mobile users	EFA and CFA	The authors have replicated Servqual with an additional dimension named service convenience. All six dimensions were significant except for empathy dimension which need revision.
55	(Baumann et al. 2007)/Australia/2002	1874	Bank customers	Factor analysis, regression	The authors try to link between service quality, satisfaction and loyalty in the retail-banking context. The results contribute to the development of more parsimonious models, suggesting that affective attitude, overall satisfaction, empathy and responsiveness together explain a large percentage of the variation in customers' intentions.

No	Authors/Country/ (Year Conducted)	Sample	Subject Type	Analysis	Findings
56	(Guo et al. 2008)/China	259	Corporate banking customers	Factor Analysis, in-depth interview	The authors identified that service quality in Chinese corporate banking is measured by a nested model, consisting of two higher-order constructs (i.e. functional quality and technical quality) and four lower-order dimensions (i.e. reliability, human capital, technology and communication).
57	(Wong et al. 2008)/Australia	706	Business in e-banking	CFA, Quadrant analysis	The authors re-examined Servqual model in the context of e-banking service in Australia. They identified that banks are performing relatively well in terms of their appearances (tangibles), and in building trust and confidence with their customers (assurance), while relatively poorer in terms of performance in providing prompt service (responsiveness), individualized attention (empathy), and dependability and accuracy (reliability). The findings are different in terms of the order sequence as suggested by Parasuraman et al. (1988) The differences between their findings with Servqual probably due to the differences between the Australian and the American culture.
58	(Landrum et al. 2008)/USA	385	Customers of 2 Army Corp Engineers	EFA/PLS	The authors have developed a service quality scale named as Servcess in evaluating information system (IS) success employing Servqual dimensions and other IS dimensions.
59	(Muslim and Zaidi 2008)/Malaysia	440	Customers of a full fledged Islamic bank and dual banking system	CFA and SEM	The authors have used Carter model and found out that service quality has positive affect to customer satisfaction. All the six dimensions are significant and <i>Shari'ah</i> compliance was identified to be positively affecting service quality. Their findings also supported Parasuraman et al. (1988) where the reliability dimension has the highest impact on service quality. They also used Servperf instead of Servqual.

No	Authors/Country/ (Year Conducted)	Sample	Subject Type	Analysis	Findings
60	(Yu et al. 2008)/China	1) 756 2) 50	1) Library 2) Academic staff	3) Survey 4) Snowball interview	The authors have replicated Servqual in the context of library service quality. The findings revealed that specific measurement must be used for specific target users. They have also commented about the Servqual score in which they found to be distributed in a very scattered manner.
61	(Ladhari 2009)/Canada	193	Customers of Canadian Banks	CFA, Correlation, Regression	The results support the dimensionality of Servqual, its reliability, convergent reliability, discriminant validity and predictive validity of the scale in this service setting. The results also show that responsiveness and empathy are the most important dimensions of overall service quality in the Canadian banking context. Findings show that the service provided by employees makes the largest contribution to bank customer satisfaction. In view of the study's findings, Canadian bank managers must recognise that frontline employees are crucially important in establishing and maintaining a competitive position for their institution.
62	(Rosenbaum and Wong 2009)/Vietnam	1683	Low ethnocentric customers of an automobile manufacturer	SEM	The authors advocate that ethnocentrism encourages customers to express loyalty and to spread positive word of mouth about Company X, which is a local automobile manufacturer. High-ethnocentric customers are also less reactive to Company X's value drivers, including product quality, price, and convenience, than low-ethnocentric customers. However, high-ethnocentric customers place greater importance on dealership SERVQUAL than low-ethnocentric customers.
63	(Kanning and Bergmann 2009)/Germany	351	Bank customers	Regression analysis	The authors have found that Locke's model of product importance do not perform better than the disconfirmation PE model, absolute P-(E-P) performed better than relative P-E and Performance alone would be the best predictor to customer satisfaction excluding expectation and importance.

No	Authors/Country/ (Year Conducted)	Sample	Subject Type	Analysis	Findings
64	(Kumar et al. 2009)/Malaysia	308	Banking users	Factor analysis and dominance analysis	The authors replicated Servqual and added an additional dimension named convenience but only 4 dimensions emerged in the factor analysis, which are tangible, reliability, competence and convenience.
65	(Etgar and Fuchs 2009)/Israel	172	Specialist physicians patients in medical sector	Factor analysis and regression	The authors replicated Servqual and examined the impacts of the dimensions on cognitive, affective and conative responses of the patients. The study revealed that Servqual has the strongest effect on cognitive and emotive states.
66	(Osman et al. 2009)/Malaysia	141	IB consumers	Mean, Kruskall Wallis Test	The authors have replicated Carter model and surveyed Islamic banks customers in Malaysia comparing between Muslim and non-Muslim customers. They found out that the Carter model is reliable since all the dimensions are having means above 4. In addition, the customer satisfaction varies if compared to the different banks in Malaysia (between full Islamic fledge banks and conventional Islamic windows).
67	(Sadek et al. 2010)	Not disclosed	Islamic bank and ethical bank customers	Mean, frequency and percentage	The authors have compared two banks customer satisfaction (Islamic Bank of Britain and Co-operative Bank) using Carter. They found that the IBB customers ranked compliance with <i>Shari'ah</i> as the highest while the Co-operative Bank ranked ethics as the highest rank.
68	(Khattak and Rehman 2010)/Pakistan	156	Banking customers	Mean and Kruskal-Wallis One Way Anova	The authors have conducted a survey in Pakistan to identify the reasons why customers embrace the IB system, the reasons why they subscribe to both banking system and the demographic factors that differentiate their level of satisfaction with the IB system. Their findings show that the demographic factors such as gender, age, religion, occupation, academic qualification and income are significantly different with the dependent variables. The implication from their findings revealed that customer demographic factors could affect the level of satisfaction.
69	(Mohammed and Shirley 2009)/Qatar	120	Banking customers	Mean	The study has replicated Servqual but eliminated Servqual two dimensions (i.e. Responsiveness and Assurance). They proposed a dimension named Competence. Tangible was found to be the highest importance for Qatari banking consumers.

No	Authors/Country/ (Year Conducted)	Sample	Subject Type	Analysis	Findings
70	(Foscht et al. 2009)/Australia	242	Retail banking customers	Factor analysis and SEM	This study examined satisfaction, loyalty, share of wallet, and the behavioural intentions of young customers of retail banks.
71	(Armstrong and Seng 2000)/Singapore	206	Top companies in Singapore	SEM	This study examined customer satisfaction at the business to business level.

Appendix 9: Operationalisation of Religiosity.

No	Scale Items	Source
1	1) mosque/church/temple attendance, 2) importance of religious values, 3) confidence in religious values, and 4) self-perceived religiousness.	Wilkes, Burnett, and Howell (1986)
2	<i>Cognitive dimension</i> 1) Indicate how religious do you view yourself to be? 2) My religion is important to me 3) I believe in God <i>Behavioural dimension</i> 1) Church/ Synagogue attendance 2) Monetary giving to religious organisation	McDaniel and Burnett (1990)
3	Tansuhaj et al. (1990) employed a scaled developed by Putney and Middleton (1961). <i>Orthodoxy Scale</i> 1) I believe that there is a physical Hell where men are punished after death for the sins of their lives. 2) I believe that there is a supernatural being, the devil, who continually tries to lead men into sins 3) To me the most important work of the church is the saving of souls. 4) I believe that there is a life after death. 5) I believe that there is a Divine plan and purpose for every living person and thing. 6) The only benefit one receives from prayer is psychological. <i>Fanaticism Scale</i> 1) I have a duty to help those who are confused about religion. 2) Even though it may create some unpleasant situations, it is important to help people become enlightened about religion. 3) There is no point arguing about religion, because there is little chance of changing other people's minds. 4) It is does not really matter what an individual believes about religion, as long as he is happy with it. 5) I believe the world would be a better place if more people hold the views about religion, which I held. 6) I believe the world's problems are seriously aggravated by the fact that so many people are misguided about religion. <i>Importance Scale</i> 1) My ideas about religion are the most important parts of my philosophy of life. 2) I find that my ideas on religion have a considerable influence on my views in other areas. <i>Ambivalence Scale</i> 1) Although one is stronger than the other, there is part of me, which believes in religion and part of me, which does not.	Tansuhaj et al. (1990)
4	1) Religious affiliation – self reported 2) Religious orientation Allport and Ross (1967) Extrinsic (11 questions) and Intrinsic (9 questions) measure of religious orientation was adapted. i. (I) I enjoy reading about my religion. ii. (E) I go to church because it helps me make friends.	Delener (1994)

No	Scale Items	Source
	<ul style="list-style-type: none"> ii. (E) It does not matter what I believe so long as I am good. v. (E) Sometimes I have to ignore my religious beliefs because of what people might think of me. v. (I) It is important for me to spend time in private thought and prayer. ii. (I) I would prefer to go to church <ul style="list-style-type: none"> a. A few times a year. b. Once every month or two. c. Two or three times a month. d. About once a week. e. More than once a week. ii. (I) I have often had a strong sense of God presence. ii. (E) I pray mainly to get relief and protection. x. (I) I try hard to live all my life according to my religious beliefs. x. (E) What religion offers me most is the comfort in times of trouble and sorrow. ii. (I) My religion is important because it answers many questions about the meaning of life. ii. (I) I would rather join a Bible study group than a church social group. ii. (E) Prayer is for peace and happiness. v. (E) Although I am religious, I do not let it affect my daily life. v. (E) I go to church mostly to spend time with my friends. ii. (I) My whole approach to life is based on my religion. ii. (E) I enjoy going to church because I enjoy seeing people I know there. ii. (E) I pray chiefly because I have been taught to pray. x. (I) Prayers I say when I am alone are as important to me as those I say in church. x. (E) Although I believe in my religion, many other things are more important in life. 	
	Source: Allport and Ross, Journal of Personality and Social Psychology 1967, 5(4) (432-443)	
	3) Perceived strength of religious affiliation How would rate the strength of your religious affiliation Very weak Very strong 1 2 3 4 5	
5	1. I go to a place of worship regularly. SA 2. Spiritual values are more important than material things. SA 3. Religious people are better citizens. SA 4. How do you characterize yourself? VR 5. Jesus Christ is the Son of God. SA 6. Individuals are free to approach the Lord for themselves. SA 7. The Bible is the word of God. SA 8. Man is responsible in his freedom to exercise his will for good. SA 9. The soul of man is immortal. SA	SD- Sood and Nasu (1995) SD- SD- NR- SD- SD- SD- SD- SD-

No	Scale Items	Source
	Questions for Japanese consumers were designed according to their beliefs. Questions no 5 until 9 were different from the American Protestant presented above:	
	5. Supreme reality is beyond the comprehension of the human mind. SA	SD-
	6. Religion is self-education in conquering pain, sorrow, and suffering. SA	SD-
	7. A person has an indefinite number of lives. SA	SD-
	8. The individual person is not important. SA	SD-
	9. One should strive for inner purity through contemplation and ceremonial acts. SA	SD-
6	Religiosity is measured by drawing on a born-again Christian sample as well as a sample of mall shopper based on two questions. 1)Have you ever made a personal commitment to Jesus that is still important to you today? 2)Those who reply in affirmative will be categorised as born again Christians and are asked to select one of five statements about salvation that comes closest to their beliefs about life after death. 3)Cognitive measure of religiosity – The importance of the religious faith 1 Extremely important – 5 Extremely unimportant 4)Behavioural measure of religiosity – Frequency of religious service attendance	La Barbera and Gurhan (1997)
7	Econometric model	Hamdani and Ahmad (2004)
8	1)Religious observances are very important to me 2)I believe in God 3)I think something is wrong if a person has no religious feeling 4)I believe in a life after death 5)I feel I am true to my beliefs in everyday life.	Huefner et al. (2002)
9	Religious orientation developed by Allport and Ross (1967) Extrinsic (11 questions) and Intrinsic (9 questions) measure of religious orientation was adapted.	Nittin and Sally (2004)
10	Respondents were asked on how they perceived their own religiousness.	Rice (2006)
11	Religiosity is measured using the RCI-10 developed by Worthington et al. (2003) 1. I often read books and magazines about my faith 2. I make financial contributions to my religious organisation 3. I spend time trying to grow in understanding of my faith 4. Religion is especially important to me because it answers many questions about the meaning of life 5. My religious beliefs lie behind my whole approach to life 6. I enjoy spending time with others of my religious affiliation 7. Religious beliefs influence all my dealings in life 8. It is important to me to spend periods of time in private religious thought and reflection 9. I enjoy working in the activities of my religious organisation 10. I keep well informed about my local religious group and have some influence in its decisions	Mokhlis (2006)
12	Content analysis is conducted in examining advertising campaign in Saudi and religious symbols affect consumer behaviours.	Al-Modaf (2007)
13	The frequencies of church attendance	Benjamin, William and Anne (2007)

No	Scale Items	Source
14	Religious orientation developed by Allport and Ross (1967) Extrinsic (11 questions) and Intrinsic (9 questions) measure of religious orientation was adapted.	Vitell, Singh, and Paolillo (2007)
15	“I attend religious services regularly.”	Bloodgood, Turnley and Mudrack (2008)
16	The questions were drawn from Santa Clara strength of religious faith questionnaire: 1) My faith is an important part of who I am as a person 2) My relationship with God is extremely important to me 3) My religious faith is extremely important to me 4) I look to my faith as providing meaning and purposes to my life 5) I look to my faith as a source of comfort 6) I look to my faith as a source of inspiration 7) I consider myself as active in my faith or church 8) I pray daily 9) My faith impact many of my decisions 10) I enjoy being around others who shared my faith	Cleveland and Chang (2009)
17	Religiosity (<i>alpha</i> 0.86) 1) Spiritual values guide me in making important decisions. 2) If more Americans used their religion, they would make better choices. 3) My religious beliefs help me recognize the dignity and welfare of people. 4) I am guided by my religion to ensure that my actions do not intentionally harm others. 5) I would describe myself as very religious.	Iyer and Kashyap (2009)
18	Religiosity measurement was the same as Iyer and Kashap (2009)	Kashyap and Iyer (2009)
19	Religiosity (in Israel) is measured on self reported five-point continuum religiosity interval scale, including 1—secular, 2—secular who keeps some of the Jewish laws, 3—traditional, 4—religious, 5—orthodox.	Katz-Gerro, Raz and Yaish (2009)
20	Drawn from Wilkes et al. (1986) four-item scale that measures (<i>alpha</i> : 0.75) 1) mosque/church/temple attendance, 2) importance of religious values, 3) Confidence in religious values, and 4) self-perceived religiousness.	Ong and Moschis (2009)
21	Religious commitment is measured using the ten-item Religious Commitment Inventory (RCI-10) scale developed by Worthington et al. (2003). The scale has six statements expressing intrapersonal religiosity (cognitive) and four expressing interpersonal religiosity (behavioural). (<i>alpha</i> : above 0.6)	Swimberghe, Sharma and Flurry (2009)
22	Religious orientation Allport and Ross (1967) Extrinsic (11 questions) and Intrinsic (9 questions) measure of religious orientation were adapted.	Vitell et al. (2009)
23	<i>Ideological dimensions (alpha: 0.51)</i> 1) I have a firm belief in all basic ideological dimensions of Islam 2) Muhammad (PBUH) is His last Prophet 3) I believe there is only one Allah <i>Ritualistic dimensions (alpha: 0.61)</i> 1) I regularly offer prayer five times a day 2) I fast regularly during Ramadan 3) I regularly recite the Holy <i>Al-Quran</i> 4) I believe that I am obliged to perform <i>Hajj</i> if I meet the prescribed criteria <i>Intellectual dimensions (alpha: 0.57)</i> 1) I never offer <i>Sajjda</i> saint's graves 2) I always keep myself away from earning through <i>haram</i> (prohibited) means 3) I always try to avoid minor and major sins 4) I know the basic and necessary knowledge about my religion	Ateeq-ur, and Muhammad Shahbaz (2010) have modified Glock's (1972) religiosity measurement.

No	Scale Items	Source
	5) I always try to follow Islamic junctions in all matters of my life	
	<i>Consequential dimensions (alpha: 0.77)</i>	
	1) It is my duty to give respect to others and give them their rights according to Islamic injunctions	
	2) I try to avoid any activity, which hurt others	
	3) I always try to help those who need my help	
	4) I try to be honest and fair with others	
	5) I always avoid humiliating others because Islam does not allow doing so	
	<i>Experience dimensions (alpha: 0.62)</i>	
	1) I feel sorrow and dissatisfaction when I do something against my faith	
	2) I have a feeling of being tempted by the devil	
	3) I have a feeling of being afraid of Allah	
	4) I have a feeling of being punished by Allah for something doing wrong	
	5) I feel pleasure by seeing others following Islamic teaching	
24	Religious commitment is measured using the ten-item Religious Commitment Inventory (RCI-10) scale developed by Worthington et al. (2003). (<i>alpha: 0.779</i>)	Kum-Lung, and Teck-Chai (2010)
25	Religious commitment is measured using the ten-item Religious Commitment Inventory (RCI-10) scale developed by Worthington et al. (2003). (<i>alpha: 0.781</i>)	Lau
26	Conceptual	Hashim and Mizerski (2010)
27	Conceptual	Parameshwaran and Srivastava (2010)
28	Barna (2005) Evangelical religious measurement (<i>alpha: 0.96</i>)	
	1) I have made a personal commitment to Jesus Christ that is still important in my life today	
	2) When I die, I will go to heaven because I have accepted Jesus Christ as my saviour	
	3) The bible is the inspired words of God	
	4) I have a personal responsibility to share my personal beliefs about Christ with non Christians	
	5) Jesus Christ lived a sinless life on earth	
	6) I believe that Satan exists	
	7) I believe that eternal salvation is only possible through grace, not works	
	8) I believe in the second coming of Christ	
	9) Christ performed miracles such changing water to wine	
	Influence of religious beliefs on buying and the service provider choice	Taylor, Halstead, and Haynes (2010)
	1) My religious beliefs influence what I buy	
	2) My religious beliefs influence which service providers that I use	
29	1) Religion plays an important part in my life 2) I regularly attend religious services	Witkowski and Reddy (2010)
30.	Drawn from Wilkes et al. (1986) four-item scale that measures (<i>alpha: 0.75</i>)	
	1) Mosque/church/temple attendance,	
	2) Importance of religious values,	
	3) Confidence in religious values, and	
	4) self-perceived religiousness.	Moschis and Ong (2011)
31	Obligations (<i>alpha: were not reported</i>)	
	I pray five times a day.	
	I fast the whole of <i>Ramadhan</i> .	
	I pay <i>zakat fitrah</i> every year.	Wan Ahmad et al. (2008)

No	Scale Items	Source
	<p>I make sure that my dress/cloth covers my <i>aurat</i>. I make sure the food and drink I consumed are <i>halal</i>.</p> <p>Recommendations I go to the mosque to pray '<i>solat fardh</i>'. I perform '<i>solat fardh</i>' in congregation. I give charity to the poor and needy. I read <i>Al-Quran</i> and perform <i>zikir</i>.</p> <p>Prohibitions I have taken or given bribes I have taken interest (<i>riba</i>).</p> <p>Akhlaq I visit my family/friends when they are bedridden. I thank Allah for my food and drink. I fulfil all that I promise. I am honest at all times.</p> <p>Faith Islam is a way of life. <i>Al-Quranic</i> teachings are suitable and practicable in today's life. Rasulullah's traditions are suitable and practicable throughout all times. All mankind's deeds will be judged and rewarded accordingly after death. My earnings are from own effort and not Allah's will. Death and destiny are determined by Allah alone. A man's wealth depends on their own effort.</p>	
32	<p>Belief (<i>alpha: was not reported</i>) My life has a clear sense of purpose Today's social ills are not due to lack of religious knowledge <i>Al-Quran</i> relieves pain and diseases I follow the <i>Sunnah</i> in daily life It is OK not to pay our debt I admire people who own expensive homes, cars and clothes I am interested in status I believe that miracles happened the way the <i>Al-Quran</i> says they did Rewards of paradise encourage me to do good things</p> <p>Practice My family members dress in accordance with religion Frequency of voluntary prayers Voluntary fasting other than <i>Ramadhan</i> Pay visits to relatives as a religious duty Care about neighbours and their well being Greeting others even to strangers I watch/listen/attend religious meetings</p> <p>Ethics Eid prayer is more important than <i>Jumaat</i> prayers To give charity is commendable If found RM1, I can take and use it If found RM1000, I can take and use it Aware of IB system Given a choice, will choose Islamic loan</p>	Hassan et al. (2010)

Appendix 10: Religiosity Scale Development

The importance of a comprehensive literature review cannot be overstated in developing a scale. Clark and Watson (1995) stated that the literature review serves to clarify the nature and range of the content of the target construct and may help to identify problems with existing measures (e.g. responses to technical problems or unclear instructions) that can then be avoided in one's own scale. They added that a thorough review would indicate whether the proposed scale is actually needed (Clark and Watson 1995). Following the systematic search conducted earlier, the development of the scale has undergone three different stages, which are explained in the following sub-sections.

Stage 1: Initial Religiosity Scale Construction

The aim of this stage is to review and compare interrelated theoretical constructs from the relevant prior literature and to distinguish the relevant from the irrelevant items according to the theoretical constructs and, finally, retain the items that are relevant to Islamic religiosity according to the expert opinion survey. Six steps were taken in stage 1. A brief explanation of these steps is given below:

- 1) Step 1: The 27 religiosity scales were collected and pooled together. There were approximately 263 items found from the 27 scales (see the column labelled Items in Table 8-1).
- 2) Step 2: Identical scales used by seven studies, i.e. Vitell et al. (2009), Swimberghe, Sharma and Flurry (2009), Kashap and Iyer (2009), Nittin and Sally (2004), Vitell, Singh and Paolillo (2007), Kartz-Gerro, Raz and Yaish (2009), Kum-Lung and Teck-Chai (2010)) were eliminated, leaving only unique scales. 86 items were removed from the 239 items leaving 177 items (See Appendix 9, p. 348 for the full list of the items from the respective scales).
- 3) Step 3: Items with specific religious or nationality measurement and ambiguous wording were rewritten, and redundant items were deleted (sixty-five items were deleted leaving 112 items – see the columns labelled ‘delete ambiguous’ and ‘duplicated items’ in Table 8-1). Seven more problematic items were deleted and the final number remaining

from the above step process is now 105 items. Table 8-1 shows the three steps taken above (steps 1 -3) for the initial scale development.

Table 8-1: Steps 1 – 3

No	Author(s)	Step 1: Items	Step 2: Delete identical scales	Step 3: Delete ambiguous and duplicated items
1	Wilkes, Burnett, and Howell (1986)	4		4
2	McDaniel and Burnett (1990)	5		5
3	Tansuhaj et al. (1990)	15		15
4	Delener (1994)	22		3
5	Sood and Nasu (1995)	9		3
6	La Barbera and Gurhan (1997)	5		5
7	Hamdani and Ahmad (2004)	0		
8	Huefner et al. (2002)	5		
9	Nittin and Sally (2004)	20	20	
10	Rice (2006)	1		1
11	Mokhlis (2006)	10		3
12	Al-Modaf (2007)	0		
13	Benjamin, William and Anne (2007)	1		1
14	Vitell, Singh, and Paolillo (2007)	20	20	
15	Bloodgood, Turnley and Mudrack (2008)	1		1
16	Cleveland and Chang (2009)	10		5
17	Iyer and Kashyap (2009)	5		4
18	Kashyap and Iyer (2009)	5	5	
19	Katz-Gerro, Raz and Yaish (2009)	1	1	
20	Ong and Moschis (2009)	0		
21	Swimberghe, Sharma and Flurry (2009)	10	10	
22	Vitell et al. (2009)	20	20	
23	Ateeq-ur, and Muhammad Shahbaz (2010) have modified Glock's (1972) religiosity measurement.	22		
24	Kum-Lung, and Teck-Chai (2010)	10	10	
25	Lau	0		
26	Hashim and Mizerski (2010)	0		
27	Parameshwaran and Srivastava (2010)	0		
28	Taylor, Halstead, and Haynes (2010)	11		7
29	Witkowski and Reddy (2010)	2		2
30	Moschis and Ong (2011)	4		3
31	Wan Ahmad et al. (2008)	22		2
32	Hassan et al. (2010)	23		1
Total		263	86	65

- 4) Step 4: The items were grouped according to the dimensions or labelled given from the literature in order to specify their domain or constructs (Churchill 1979). There were

twenty labels, which were then reduced to twelve labels due to redundancy. The labels applied are: intrinsic and extrinsic motivation, commitment, faith, intellectual experiential, influence, *Shari'ah* (which consists of obligations, recommendations and prohibitions), *akhlaq*, belief, practice and ethics.

- 5) Step 5: The items were numbered for group identification, however the items in the group were not numbered in sequence in order to avoid giving the respondents any clues to their previous label, as in the literature.
- 6) Step 6: All 105 items were given to approximately twenty expert Islamic scholars, professionals and academicians requiring them to identify whether the items were related or not related to Islamic religiosity measurement using an online questionnaire (see Appendix 7, p. 354, which that shows individual items have been accepted and deleted). The selection of respondents (experts) is based on the researcher's own personal contacts and knowledge about the respondents' Islamic scholarly credentials. They either have a formal Islamic *Shari'ah* background or are involved in Islamic religious activities. The survey was conducted from 4th of July 2011 until 18th of July 2011 (approximately two weeks). This was conducted since the items found in the literature were extracted from general or specific religiosity measurements. The items that were identified by the expert as not being related to, or having an ambiguous connection with, Islamic religiosity measurement, will be deleted. The response rate was 60% where twelve scholars responded to the expert opinion survey. The response rate is considered as sufficient for the researcher to reduce to only related religiosity items. Items with 100% agreement will remain in the study. In total there are 41 items remaining from an initial 105 items (see Appendix 12, p. 371 for the list of the 41 items).

Demographic of the Islamic Scholars Experts

The demographic profile of the expert respondents is given as follows. Approximately 58% of the respondents' ages are in the range of 26 to 35 years old. The remaining 42% fall in the range of 36 to 45 years old. In addition, 42% of the expert respondents were PhD holders and the remaining 58% have Masters degrees. The respondents' background of expertise varies across fields such as human rights, accounting and IB, *fiqh muamalat*⁶³, International

⁶³ Islamic rules regarding business transactions.

Investment law, *hadith* and Islamic Civilisation and *usul fiqh*⁶⁴. The distribution of the areas of expertise of the respondents thereby gives a broad coverage of Islamic knowledge while preserving the focus on Islamic religiosity.

Grouping Items According to Theory

The relevant items were culled from the above process, and then grouped into dimensions or labels according to their respective dimensions in the literature. The items are then labelled according to their theoretical dimensions as shown in the following table.

Table 8-2: The Items According the Dimensions in the Literature

Dimension	Item No	Total items in dimension
<i>Akhlaq</i> ⁶⁵	75	1 item
Beliefs	19, 26,35, 36,37, 38, 42,43,78, 79, 80, 81, 88, 93	14 items
Commitment	24, 28,29	3 items
Influence	63, 64	2 items
Intellectual	49,50,51, 52	4 items
Intrinsic	5,8,14	3 items
Practice	18,44,45,46,47,96, 65,66,67,71,73	11 items
Experience	58,60,61	3 items

Conceptualisation of the dimensions revealed that there are dimensions that can be pooled together to avoid confusion for the respondents. These dimensions are commitment, intellectual and intrinsic, because the items measuring intellectual and intrinsic dimensions are indirectly measuring individual commitment. In addition, an *akhlaq* dimension was deleted since there is only one item in the dimension. The item in the dimension is transferred into the experience dimension. Table 8-3 summarises the conceptualisation of the dimensions in religiosity.

Table 8-3: The Conceptualisation of the Religiosity Dimensions

Dimension	Definition	Author
<i>Akhlaq</i> *	The meaning of this dimension is virtues and vices. There is only 1 item in this dimension, therefore it is suggested that this item I thank Allah for my food and drink be moved to the experience dimension.	Wan Ahmad et al. (2008)
Beliefs	This group is a combination of items from faith (Wan-Ahmad et al., 2010), ideology - including the overall beliefs associated with a religion (Ateeq-ur, and Muhammad Shahbaz, 2010) and religious beliefs - (Hassan et al., 2010) dimensions that were taken from different measurement scales by different authors. However, the meanings of the dimensions are the same.	(Wan-Ahmad et al. 2008; Ateeq-ur and Muhammad Shahbaz 2010; Hassan et al. 2010)

⁶⁴ The roots of Islamic jurisprudence.

⁶⁵ The meaning of this dimension is virtues and vices

Dimension	Definition	Author
Commitment	Religious commitment, which is defined as the degree to which a person adheres to his or her religious values, beliefs, and practices and uses them in daily living.	(Worthington Jr et al. 2003)
Influence	The influence of religious beliefs on buying and the service providers' choice,	Taylor, Halstead, and Haynes (2010)
Intellectual*	Refers to an individual's knowledge about religion. However, a thorough examination of the items in this dimension revealed that the items were related to the commitment dimension. Therefore, all the items were transferred to the commitment dimension.	Ateeq-ur, and Muhammad Shahbaz (2010)
Intrinsic*	Intrinsic religiosity is defined as a meaning-endowing framework in terms of which all of life is understood. However, this dimension is deemed to be the same as the commitment dimension.	(Allport and Ross 1967)
Practice	Hassan et al. defined practice as 1. Practicing all basic <i>ibadah</i> (rituals), 2. Enrichment, 3. Seeking knowledge and the act of giving donation to charity, while Ateeq-ur and Muhammad Shahbaz (2010) defined practice as ritual, which includes the actions prescribed by religion such as prayer, fasting, pilgrimage, etc. Wan Ahmad et al. defined it as <i>Shari'ah</i> dividing it into three factors i.e. obligation, recommendation and prohibition. However, the term <i>Shari'ah</i> is too broad because it will include all aspects of Islam. Therefore, the word practice or ritual or good deeds (<i>amal soleh</i>) would be more precise.	Ateeq-ur, and Muhammad Shahbaz (2010) and Hassan et al. (2010)
Experience	The experience dimension describes the practicality of the religion.	Ateeq-ur, and Muhammad Shahbaz (2010)

Note: * Dimension is combined with another dimension.

The final dimensions after the conceptual refinement have been reduced to five dimensions before the sorting procedure with forty-one items. The following table shows the items in their respective dimensions.

Table 8-4: The Items According the Dimensions in the Literature

Dimension	Item No	Total items in dimension
Beliefs	19, 26,35, 36,37, 38, 42,43,78, 79, 80, 81, 88, 93	14 items
Commitment	5,8,14, 24, 28,29, 49,50,51, 52	10 items
Influence	63, 64	2 items
Practice	18,44,45,46,47,96, 65,66,67,71,73	11 items
Experience	58,60,61, 75	4 items

The optimal number of items for the proposed religiosity scale was determined using the Spearman-Brown prophecy formula (Bhattacharjee 2002). This formula estimates the number of items needed in a scale to obtain a desired reliability based on the number of items and reliabilities of comparable previous scales. Extrapolating from the existing religiosity scales, the Spearman Brown prophecy formula suggests the following number of items in each dimension at a reliability of 0.8.

Table 8-5: Optimal Items Based on Spearman Brown Prophecy Formula

Dimension	Original N	Previous <i>alpha</i>	Optimal Items	Existing Items
Beliefs	3 items	0.51	12 items	14 items
Commitment	10 items	0.779	11 items	10 items
Influence	2 items	Na	Na	2 items
Practice	4 items	0.61	11 items	11 items
Experience	4 items	0.62	12 items	4 items

The Spearman Brown Prophecy test suggests that eleven to twelve items are required for a scale reliability of 0.80 for the beliefs dimension, ten to eleven items in the commitment dimension, ten to eleven items in the practice dimension and eleven to twelve items in the experience dimension. A reliability score of 0.80 is generally considered to be adequate for confirmatory research (Bhattacharjee 2002). Furthermore, Bhattacharjee (2002) recommended keeping measurement scales as small as possible in order to reduce the semantic overlap between scales and minimize respondent fatigue.

Stage 2: Sorting Procedures

The goals of this stage as stated by Benbasat and Moore (1991) are twofold: a) to assess the construct validity of the various scales being developed and b) to identify any particular items which still may be ambiguous. Judges (Muslim consumers) were requested to sort the various items into a dimension or to construct categories in order to achieve the goals. This technique is similar to Benbasat and Moore (1991) and Bhattacharjee (2002).

Each item was printed separately on one 4 X 6-inch index card. The categories/ labels with each definition printed on the label were specified from the literature. The label and definition were printed on A4 cards. The definitions of each label were given with the aim of assisting judges in choosing the items that suited the labels. The cards were then shuffled into a random order for presentation to the judges. Each judge sorted the cards into categories of items independently from the other judges. The selection of judges was made based on the researcher's convenience using personal contacts. The judges were selected based on the criteria that they are Muslim and hold Malaysian citizenship. The researcher has managed to find Malaysian Muslims studying in the United Kingdom, Malaysian Muslims who visited Cardiff in July 2011 and Malaysian Muslims who were working in Cardiff to become the judges for the sorting procedures. In total nineteen judges (divided into four groups) participated in the sorting procedure. Prior to sorting the cards, judges had the sorting

procedures and the definition of the labels explained to them to ensure their understanding and comprehensive sorting.

Analysis of Sorting Rounds

The sorting rounds can be discussed based on two different measurements. First, for each pair of judges at each sorting step, their level of agreement in categorising items was measured using Cohen's Kappa (Cohen, 1960). Once all the Kappa scores were calculated, an assessment was made regarding the level of agreement across all pairs of judges. For Kappa, scores greater than 0.65 were deemed to be acceptable (Moore and Benbasat 1991). Secondly, overall, a measure both of the reliability of the classification scheme and the validity of the items was developed for this research. The method requires analysis of how many items were placed by the judges within the targeted constructs. In other words, because each item was explicitly included in the pool to measure a particular underlying construct, a measurement was taken of the overall frequency with which all judges placed items within the intended theoretical construct. The higher the percentage of items placed in the target construct, the higher the degree of inter-judge agreement attained across the judges. Scales based on categories, which have a high degree of correct placement of items within them, can be considered to have a high degree of construct validity, with a consequently high potential for good reliability scores.

Results of the First Sorting Round

Seventeen judges were involved in the first sorting round. The results revealed that the overall inter rater reliabilities of Cohen Kappa (approximately 135 pairs of judges' kappa were calculated) were very low at 23%. In addition, the raw agreement of the judges was also relatively low.

Table 8-6: Inter Raters Raw and Cohen Kappa Agreement (Sorting Round 1)

Agreement Measure	# of items	Round 1
Raw Agreement		
Beliefs	14	0.616071
Commitment	10	0.508824
Experience	4	0.591912
Influence	2	0.602941
Practice	11	0.569519
<i>Average</i>	<i>41</i>	<i>0.577853</i>

Agreement Measure	# of items	Round 1
Cohen's Kappa		
Beliefs	14	0.126718
Commitment	10	-0.01663
Experience	4	0.148194
Influence	2	0.75
Practice	11	0.142696
<i>Average</i>	<i>41</i>	<i>0.230197</i>

In addition, the placement overall hit ratios were also relatively low, at 52%. The lowest was the experience dimension achieving only 27% of the targeted placement followed by commitment at 41%.

Table 8-7: Item Placement Scores (Sorting Round 1)

Sorting Round:	First	Respondents					17
Target category	Beliefs	Commitment	Experience	Influence	Practice	Total	Target %
Beliefs	141	24	30	6	15	216	65%
Commitment	36	66	5	0	54	161	41%
Experience	26	22	20	2	3	73	27%
Influence	8	12	2	25	6	53	47%
Practice	27	46	11	1	109	194	56%
Total Item Placements		697	Hits	361	Overall Hit Ratio		52%

Both measurements, i.e. the Cohen Kappa and items' placement scores, were very low, indicating that the items might be confusing or ambiguous for the judges. For example, the judges were unsure about placing items between commitment and practice. This is because some of the judges perceived the items as a commitment while the others perceived them as a practice. A further examination of the definition of the constructs revealed that they are inter-related because the word practice appears in both definitions. In addition, the experience construct was problematic since the items were placed all over the other constructs. Therefore, the items and constructs had to be reviewed before the second sorting round could be conducted.

Items and Constructs Review

The goal of this section is to increase the percentage of correct item placement in its targeted theoretical construct by reviewing, rewording the items and reconstructing the constructs. The first step towards achieving this was to identify the incorrect placement items that might arise from confusing and ambiguous wording or problems of items loading in more than one

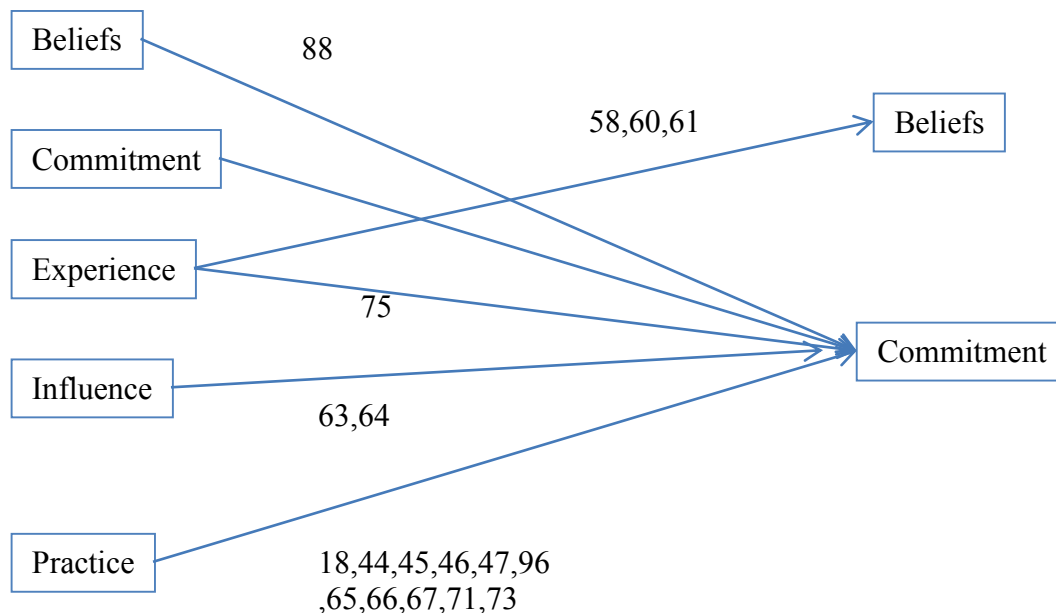
constructs, which might be due to their wording or to the theoretical constructs. This is conducted by reviewing the results of the correctly and incorrectly placed items. The identification of incorrect placements is shown in Table 8-8. For instance, a higher frequency of item placement was located in two of the constructs, which were commitment and practice.

Table 8-8: Example of the Individual Items Placement by Seventeen Judges

Items	Beliefs	Commitment	Experience	Influence	Practice
I make financial contributions to my religious organisation	0	6	2	4	5
I spend time trying to grow in understanding of my faith	1	7	5	-	4
I always keep myself away from earning through <i>haram</i> (prohibited) means	1	8	1	1	6
I always try to avoid minor and major sins	2	8	-	1	6

The next step was to reword the items to overcome the problem or move the items in inappropriate constructs. For example, the item “*I look to my faith as a source of comfort*” was reworded to “*I believe that my faith is a source of comfort*” in order to reduce its ambiguity. Nine items were re-written in the process. The next step was to merge or delete problematic constructs that were interrelated and producing low inter rater reliabilities resulting in two final constructs, beliefs and commitment. Figure 1-1 shows the movement of items from the previous construct into the beliefs and commitment constructs.

Figure 8-1: Items Movement



There are sixteen (16) final items in beliefs construct after the moving process and twenty-five (25) items in commitment. The two dimensions proposed are in line with an emphasis on the concept of belief (*iman*⁶⁶) and doing good deeds (*amal soleh*⁶⁷) where they are always paired in the holy verses of the *Al-Quran*. Lastly, all the items were translated into the Malay language to increase the judges' level of comprehension.

Results of the Second Sorting Round

In contrast to the first round, this time only five independent judges were asked to answer the questions. In addition, instead of using sorting cards, an online survey was conducted and the judges were selected from appropriate contacts known to the researcher's. The sorting process was conducted from the 16th of August until the 18th of August 2011. The results revealed that the overall inter rater reliabilities of Cohen Kappa were still low at 12%. However, the raw agreement of the judges had increased to 63%.

Table 8-9: Inter Raters Raw and Cohen Kappa Agreement (Sorting Round 2)

Agreement Measure	# of items	Round 2
Raw Agreement		
Beliefs	16	0.525
Commitment	25	0.736
<i>Average</i>	<i>41</i>	<i>0.6305</i>
Cohen's Kappa		
Beliefs	16	0.0863
Commitment	25	0.1448
<i>Average</i>	<i>41</i>	<i>0.11555</i>

In addition, the overall placement hit ratios were higher compared to the previous sorting round achieving a level of 77%. The increase in both constructs implies that the review process has managed to increase the judges' comprehension. The steps in the items and the constructs review mentioned earlier as part of sorting round 1 were carried out again. Four items from the belief construct were deleted while two items have been reworded. Two

⁶⁶ Zaman & Asutay (2009) describe this as a stage arising from *tanbid* to reflect the inner dimensions of belief, thought and intention, and so actions are not dictated by externalities but rather motivation originates and emanates from within.

⁶⁷ Zaman & Asutay (2009) call this a stage of Islam concerning the outward attestations and actions of worship which by necessity are expressions of *tanbid* and which exist as a tangible framework to give shape to Islam in society. This stage of development includes all such outward actions and speeches as encompassed by the law.

additional items in the commitment constructs were also deleted. There are twelve items in the belief construct, and twenty-three items in commitment construct for the third sorting round.

Table 8-10: Item Placement Scores (Sorting Round 2)

Sorting Round:	Two	Respondents 5			
Target category	Beliefs	Commitment	Total	Target %	
Beliefs	52	20	72	72%	
Commitment	28	105	133	79%	
Total Item Placements	205	Hits	157	Overall Ratio	Hit 77%

Results of the Third Sorting Round

Similarly, to the second round, five independent judges were asked to answer the questions. The sorting process was conducted from the 19th of August until the 25th of August 2011. The results, shown in the following table revealed that the overall inter rater reliabilities according to the Cohen Kappa were still low at 13%. However, the raw agreement of the judges increased to a level of 67%.

Table 8-11: Inter Raters Raw and Cohen Kappa Agreement (Sorting Round 3)

Agreement Measure	Round 3	
Raw Agreement	# of items	
Beliefs	12	0.775
Commitment	23	0.582609
<i>Average</i>	35	0.678804
Cohen's Kappa		
Beliefs	12	0.296667
Commitment	23	-0.0281
<i>Average</i>	35	0.134283
Placement Ratios Summary		
Beliefs	12	60%
Commitment	23	87%
<i>Average</i>	35	74%

In addition, the judges' item placement score was stable in the range between 75%-80% as shown in the following table.

Table 8-12: Item Placement Scores (Sorting Round 3)

Sorting Round:	Three		Respondents = 5		
Target category	Beliefs		Commitment	Total	Target %
Beliefs	48		32	80	60%
Commitment	12		83	95	87%
Total Item Placements	175	Hits	131	Overall Ratio	Hit 75%

See Appendix 13 on p. 372 for the 35 items that have been grouped into two dimensions, 1) belief and 2) commitment and practice. In the following section, the final stage in the scale development intended to test the measurement instrument will be explained in detail.

Stage 3: Instrument Testing

At this stage, pilot tests and factor analysis were conducted in order to ensure that the items are reliable and were reduced to a manageable set.

Pilot Tests

The questions in the pilot test were set in a random order. Questionnaires were distributed to a convenient sample of the researcher's personal contacts via email and Facebook. The first pilot test was conducted from the 31st August 2011 until the 2nd of September 2011. Fifty respondents answered the questions for the three days in which the survey was conducted. The reliability tests were conducted, reported in the far left columns of Table 8-13 shown below. The second pilot test was a continuation of the first pilot test after a few amendments to the item wording. The survey was conducted from the 3rd of September until 7th of Septembers (five days). The total of respondents participating was 180. The aim of these tests was to make an initial reliability assessment of the scales. Table 8-13 shows that the scales were analysed using the Cronbach Alpha and Guttman's Lower Bound (GLB).

Table 8-13: Reliability Coefficients for Pilot Tests

Initial Pilot n=50				Full Pilot n=180		
Scale Name	Items	Alpha	GLB	Items	Alpha	GLB
Belief	12	0.703 (n = 47)	0.790 (n = 47)	12	0.933 (n = 166)	0.950 (n = 166)
Commitment	23	0.883 (n = 43)	0.889 (n = 43)	23	0.946 (n=157)	0.963 (n=157)

The Cronbach Alpha and Guttman's lower bound (GLB) reliability analyses shown in Table 8-13 were highlighted as the standard reliability analysis discussed in many academic journals. The Cronbach Alpha reliability coefficients for the pilot tests are comparatively higher and improved when compared to the average alpha from the previous studies as reported in Table 8-13. For example, the average alpha for the belief construct was 0.51 as compared to 0.933 in the second pilot test. In addition, the average alphas for commitment and practice from the previous studies are also relatively sufficient at 0.779 and 0.61 compared to 0.946 in the pilot second test. Thus, for this study, the alphas have exceeded the targeted level of minimum reliability of 0.70. Because 35 items are too many for this type of instrument, we wished to eliminate as many as possible while retaining the desired reliability levels. Thus, a factor analysis was conducted and is discussed in the following section.

Factor Analysis

Factor analysis was conducted across five rounds and the factors were restricted to two in number. The first factor analysis included all 35 items. Four items from the belief construct and seven items from the commitment construct were deleted because either the factor loadings were less than 0.5 or the items were loaded in both factors. The factor analysis was repeated three times until all the items loaded in both factors without any factor loading or cross loading problems. In the fourth round, items incorrectly loaded based on theoretical reasoning were deleted. For instance, C5, C7, C14 and C16 were loaded in the belief construct where they were theoretically unjustified. The following table shows the results of the factor analysis conducted for the full pilot test.

Table 8-14: The Results of the Factor Analysis for the Full Pilot Test

		Original 35 items	1st Factor Analysis	2nd Factor Analysis	3rd Factor Analysis	4th Factor Analysis	5th Factor Analysis
KMO		n/a	0.928	0.924	0.918	0.917	0.899
Σ Variance Explained		n/a	59.45%	66.09%	67.22%	66.85%	67.32%
Items in Belief		12	16	12	11	10	6 (alpha 0.934)
Items in Commitment		23	19	12	11	11	10 (alpha 0.922)
Items deleted		n/a	B1, B4, B7, B8, C1, C2, C6, C11,	C3, C10	B3,	C5, C7, C14, C16, B11	None

Original 35 items	1 st Factor Analysis	2 nd Factor Analysis	3 rd Factor Analysis	4 th Factor Analysis	5 th Factor Analysis
C18, C21, C22					

There are only six final items remaining in the belief construct and ten items remaining in the commitment construct. Even though quite a number of items have been removed from the total of 239 items from 27 measurements, the remaining items represent the minimum religiosity adherence for a Muslim of either gender, male or female.

In addition, the alphas for both constructs are 0.934 and 0.922 for belief and commitment respectively. This study has managed to reduce about 93.31% of the initial items leaving 16 items after a vigorous combination of qualitative and quantitative analysis.

The dimensions found were 1) belief and 2) commitment and practice. An initial pool of two hundred and sixty three (263) items was generated and twelve expert judges (*Shari'ah* scholars) were asked to provide expert opinions for each of these items. In this study, religiosity was operationalized on a 5-point Likert scale (ranging from 1: “never” to 5: “always” for commitment and practice dimension and ranging from 1 “strongly disagree to 5 strongly agree for belief dimension). Table 8-15 illustrates the religiosity scale items.

Table 8-15: Items of Religiosity

Items	Reference
<i>Belief Dimension</i>	
Muhammad (p.b.u.h.) is His last Prophet	Ateeq-ur, and Muhammad Shahbaz (2010)
I believe there is only one Allah ⁶⁸	Ateeq-ur, and Muhammad Shahbaz (2010)
I believe <i>Al-Quranic</i> teachings are suitable in today's life.	Wan Ahmad et al. (2008)
All mankind's good deeds will be judged and rewarded accordingly after death.	Wan Ahmad et al. (2008)
I believe <i>Rasulullah</i> ⁶⁹ 's traditions are suitable throughout all times.	Wan Ahmad et al. (2008)

⁶⁸ He is the one without partner, unique without peer, ultimate without opposite, alone without equal. He is one, preeternal, beginninglessly, un-create, everlastingly abiding, unceasingly, existent, eternally limitless, the ever self-subsisting through whom all else subsists, ever enduring, without end. He is, was, and ever will be possessed of all attributes of majesty, un-annihilated by dissolution or separation through the passage of eons or terminus of interims. He is the First and Last, the Outward and Inward, and He has knowledge of everything. Cited from Keller, N. H. M. ed. 2011. *Reliance of the Traveller: a Classic Manual of Islamic Sacred Law*, by *Ahmad ibn Naqib al-Misri*. Maryland USA: Amana Publications..

⁶⁹ *Rasulullah* means the messenger of God referring to the prophet Muhammad p.b.u.h.

I believe that my faith is a source of comfort	Cleveland and Chang (2009)
<i>Commitment and Practice Dimension</i>	
My religious beliefs influence what I buy	Taylor, Halstead, and Haynes (2010)
I always keep myself away from earning through <i>haram</i> (prohibited) means such as interest from conventional banking.	Ateeq-ur, and Muhammad Shahbaz (2010)
I make sure that my dress/cloth covers my <i>aurat</i> ⁷⁰ .	Wan Ahmad et al. (2008)
I always perform the <i>zikir</i> ⁷¹ .	Wan Ahmad et al. (2008)
I follow the <i>Sunnah</i> ⁷² in daily life	Hassan et al. (2010)
My religious beliefs influence which service providers I use	Taylor, Halstead, and Haynes (2010)
I always try to avoid minor and major sin (this item was deleted because of confusion between minor and major sins)	Ateeq-ur, and Muhammad Shahbaz (2010)
My whole approach to life is based on my religion.	Delener (1994)
It is important for me to spend time in private thought and prayer	Delener (1994)
I regularly offer prayer five times a day.	Ateeq-ur, and Muhammad Shahbaz (2010)

⁷⁰ Parts of the body to be clothed as required by Islam

⁷¹ Remembrance of Allah.

⁷² The sayings, deeds and approvals of Prophet Muhammad p.b.u.h.. *Sunnah* is also referred to as *Hadith*.

Appendix 11: Items Deleted Based on the Expert Opinion Survey

No	Items	% Agreed	Decision
1	I enjoy reading about my religion.	91%	Delete
2	I go to <i>masjid</i> because it helps me make friends.	64%	Delete
3	It does not matter what I believe so long as I am good.	18%	Delete
4	Sometimes I have to ignore my religious beliefs because of what people might think of me.	36%	Delete
5	It is important for me to spend time in private thought and prayer.	100%	Accept
6	I have often had a strong sense of God presence.	91%	Delete
7	I pray mainly to get relief and protection.	82%	Delete
8	I try hard to live all my life according to my religious beliefs.	100%	Accept
9	What religion offers me most is the comfort in times of trouble and sorrow.	82%	Delete
10	My religion is important because it answers many questions about the meaning of life.	91%	Delete
11	I would rather join a religious study group than a social group.	64%	Delete
12	Prayer is for peace and happiness.	82%	Delete
13	Although I am religious, I do not let it affect my daily life.	55%	Delete
14	My whole approach to life is based on my religion.	100%	Accept
15	I pray chiefly because I have been taught to pray.	64%	Delete
16	Prayers I say when I am alone are as important to me as those I say in congregation.	91%	Delete
17	Although I believe in my religion, may other things are more important in life.	55%	Delete
18	I go to a place of worship/masjid regularly.	100%	Accept
19	Spiritual values are more important than material things.	100%	Accept
20	Religious people are better citizens.	73%	Delete
21	Individuals are free to approach the Lord for themselves.	82%	Delete
22	Man is responsible in his freedom to exercise his will for good.	64%	Delete
23	The soul of man is immortal.	73%	Delete
24	Religious observances are very important to me	100%	Accept
25	I think something is wrong if a person has no religious feeling	91%	Delete
26	I believe in a life after death	100%	Accept
27	I feel I am true to my beliefs in everyday life.	91%	Delete
28	I make financial contributions to my religious organisation	100%	Accept
29	I spend time trying to grow in understanding of my faith	100%	Accept
30	Religion is especially important to me because it answers many questions about the meaning of life	91%	Delete
31	My religious beliefs lie behind my whole approach to life	82%	Delete
32	It is important to me to spend periods of time in private religious thought and reflection	91%	Delete
33	I enjoy working in the activities of my religious organisation	90%	Delete
34	I keep well informed about my local religious group and have some influence in its decisions	64%	Delete
35	My relationship with God is extremely important to me	100%	Accept
36	I look to my faith as a source of comfort	100%	Accept
37	I look to my faith as a source of inspiration	100%	Accept
38	My faith impacts many of my decisions	100%	Accept
39	I enjoy being around others who shared my faith	73%	Delete
40	My religious beliefs help me recognize the dignity and welfare of people	82%	Delete
41	I have firm belief in all basic ideological dimensions of Islam	91%	Delete
42	Muhammad (PBUH) is His last Prophet	100%	Accept
43	I believe there is only one Allah	100%	Accept
44	I regularly offer prayer five times a day	100%	Accept
45	I fast regularly during <i>Ramadan</i>	100%	Accept
46	I regularly recite the Holy <i>Al-Quran</i>	100%	Accept
47	I believe that I am obliged to perform Hajj if I meet the prescribed criteria	100%	Accept
48	I never offer <i>Sajjda</i> saint's graves	40%	Delete
49	I always keep myself away from earning through <i>haram</i> (prohibited) means	100%	Accept
50	I always try to avoid minor and major sin	100%	Accept
51	I know the basic and necessary knowledge about my religion	100%	Accept
52	I always try to follow Islamic junctions in all matters of my life	100%	Accept

No	Items	% Agreed	Decision
53	It is my duty to give respect to others and give them their rights according to Islamic injunctions	91%	Delete
54	I try to avoid any activity, which hurt others	64%	Delete
55	I always try to help those who need my help	73%	Delete
56	I try to be honest and fair with others	82%	Delete
57	I always avoid humiliating others because Islam does not allow doing so	91%	Delete
58	I feel sorrow and dissatisfaction when I do something against my faith	100%	Accept
59	I have feeling of being tempted by devil	64%	Delete
60	I have feeling of being afraid of Allah	100%	Accept
61	I have feeling of being punished by Allah for something doing wrong	100%	Accept
62	I feel pleasure by seeing others following Islamic teaching	82%	Delete
63	My religious beliefs influence what I buy	100%	Accept
64	My religious beliefs influence which service providers that I use	100%	Accept
65	I pay <i>zakat fitrah</i> every year.	100%	Accept
66	I make sure that my dress/cloth covers my <i>aurat</i> .	100%	Accept
67	I make sure the food and drink I consumed are <i>halal</i> .	100%	Accept
68	I go to the <i>masjid</i> to pray ' <i>solat fardh</i> '.	91%	Delete
69	I perform ' <i>solat fardh</i> ' in congregation.	91%	Delete
70	I give charity to the poor and needy.	82%	Delete
71	I read <i>Al-Quran</i> and perform <i>zikir</i> .	100%	Accept
72	I have not taken or given bribes	82%	Delete
73	I have not taken interest (<i>riba</i>).	100%	Accept
74	I visit my family/friends when they are bedridden.	70%	Delete
75	I thank Allah for my food and drink.	100%	Accept
76	I fulfil all that I promise.	73%	Delete
77	I am honest at all times.	73%	Delete
78	Islam is a way of life.	100%	Accept
79	<i>Al-Quranic</i> teachings are suitable and practicable in today's life.	100%	Accept
80	<i>Rasulullah</i> 's traditions are suitable and practicable throughout all times.	100%	Accept
81	All mankind's deeds will be judged and rewarded accordingly after death.	100%	Accept
82	My earnings are from own effort and not Allah's will.	27%	Delete
83	Death and destiny are determined by Allah alone.	91%	Delete
84	Man's wealth depends on their own effort.	36%	Delete
85	My life has a clear sense of purpose	82%	Delete
86	Today's social ills are not due to lack of religious knowledge	45%	Delete
87	<i>Al-Quran</i> relieves pain and diseases	91%	Delete
88	I follow the <i>sunnah</i> in daily life	100%	Accept
89	It is OK not to pay our debt	9%	Delete
90	I admire people who own expensive homes, cars and clothes	27%	Delete
91	I am interested in status	36%	Delete
92	I believe that miracles happened the way the <i>Al-Quran</i> says they did	91%	Delete
93	Rewards of paradise encourage me to do good things	100%	Accept
94	My family members dress in accordance with religion	82%	Delete
95	Frequency of voluntary prayers	91%	Delete
96	I perform voluntary fasting other than <i>Ramadhan</i>	100%	Accept
97	I pay visit to relatives as a religious duty	91%	Delete
98	I care about neighbours and their well being	82%	Delete
99	I will greet others even to strangers	70%	Delete
100	I watch/listen/attend religious meetings	91%	Delete
101	Friday prayers are more important than <i>Eid</i> prayers	82%	Delete
102	If found RM1, I will not take and use it	64%	Delete
103	If found RM1000, I will not take and use it	64%	Delete
104	I am aware of IB system	73%	Delete
105	Given a choice, I will choose Islamic loan	91%	Delete

Appendix 12: The Remaining 41 Items after Expert Opinion Survey

Item No	Theoretical Dimensions	Item
75	<i>Ahlaq</i>	I thank Allah for my food and drink.
19	Beliefs	Spiritual values are more important than material things.
26	Beliefs	I believe in a life after death
35	Beliefs	My relationship with God is extremely important to me
36	Beliefs	I look to my faith as a source of comfort
37	Beliefs	I look to my faith as a source of inspiration
38	Beliefs	My faith impacts many of my decisions
42	Beliefs	Muhammad (PBUH) is His last Prophet
43	Beliefs	I believe there is only one Allah
78	Beliefs	Islam is a way of life.
79	Beliefs	Quranic teachings are suitable and practicable in today's life.
80	Beliefs	Rasulullah's traditions are suitable and practicable throughout all
81	Beliefs	All mankind's deeds will be judged and rewarded accordingly after
88	Beliefs	I follow the sunnah in daily life
93	Beliefs	Rewards of paradise encourage me to do good things
24	Commitment	Religious observances are very important to me
28	Commitment	I make financial contributions to my religious organisation
29	Commitment	I spend time trying to grow in understanding of my faith
63	Influence	My religious beliefs influence what I buy
64	Influence	My religious beliefs influence which service providers that I use
49	Intel	I always keep myself away from earning through haram (prohibited)
50	Intel	I always try to avoid minor and major sin
51	Intel	I know the basic and necessary knowledge about my religion
52	Intel	I always try to follow Islamic junctions in all matters of my life
5	Intrinsic	It is important for me to spend time in private thought and prayer.
8	Intrinsic	I try hard to live all my life according to my religious beliefs.
14	Intrinsic	My whole approach to life is based on my religion.
18	Practice	I go to a place of worship/masjid regularly.
44	Practice	I regularly offer prayer five times a day
45	Practice	I fast regularly during Ramadan
46	Practice	I regularly recite the Holy Quran
47	Practice	I believe that I am obliged to perform Hajj if I meet the prescribed
96	Practice	I perform voluntary fasting other than Ramadhan
65	<i>Shari'ah</i> -Obligation	I pay zakat fitrah every year.
66	<i>Shari'ah</i> -Obligation	I make sure that my dress/cloth covers my aurat.
67	<i>Shari'ah</i> - Obligation	I make sure the food and drink I consumed are halal.
73	S-Prohibition	I have not taken interest (riba).
71	S-Recomendation	I read Quran and perform zikir.
58	<i>Taqwa</i>	I feel sorrow and dissatisfaction when I do something against my
60	<i>Taqwa</i>	I have feeling of being afraid of Allah
61	<i>Taqwa</i>	I have feeling of being punished by Allah for something doing wrong

Appendix 13: List of 35 Items from The Q-Sorting Procedures

Code and Item	Dimension
b1: I believe in a life after death	Belief
b2: I believe that my faith is as a source of comfort	Belief
b3: I believe that my faith as a source of inspiration	Belief
b4: I believe that my faith impacts many of my decisions	Belief
b5: Muhammad (p.b.u.h) is His last Prophet	Belief
b6: I believe there is only one Allah	Belief
b7: I feel sorrow when I do something against my religion	Belief
b8: All sins will be punished by Allah in the days hereafter	Belief
b9: I believe <i>Quranic</i> teachings are suitable in today's life.	Belief
b10: All mankind's good deeds will be judged and rewarded accordingly after death.	Belief
b11: Rewards of paradise encourage me to do good things	Belief
b12: I believe <i>Rasulullah's</i> traditions are suitable throughout all times.	Belief
c1: I go to <i>masjid</i> regularly.	Commitment and Practice
c2: I make financial contributions to my religious organisation	Commitment and Practice
c3: I spend time trying to grow in understanding of my faith	Commitment and Practice
c4: I regularly offer prayer five times a day	Commitment and Practice
c5: I fast regularly during <i>Ramadan</i>	Commitment and Practice
c6: I regularly recite the Holy <i>Quran</i>	Commitment and Practice
c7: I am obliged to perform <i>Hajj</i> if I meet the prescribed criteria	Commitment and Practice
c8: I always keep myself away from earning through <i>haram</i> (prohibited) means such as interest from conventional banking	Commitment and Practice
c9: I always try to avoid minor and major sin	Commitment and Practice
c10: I make sure that I know the basic and necessary knowledge about my religion	Commitment and Practice
c11: I always try to follow Islamic junctions in all matters of my life	Commitment and Practice
c12: My religious beliefs influence what I buy	Commitment and Practice
c13: My religious beliefs influence which service providers that I use	Commitment and Practice
c14: I pay <i>zakat fitrah</i> every year.	Commitment and Practice
c15: I make sure that my dress/cloth covers my <i>aurat</i> .	Commitment and Practice
c16: I make sure the food and drink I consumed are <i>halal</i> .	Commitment and Practice
c17: I always perform the <i>zikir</i> .	Commitment and Practice
c18: I use the Islamic banking to avoid interest (<i>riba</i>).	Commitment and Practice
c19: It is important for me to spend time in private thought and prayer	Commitment and Practice
c20: I follow the <i>sunnah</i> in daily life	Commitment and Practice
c21: I perform voluntary fasting other than <i>Ramadhan</i>	Commitment and Practice
c22: I try hard to live all my life according to Islam	Commitment and Practice
c23: My whole approach to life is based on my religion.	Commitment and Practice

Appendix 14: Semi Structured Interview for Islamic Credit Card Satisfaction Research.

Title: "Islamic Credit-card Users Satisfaction. A Comparative Study",

Introduction

This interview is partial of a PhD research project entitled "Islamic Credit-card Users Satisfaction. A Comparative Study", by Nuradli Ridzwan Shah Mohd Dali at Cardiff University. The aim of this interview is to identify the antecedents of the Islamic credit-card users satisfaction. The information from this study will be analysed and used to generate a set of guidelines for the IB industry to use, in order to design a comprehensive customer satisfaction model. The information you provide is entirely confidential and your identity will not be disclosed to any third parties.

I would like to thank you for your participation in the interview. If you have any question please contact the researcher by email.

Nuradli Ridzwan Shah Mohd Dali

Cardiff University

MohdDaliNR@cardiff.ac.uk

- 1 .Age
2. Occupation
3. Religion
4. Nationality
5. Ethnic
6. Education
7. Income Range
8. Types of Credit card – Visa/Mastercard
9. Number of Credit cards
- 10 . Banks

Section B

- a. Why do you choose Islamic credit card?
- b. From your point of you, is there any difference between Islamic and conventional credit card?
- c. Can you describe the service quality dimensions of Islamic credit card?

- d. Which service quality is the most important?
- e. Are you satisfied with the Islamic credit card service?
- f. Why or why not?
- g. Do you think that religiosity has an impact to your satisfaction?
- h. Why or why not?
- i. How does your culture see the uses of Islamic credit card?
- j. Does culture have an impact on your satisfaction?

Appendix 15: Online Questionnaire

ONLINE QUESTIONNAIRE

**The data collected is solely for PhD Research conducted by Nuradli Ridzwan Shah
Bin Mohd Dali**

Title: Islamic credit card users satisfaction. A comparative Study.

The aim of this study is to identify the potential antecedents to Islamic credit card users' satisfaction. I will identify the factors that contribute to the customer satisfaction in the context of Islamic credit card setting and try to look whether service quality and religiosity have a contributing factor to customer satisfaction. I have chosen to focus on the credit cards since the credit industry is exponentially rising in the banking sector. I will compare and contrast the findings from the consumers with the findings from the bank and compare if there are incongruent.

The online interview will require approximately 20-25 minutes of your time and will be conducted via online survey. I understand that only the researcher will have access to the materials and that all data collected will be confidential and anonymous.

I understand that participation in this study is entirely voluntary and that I can withdraw from the study at any time without giving a reason.

I understand that I am free to ask any questions at any time. If for any reason I have second thoughts about my participation in this project, I am free to withdraw or discuss my concerns with Nuradli Ridzwan Shah Bin Mohd Dali (MohdDaliNR@cardiff.ac.uk)

I understand that the information provided by me will be held confidentially and securely, such that only the researcher can trace this information back to me individually. I understand that if I withdraw my consent I can ask for the information I have provided to be anonymised/deleted/destroyed in accordance with the Data Protection Act 1998.

I consent to participate in the study conducted by Nuradli Ridzwan Shah Bin Mohd Dali, a PhD student of Cardiff Business School, Cardiff University, under the supervision of Dr. Shumaila Yousafzai and Dr Simon Norton.

[Please click here to participate in the study](#)

Introduction

This questionnaire is part of a PhD research project entitled "Islamic Credit Card Users Satisfaction. A Comparative Study", by Nuradli Ridzwan Shah Mohd Dali and supervised by Dr Shumaila Yousafzai and Dr Simon Norton at Cardiff University. The aim of this questionnaire is to identify the antecedents of the Islamic credit card users' satisfaction. The information from this study will be analysed and used to generate a set of guidelines for the Islamic banking industry to use, in order to design a comprehensive customer satisfaction model. The results of the project will be published as academic papers and presentations. The information you provide is entirely confidential and your identity will not be disclosed to any third parties. I would like to thank you for your participation in the survey. If you have any question please contact the researcher by email.

Pengenalan

Soal selidik ini adalah sebahagian daripada projek penyelidikan PhD yang bertajuk "Kepuasan Pemegang Kad Kredit Islam. Satu Kajian Perbandingan", oleh Nuradli Ridzwan Shah Mohd Dali dan diselia oleh Dr Shumaila Yousafzai dan Dr Simon Norton di Cardiff University. Tujuan soal selidik ini adalah untuk mengenal pasti latar belakang kepuasan pemegang kad kredit Islam '. Maklumat daripada kajian ini akan dianalisis dan digunakan untuk menjana satu set garis panduan bagi industri perbankan Islam dan untuk mereka bentuk satu model kepuasan pelanggan yang menyeluruh. Hasil projek akan diterbitkan sebagai makalah jurnal dan konferen. Maklumat yang anda berikan adalah sulit dan identiti anda tidak akan didedahkan kepada mana-mana pihak ketiga. Saya ingin mengucapkan terima kasih atas penyertaan anda dalam kajian ini. Sila hubungi penyelidik melalui e-mel jika mempunyai sebarang kemusykilan.

Nuradli Ridzwan Shah Bin Mohd Dali
Cardiff University
MohdDaliNR@cardiff.ac.uk /mohdddalins@yahoo.com

Screening Question

1. Do you have (a) credit card(s)?

Yes () No ()

Customer Preferences

2. Which credit card do you prefer?

() Conventional credit card

() Islamic credit card

() Both Islamic and Conventional credit card

3. Please tick the reasons why you use credit cards Please respond to each item in a thoughtful manner and indicate how strongly you agree or disagree with each by using the following scale:

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree			
	1	2	3	4	5			
	Selection Factors			SD	D	NAND	A	SA
a.	I used credit card as a medium of transaction			1	2	3	4	5
b.	I used credit card for image and identity purposes			1	2	3	4	5
c.	I used credit card as a credit facility			1	2	3	4	5
d.	I used credit card because I do not have to carry too much cash in the pocket			1	2	3	4	5

4. Please select the best that describe yourself (loyalty levels)

() I am unaware about the *Islamic* credit card and have no inclination to use it

() I have not used the *Islamic* credit cards but I am interested to have an *Islamic* credit card

() I am an *Islamic* credit card user but I am willing to switch to conventional credit cards

() I am an *Islamic* credit card user and have a strong feeling with the usage of *Islamic* credit card in my daily transactions.

() I am an *Islamic* credit card user and I am actively supporting the *Islamic* credit card

() I am an *Islamic* credit card user and I believe that with the usage of *Islamic* credit card my card issuer and I will mutually benefit.

Section I: FUNCTIONAL QUALITY (KUALITI PERKHIDMATAN FUNGSIAN)

Information: Functional quality is the outcome dimension, or what the process leads to for the customer as a result of the process. The following items are designed to help us to understand customer perception regarding the functional service quality provided by banks/credit card provider. Please respond to each item in a thoughtful manner and indicate how strongly you agree or disagree with each by using the following scale:

Maklumat: Kualiti Fungsi adalah dimensi hasil, atau apa yang dihasilkan melalui proses-proses tertentu untuk pelanggan. Kenyataan di bawah di olah untuk kami memahami persepsi pelanggan terhadap kualiti perkhidmatan fungsi yang diberikan oleh bank/pengeluar kad kredit. Sila beri respon terhadap setiap item dengan teliti dan nyatakan samada anda bersetuju atau tidak berdasarkan skala yang diberikan.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
1	2	3	4	5

R	Reliability	SD	D	NAND	A	SA
R1	When XYZ bank promises to do something, it keeps its promise.	1	2	3	4	5
R2	When you have a problem, XYZ bank shows a sincere interest in solving it.	1	2	3	4	5
R3	The XYZ bank performs the service right the first time.	1	2	3	4	5
R4	The XYZ bank provides its service at the time the service is promised.	1	2	3	4	5
R5	XYZ bank billing is accurate	1	2	3	4	5
Ass	Assurance	SD	D	NAND	A	SA
Ass1	The behaviour of employees in XYZ bank instils confidence in you.	1	2	3	4	5
Ass2	You feel safe in your transactions with XYZ bank.	1	2	3	4	5
Ass3	Employees in XYZ bank area consistently courteous with you.	1	2	3	4	5
Ass4	Employees in XYZ bank have the knowledge to answer your questions.	1	2	3	4	5
Tan	Tangibles	SD	D	NAND	A	SA
Tan1	XYZ bank has modern looking equipment.	1	2	3	4	5
Tan2	XYZ Bank's physical facilities are visually appealing.	1	2	3	4	5
Tan3	XYZ Bank's employees are neat appearing.	1	2	3	4	5

Tan4	Materials associated with the service (such as pamphlets or statements) are visually appealing at XYZ bank.	1	2	3	4	5
Emp	Empathy	SD	D	NAND	A	SA
Emp1	Employees giving customer individual attention.	1	2	3	4	5
Emp2	XYZ bank has operating hours convenient for all its customers.	1	2	3	4	5
Emp3	XYZ bank has employees who give you personal attention.	1	2	3	4	5
Emp4	XYZ bank has your best interest at heart.	1	2	3	4	5
Emp5	The employees of XYZ bank understand your specific needs.	1	2	3	4	5
Res	Responsiveness	SD	D	NAND	A	SA
Res1	Employees in XYZ bank call the customer back quickly if required	1	2	3	4	5
Res2	Employees in XYZ bank call you immediately when there is an error in your account	1	2	3	4	5
Res3	Employees in XYZ bank set an appointment for you quickly.	1	2	3	4	5
Res4	Employees in XYZ bank are never too busy to respond to your request.	1	2	3	4	5
St	Staff Conduct	SD	D	NAND	A	SA
St1	Employees in XYZ are polite	1	2	3	4	5
St2	Employees in XYZ express concern if there is a mistake in my account	1	2	3	4	5
St3	Employees in XYZ are helpful	1	2	3	4	5
St4	I am satisfied with the promptness of service from staff	1	2	3	4	5
FSQ SATIS	Overall I am satisfied with the functional service quality provided by the credit card provider	1	2	3	4	5

SECTION II: TECHNICAL QUALITY (TECET)

Information: The process dimension, or how the service process functions.

The following items are designed to help us to understand customer perception regarding the technical service quality provided by bank/credit card issuers. Please respond to each item in a thoughtful manner and indicate how strongly you agree or disagree with each by using the following scale:

Maklumat: dimensi proses, atau bagaimana proses perkhidmatan berfungsi. Pernyataan-pernyataan berikut diolah untuk membantu kami memahami persepsi pelanggan mengenai kualiti perkhidmatan teknikal yang disediakan oleh bank/pengeluar kad kredit. Sila beri respon terhadap setiap item dengan teliti dan nyatakan samada anda bersetuju atau tidak berdasarkan skala yang diberikan.

Strongly Disagree	Disagree	Neither Disagree	Agree	Nor	Agree	Strongly Agree
1	2	3		4	5	

TA	Technical Ability	SD	D	NAND	A	SA
Ta1	Problems are sorted out immediately.	1	2	3	4	5
Ta2	Technical advice is given accurately.	1	2	3	4	5
Ta3	The bank/credit card issuer offers a flexible solution.	1	2	3	4	5
Ta4	The bank/credit card issuer has flexible rules that suit the customers	1	2	3	4	5
Ta5	Any technical problems encountered are normally solved by the employees within a short period of time.	1	2	3	4	5
EK	Employee Knowledge	SD	D	NAND	A	SA
Ek1	The credit card provider's employees are knowledgeable about the products.	1	2	3	4	5
Ek2	Satisfactory explanation by the credit card provider's regarding the products.	1	2	3	4	5
Ek3	The employees have the knowledge of the current economic conditions	1	2	3	4	5
Com	Communication	SD	D	NAND	A	SA
Com1	The bank's/credit card issuer's employees communicate about the different types products available.	1	2	3	4	5
Com2	I can always make complaints to the bank regarding any problems.	1	2	3	4	5
Com3	The bank/credit card issuer provides a telephone helpline for customers.	1	2	3	4	5
Com4	The bank/credit card issuer provides a web helpline for customers.	1	2	3	4	5

Com5	The bank/credit card issuer provides a help desk in branch for customers.	1	2	3	4	5
ETA	Employee Technical Ability	SD	D	NAND	A	SA
ETA1	The employees have discretion to make decision making.	1	2	3	4	5
ETA2	The bank/credit card issuer's employees avoid making errors.	1	2	3	4	5
ETA3	The bank/credit card issuer's employees are capable of solving my technical problems.	1	2	3	4	5
TECH	Technology	SD	D	NAND	A	SA
Tech1	The credit card of XYZ can be accessed in most of the ATMs.	1	2	3	4	5
Tech2	The credit card of XYZ has the latest technology.	1	2	3	4	5
Tech3	The bank/credit card issuer of XYZ has a reliable online service.	1	2	3	4	5
Tech4	The website provided by the bank/credit card issuer contains helpful updated information.	1	2	3	4	5
TSQ Satis	Overall I am satisfied with the technical service quality provided by the credit card provider.	1	2	3	4	5

SECTION III: RELIGIOSITY

If you are Muslim please answer this section. If not then go to Section V.

The following items are designed to help us to understand customer religiosity commitment to *Shari'ah*. Please respond to each item in a thoughtful manner and indicate how strongly you agree or disagree with each by using the following scale:

	Belief	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
B5	Muhammad (PBUH) is His last Prophet	1	2	3	4	5
B6	I believe there is only one Allah	1	2	3	4	5
B9	I believe Quranic teachings are suitable in today's life.	1	2	3	4	5
B10	All mankind's good deeds will be judged and rewarded accordingly after death.	1	2	3	4	5
B12	I believe Rasulullah's traditions are suitable throughout all times.	1	2	3	4	5
B2	I believe that my faith is as a source of comfort	1	2	3	4	5

	Commitment (Commitment and practice)	Never	Rarely	Sometimes	Very Often	Always
C12	My religious beliefs influence what I buy	1	2	3	4	5
C8	I always keep myself away from earning through haram (prohibited) means such as interest from conventional banking	1	2	3	4	5
C15	I make sure that my dress/cloth covers my <i>aurat</i> .	1	2	3	4	5
C17	I always perform the <i>zikir</i> .	1	2	3	4	5
C20	I follow the <i>Sunnah</i> in daily life	1	2	3	4	5
C13	My religious beliefs influence which service providers that I use	1	2	3	4	5
C9	I always try to avoid minor and major sins	1	2	3	4	5
C23	My whole approach to life is based on my religion.	1	2	3	4	5
C19	It is important for me to spend time in private thought and prayer	1	2	3	4	5

C4	I regularly offer prayer five times a day	1	2	3	4	5
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SECTION IV: *SHARI'AH* COMPLIANCE

The following items are designed to help us to understand customer perception regarding the ability of the credit card provider to follow the rules and regulations as promulgated by *Shari'ah*. Please respond to each item in a thoughtful manner and indicate how strongly you agree or disagree with each by using the following scale:

Strongly Disagree	Disagree	Neither Disagree	Agree	Nor	Agree	Strongly Agree
1	2	3			4	5

<i>Shari'ah</i> Compliance		SD	D	NAND	A	SA
S1	The bank products' are using <i>Islamic</i> law and principles.	1	2	3	4	5
S2	No interest is paid for my credit card outstanding balance.	1	2	3	4	5
S3	The bank provides other <i>Islamic</i> products and services.	1	2	3	4	5
S4	The bank also provides interest free loans	1	2	3	4	5
S5	The bank also provides profit-sharing investment products.	1	2	3	4	5
	Overall I am satisfied with the <i>Shari'ah</i> compliance service quality provided by the credit card provider	1	2	3	4	5

SECTION V: ETHICAL DIMENSION

The following items are designed to help us to understand customer ethical perception regarding a credit card service provider. Please respond to each item in a thoughtful manner and indicate how strongly you agree or disagree with each by using the following scale:

Strongly Disagree	Disagree	Neither Disagree	Agree	Nor	Agree	Strongly Agree
1	2	3			4	5

Ethical

SD D NAND A SA

Et1	The bank runs on ethical policy.	1	2	3	4	5
Et2	No investment for environmentally harmful businesses.	1	2	3	4	5
Et3	The bank does not support organisation/countries with a poor human rights record.	1	2	3	4	5
Et4	Customer oriented customer services.	1	2	3	4	5
Et5	Provision of all financial banking and conventional products.	1	2	3	4	5
	Overall I am satisfied with the ethical service quality provided by the credit card provider	1	2	3	4	5
	Overall I am satisfied with the ALL DIMENSIONS (Functional, Technical, Shariah Compliance, and ethical) provided by the credit card provider	1	2	3	4	5

Demographic Section

Gender?

Male

Female

Please select your age?

Below 20 years

21-30 years

31-40 years

41-50 years

51-60 years

Above than 61 years

What is your level of education?

No formal religious education

Primary School
High school
Diploma
Degree
Master
PhD

Please select your formal religious education level

No formal religious education
Primary School
High school
University
Pondok Education
Middle East Universities

Please state your ethnicity

Malay
Chinese
Indian
Other _____please state

How long have you been using credit card?

Below 1 year
1-5 years
6-10 years
11-15 years
16-20 years
More than 21 years

How many credit cards do you have?

How often you used your credit card in a month?

1 2 3 4 5 6 7 8 9 10 times

Please choose your monthly credit card payment behaviour

I will always pay the whole outstanding balance spent on my credit card every month
I will pay most of the outstanding balance spent on my credit card every month
I will only pay the minimum payment required every month
I cannot meet the minimum payment requirement

Please select your credit card provider(s)? You can tick more than one provider.

<input type="checkbox"/>	Affin Bank Berhad
<input type="checkbox"/>	Alliance Bank Malaysia Berhad

	AmBank (M) Berhad
	<i>Bank Islam Malaysia Berhad</i>
	<i>Bank Simpanan Nasional</i>
	<i>Bank Kerjasama Rakyat Malaysia Berhad</i>
	CIMB Bank Berhad
	EON Bank Berhad
	Hong Leong Bank Berhad
	Malayan Banking Berhad
	<i>Maybank Islamic Berhad</i>
	Public Bank Berhad
	RHB Bank Berhad
	HSBC Bank Malaysia Berhad
	Citibank Berhad
	Standard Chartered Bank Malaysia Berhad
	United Overseas Bank (Malaysia) Berhad
	OCBC Bank (Malaysia) Berhad
	<i>CIMB Islamic Bank Berhad</i>
	<i>HSBC Amanah Malaysia Berhad</i>
	<i>AmIslamic Bank Berhad</i>
	<i>RHB Islamic Bank Berhad</i>

What type of credit card do you used?

Visa

MasterCard

Please state your membership

Platinum

Classic

Gold

Please state your nationality _____

Please state your race _____

Please state your religion _____

Thank you for your participation. If you want to know the findings from this research please write your email address below:

_____@_____

Appendix 16: List of Islamic Banks in Malaysia and Ownership

No.	Name	Ownership
1	<u>Affin Islamic Bank Bhd.</u>	L
2	<u>Al Rajhi Banking and Investment Corporation (Malaysia) Bhd.</u>	F
3	<u>Alliance Islamic Bank Bhd.</u>	L
4	<u>AmIslamic Bank Bhd.</u>	L
5	<u>Asian Finance Bank Bhd.</u>	F
6	<u>Bank Islam Malaysia Bhd.</u>	L
7	<u>Bank Muamalat Malaysia Bhd.</u>	L
8	<u>CIMB Islamic Bank Bhd.</u>	L
9	<u>EONCAP Islamic Bank Bhd.</u>	L
10	<u>Hong Leong Islamic Bank Bhd.</u>	L
11	<u>HSBC Amanah Malaysia Bhd.</u>	F
12	<u>Kuwait Finance House (Malaysia) Bhd.</u>	F
13	<u>Maybank Islamic Bhd.</u>	L
14	<u>OCBC Al-Amin Bank Bhd.</u>	F
15	<u>Public Islamic Bank Bhd.</u>	L
16	<u>RHB Islamic Bank Bhd.</u>	L
17	<u>Standard Chartered Saadiq Bhd.</u>	F

Appendix 17: Demographic Profiles of the Respondents

Demographic	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
Age	30	29	30	29	37	36	35
Gender	Male	Female	Male	Female	Female	Male	Male
Occupation	Lecturer	Lecturer	Lecturer	Lecturer	Lecturer	Assistant Manager	Engineer
Religion	Islam	Islam	Islam	Islam	Islam	Islam	Islam
Nationality	Malaysian	Malaysian	Malaysia	Malaysia	Malaysia	Malaysia	Malaysia
Education to Date	MBA	Master in Accountancy	MBA	MBA	MBA	BBA	BSc Petroleum Engineering
Types of Credit-cards	Terminated	Both	MasterCard	Both	Both	Both	Visa
Number of Islamic Credit-cards	Used to own 2 Islamic credit-cards	2	2	3	2	4	1
Name of the credit-card issuers that you own	BIMB & AmBank	BIMB	BIMB CIMB	BIMB Maybank CIMB	BIMB Maybank	AmIslamic Bank, Eon Bank, Southern Bank, HSBC.	Maybank

Appendix 18: Respondent Interviews on the Issues of ICCs Satisfaction

Ques.	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
Reasons to choose ICC	<i>Shari'ah</i> -compliant and no compounding interest and the maximum profit (charge) are determined. Lower cash withdrawal fee. Bank Islam, we can use to buy gold because we use our own money.	Because it is <i>halal</i> in Islam as compared to conventional credit card. Furthermore, the profit charge for Islamic credit card is fixed. If using conventional credit cards the interest charged is compounding interest and there is no price ceiling mentioned in the contract. Whereas using Islamic credit card the price ceiling is known upon signing the agreement.	Because it is Islamic.	Conversion from the conventional credit card	-i. The authors nciple -ii. Less burden	No <i>riba</i> , and profit not compounded	Because I need a credit card as a customer and specifically I choose Islamic credit card to comply with the spirit of Islamic teachings
Any differences between ICC and CCC	The bank will not approve any non <i>halal</i> items. The maximum charge is known because we can know the ceiling price for ICC but CCC the charge is still opened. It is still compounding as long as the outstanding balance is not being paid. In terms of customer services, Bank Islam and AmIslamic bank, bank Islam is pure Islamic, in term of customer award program AmIslamic bank is a better approach. For example, for our birthday they will give coupon to us and for special events. The customer relationship	Yes	Yes. Especially on compounding	In terms of charges	The implementation is better because it is following the <i>Shari'ah</i> principles The charge that we need to pay, for ICC have maximum limit, the CCC will have higher. Controlled transaction for gambling purposes	Yes, the <i>akad</i> and profit charged	Yes, to put simply, <i>riba</i> is <i>haram</i> , the consequence is grave! There are other consequences but this is paramount.

Ques.	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
Most important service quality	The late payment charge (profit charged in advance) is very minimal and there is no compounding charge effect on the outstanding balance. The reward programs is not efficient Takaful coverage for any outstanding balance if anything happens to you.	Example, in some electrical shop, if we purchase the electrical goods using credit card sometimes they offer if using credit card 12 month interest free. But this is not applicable to bank Islam credit card. BICC did not take part in this event. Ambank Islamic credit card also took part offering if pay using Ambank Islamic credit card for purchasing the electrical goods in that particular shop the customer will be given opportunity 12 month profit free. I think BICC lack of rewarding the customer in using the credit card (such as free voucher, accumulate points and etc.)	Ceiling price	Still need to be enhanced.- lateness and not efficient. -customer service (transaction abroad) and more than RM1,000.00	Less burden, the services are similar.	The operational of the card, not compounded interest / profit charged to customer	Just like any other credit card, customer service is important
Religion->satisfaction	Yes of course, I think that is a very big factor me. For example I prefer to use pure Islamic bank because I can carry out the contract properly as compared to the Islamic subsidiary banks.	Yes	Of course, yes because it follows the <i>Shari'ah</i> . We enter an <i>akad</i> The bank will only charge a maximum price. Basically we know.	Religion and place of work	Maybe, depends on my understanding of Islamic knowledge	Yes	Yes. Even if the service quality is subpar, I would stick to the Islamic principle as much as I can.
Culture->satisfaction	Hmmm, Yes, I think my culture is related closely to my religion. So it gives a very	No	No idea	Yes	Not so sure, but I think so.	Yes	No

Ques.	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
action ?	strong impact on my satisfaction.						
Overall I Satisfaction	Satisfied but not strongly satisfied. The bank should be more lenient (<i>samahah</i>), the bank not to be contacted for example, the bank may contact the customer to make the payment but not to.... Should not be done frequently. Maybe they contact us once a week, should not to be to insist, act roughly to the customer to make the payment. Maybe it depends on the outstanding balance.	Not really. Because sometimes BICC's 'smart chip' cannot be read in certain premises. I need to call the customer service first to clarify this matter. The customer service explains that is a normal thing to happen. In fact, the customer service advice to rub the smart chip using the eraser in order to make sure that the card is readable. Thus, it makes me difficult to pay goods using credit card.	Yes	Can be improved as it is still new in the market	Yes	Yes	Yes, so far so good

Appendix 19: Non-Bias Responses Analysis Using Chi Square Test

Items	Chi-Square	df	Asymp. Sig.
Loyalty level	3.136	4	.535
When XYZ bank promises to do something, it keeps its promise.	5.692	4	.223
When you have a problem, XYZ bank shows a sincere interest in solving it.	8.734	4	.068
XYZ bank performs the service right the first time.	3.097	4	.542
XYZ bank provides its service at the time the service is promised.	4.111	4	.391
XYZ bank billing is accurate	2.238	4	.692
The behaviour of employees in XYZ bank instils confidence in you.	5.202	4	.267
You feel safe in your transactions with XYZ bank.	1.719	4	.787
Employees in XYZ bank area consistently courteous with you.	3.078	4	.545
Employees in XYZ bank have the knowledge to answer your questions.	2.789	4	.594
XYZ bank has modern looking equipment.	.437	4	.979
XYZ Bank's physical facilities are visually appealing.	2.289	4	.683
XYZ Bank's employees are neat appearing.	5.233	4	.264
Materials associated with the service (such as pamphlets or statements) are visually appealing at XYZ bank.	4.378	4	.357
Employees giving customer individual attention.	1.739	4	.784
XYZ bank has operating hours convenient to all its customers.	2.739	4	.602
XYZ bank has employees who give you personal attention.	2.900	4	.575
XYZ bank has your best interest at heart.	.791	4	.940
The employees of XYZ bank understand your specific needs.	3.501	4	.478
Employees in XYZ bank call customer back quickly if required	.839	4	.933
Employees in XYZ bank call you immediately when there is an error in your account	1.316	4	.859
Employees in XYZ bank set an appointment for you quickly.	2.422	4	.659
Employees in XYZ bank are never too busy to respond to your request.	8.000	4	.092
Employees in XYZ are polite	4.303	4	.367
Employees in XYZ express concern if there is a mistake in my account.	2.137	4	.711
Employees in XYZ are helpful	3.132	4	.536
I am satisfied with the promptness of service from staff	1.400	4	.844
I am satisfied with the functional service quality provided by the bank/credit card issuer.	4.944	4	.293
Technical problems are sorted out immediately.	1.020	4	.907
Technical advice is given accurately.	.609	4	.962
The bank/credit card issuer offers flexible solution.	1.777	4	.777
The bank/credit card issuer has flexible rules that suits the customers	1.175	4	.882
Any technical problems encountered are normally solved by the employees within a short period of time.	1.860	4	.762
The bank's/credit card issuer's employees are knowledgeable about the products offered.	.967	4	.915
Satisfactory explanation is given by the bank's/ credit card issuer's staff regarding the products.	1.062	4	.900
The employees have the knowledge of the current economic conditions	1.192	4	.879
The bank's/credit card issuer's employees communicate about the different types products available.	.226	4	.994
I can always make complaints to the bank regarding any problems.	5.315	4	.256

Items	Chi-Square	df	Asymp. Sig.
The bank/credit card issuer provides a telephone helpline for customers.	2.193	4	.700
The bank/credit card issuer provides a web helpline for customers.	1.924	4	.750
The bank/credit card issuer provides a help desk in branch for customers.	1.080	4	.897
The employees have discretion to make decision making.	3.992	4	.407
The bank/credit card issuer employees avoid making errors.	.534	4	.970
The bank/credit card issuer employees are capable in solving my technical problems.	1.199	4	.878
The credit card of XYZ can be accessed in most of the ATMs.	.433	4	.980
The credit card of XYZ has the latest technology.	1.431	4	.839
The bank/credit card issuer of XYZ has a reliable online service.	3.752	4	.441
The website provided by the bank/credit card issuer contains helpful updated information.	4.282	4	.369
Overall I am satisfied with the technical service quality provided by the bank/credit card issuer.	.768	4	.943
Muhammad (PBUH) is His last Prophet	4.275	4	.370
I believe there is only one Allah	2.030	4	.730
I believe Quranic teachings are suitable in today's life.	4.023	4	.403
All mankind's good deeds will be judged and rewarded accordingly after death.	6.941	4	.139
I believe Rasulullah's traditions are suitable throughout all times.	5.959	4	.202
I believe that my faith is as a source of comfort	4.466	4	.347
My religious beliefs influence what I buy	10.331	4	.035
I always keep myself away from earning through haram (prohibited) means such as interest from conventional banking	7.518	4	.111
I make sure that my dress/cloth covers my aurat.	7.239	4	.124
I always perform the zikir.	4.059	4	.398
I follow the Sunnah in daily life	1.377	4	.848
My religious beliefs influence which service providers that I use	9.637	4	.047
My whole approach to life is based on my religion.	3.043	4	.551
It is important for me to spend time in private thought and say my prayer.	6.610	4	.158
I offer obligatory prayer five times a day.	5.223	4	.265
The bank products' are using Islamic law and principles.	7.671	4	.104
No interest is charged for my credit cards outstanding balance.	5.031	4	.284
The bank provides financing products based on Mudharabah (profit sharing) and Musyarakah (profit and loss sharing) contracts.	.889	4	.926
The bank also provides interest free loans (Qard hassan)	4.389	4	.356
The bank also provides profit-sharing investment products (Mudharabah investment)	.631	4	.960
I am satisfied with the Shari'ah compliance provided by the bank	2.140	4	.710
The bank operates on an ethical policy - environmental friendly	2.948	4	.566
No investment on environmentally harmful businesses.	7.621	4	.106
The bank does not support organisation/countries with poor human rights record.	4.311	4	.366
The bank operates on an ethical policy - religious friendly	9.653	4	.047
The bank focuses on customer oriented customer services.	3.536	4	.472
The bank offers ethical banking products.	2.578	4	.631
I am satisfied with the ethical quality provided.	2.074	4	.722

Appendix 20: Non-Bias Responses Analysis Using Man Whitney U Test

Items	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Loyalty level	4293.500	6849.500	-.484	.628
When XYZ bank promises to do something, it keeps its promise.	4199.000	6827.000	-.924	.355
When you have a problem, XYZ bank shows a sincere interest in solving it.	3767.500	6395.500	- 2.097	.036
	3962.000	6590.000	-	.137
XYZ bank performs the service right the first time.			1.487	
XYZ bank provides its service at the time the service is promised.	3945.000	6573.000	-	.168
			1.380	
	4072.500	6700.500	-	.191
XYZ bank billing is accurate			1.309	
The behaviour of employees in XYZ bank instils confidence in you.	4032.000	6588.000	-	.255
			1.137	
You feel safe in your transactions with XYZ bank.	4421.500	6977.500	-.045	.964
Employees in XYZ bank area consistently courteous with you.	3870.500	6355.500	-	.118
			1.563	
Employees in XYZ bank have the knowledge to answer your questions.	3959.000	6444.000	-	.194
			1.299	
XYZ bank has modern looking equipment.	4293.500	12168.500	-.592	.554
	4118.500	12119.500	-	.245
			1.164	
XYZ Bank's physical facilities are visually appealing.	4232.000	6788.000	-.681	.496
XYZ Bank's employees are neat appearing.	4352.000	12227.000	-.412	.680
Materials associated with the service (such as pamphlets or statements) are visually appealing at XYZ bank.				
Employees giving customer individual attention.	4340.500	12215.500	-.099	.921
XYZ bank has operating hours convenient to all its customers.	3968.000	6453.000	-	.256
			1.136	
	3846.500	6402.500	-	.103
XYZ bank has employees who give you personal attention.			1.629	
XYZ bank has your best interest at heart.	3970.000	6455.000	-.762	.446
The employees of XYZ bank understand your specific needs.	3812.500	6368.500	-	.069
			1.816	
Employees in XYZ bank call customer back quickly if required	4327.000	12328.000	-.397	.691
Employees in XYZ bank call you immediately when there is an error in your account	4343.500	6899.500	-.160	.873
Employees in XYZ bank set an appointment for you quickly.	4028.500	6443.500	-.902	.367
Employees in XYZ bank are never too busy to respond to your request.	3855.500	6340.500	-	.151
			1.436	
Employees in XYZ are polite	4264.000	6820.000	-.499	.618
Employees in XYZ express concern if there is a mistake in my account.	4152.000	6780.000	-	.290
			1.058	
Employees in XYZ are helpful	4162.500	6790.500	-.950	.342
I am satisfied with the promptness of service from staff	4167.500	6795.500	-.841	.401
I am satisfied with the functional service quality provided by the bank/credit card issuer.	3870.000	6498.000	-	.056
			1.913	
Technical problems are sorted out immediately.	4323.500	6951.500	-.299	.765

Items	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Technical advice is given accurately.	4360.500	12361.500	-.491	.624
The bank/credit card issuer offers flexible solution.	4351.500	12101.500	-.144	.885
The bank/credit card issuer has flexible rules that suits the customers	4326.500	6954.500	-.584	.560
Any technical problems encountered are normally solved by the employees within a short period of time.	4450.500	12200.500	-.038	.970
The bank's/credit card issuer's employees are knowledgeable about the products offered.	4433.000	12183.000	-.088	.930
Satisfactory explanation is given by the bank's/ credit card issuer's staff regarding the products.	4516.000	7144.000	-.056	.955
The employees have the knowledge of the current economic conditions	4283.000	12284.000	-.530	.596
The bank's/credit card issuer's employees communicate about the different types products available.	4442.000	6998.000	-.088	.930
I can always make complaints to the bank regarding any problems.	4101.000	6729.000	- 1.221	.222
The bank/credit card issuer provides a telephone helpline for customers.	3925.000	6481.000	- 1.374	.169
The bank/credit card issuer provides a web helpline for customers.	3910.500	6325.500	-.958	.338
The bank/credit card issuer provides a help desk in branch for customers.	4089.500	6717.500	-.856	.392
The employees have discretion to make decision making.	3663.000	6009.000	- 1.671	.095
The bank/credit card issuer employees avoid making errors.	4353.000	6909.000	-.334	.738
The bank/credit card issuer employees are capable in solving my technical problems.	4275.500	6831.500	-.361	.718
The credit card of XYZ can be accessed in most of the ATMs.	4351.500	6979.500	-.407	.684
The credit card of XYZ has the latest technology.	4172.000	11675.000	-.616	.538
The bank/credit card issuer of XYZ has a reliable online service.	4159.500	12160.500	-.880	.379
The website provided by the bank/credit card issuer contains helpful updated information.	4111.000	11986.000	- 1.087	.277
Overall I am satisfied with the technical service quality provided by the bank/credit card issuer.	4284.500	6769.500	-.266	.790
Muhammad (PBUH) is His last Prophet	4284.000	6912.000	.000	1.000
I believe there is only one Allah	4212.000	6840.000	.000	1.000
I believe Quranic teachings are suitable in today's life.	4212.000	11352.000	- 1.103	.270
All mankind's good deeds will be judged and rewarded accordingly after death.	4084.000	6712.000	- 1.071	.284
I believe Rasulullah's traditions are suitable throughout all times.	4118.000	11139.000	- 1.100	.271
I believe that my faith is as a source of comfort	4165.500	6721.500	-.364	.716
My religious beliefs influence what I buy	3592.500	6148.500	- 2.022	.043
I always keep myself away from earning through haram (prohibited) means such as interest from conventional banking	3826.000	6454.000	- 1.435	.151

Items	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
I make sure that my dress/cloth covers my aurat.	3776.000	6404.000	-	.099
I always perform the zikir.	4160.500	11181.500	1.650	.801
I follow the Sunnah in daily life	4235.000	6863.000	-.252	.885
My religious beliefs influence which service providers that I use	3855.000	6411.000	-.144	.319
My whole approach to life is based on my religion.	3748.000	6376.000	-.996	.160
It is important for me to spend time in private thought and say my prayer.	4042.500	6598.500	-	.616
I offer obligatory prayer five times a day.	3780.000	6336.000	1.405	.073
The bank products' are using Islamic law and principles.	3869.500	6497.500	-	.246
No interest is charged for my credit cards outstanding balance.	4108.500	11248.500	1.795	.625
The bank provides financing products based on Mudharabah (profit sharing) and Musyarakah (profit and loss sharing) contracts.	3992.500	10895.500	-.489	.644
The bank also provides interest free loans (Qard hassan)	3564.500	10350.500	-.462	.082
The bank also provides profit-sharing investment products (Mudharabah investment)	4092.500	11113.500	-	.785
I am satisfied with the Shari'ah compliance provided by the bank	4149.500	6777.500	1.737	.708
The bank operates on an ethical policy - environmental friendly	4345.500	6901.500	-.273	.726
No investment on environmentally harmful businesses.	4227.500	6855.500	-.375	.504
The bank does not support organisation/countries with poor human rights record.	3891.000	11394.000	-.351	.222
The bank operates on an ethical policy - religious friendly	3807.000	6363.000	-	.099
The bank focuses on customer oriented customer services.	4100.000	6585.000	1.648	.384
The bank offers ethical banking products.	4017.500	6432.500	-.870	.397
			-.847	

Appendix 21: Demographic Profiles for All respondents (N=560)

NO	PROFILES		All		CCC		ICC		Both	
			N	%	N	%	N	%	N	%
1	Type Of Credit card Owned		560	100.0	186	33.2	219	39.1	155	27.7
2	Gender	Male	270	48.3	86	46.2	109	50.0	75	48.4
		Female	289	51.7	100	53.8	109	50.0	80	51.6
		Total	559	100.0	186	100.0	218	100.0	155	100.0
		Below 20	1	.2	1	.5	0	0	0	0
3	Age	21-30 years	125	22.3	43	23.1	47	21.5	35	22.6
		31-40 years	306	54.6	95	51.1	122	55.7	89	57.4
		41-50 years	98	17.5	33	17.7	43	19.6	22	14.2
		51-60 years	25	4.5	10	5.4	6	2.7	9	5.8
		Above 61 years	5	.9	4	2.2	1	.5	0	0
		Total	560	100.0	186	100.0	219	100.0	155	100.0
		High School	5	.9	2	1.1	2	.9	1	.6
		Diploma	34	6.1	13	7.0	13	5.9	8	5.2
4	Highest Educational Background	Degree	188	33.6	71	38.4	59	26.9	58	37.4
		Master	234	41.9	73	39.5	93	42.5	68	43.9
		PhD	98	17.5	26	14.1	52	23.7	20	12.9
		Total	559	100.0	185	100.0	219	100.0	155	100.0
		Malay	540	96.6	176	94.6	212	96.8	152	98.7
		Chinese	7	1.3	5	2.7	2	.9	0	0
		Indian	4	.7	3	1.6	0	0	1	.6
		Total	559	100.0	186	100.0	219	100.0	154	100.0
5	Ethnicity	Kadazan	3	.5	1	.5	2	.9	0	0
		Bajau	2	.4	0	0	2	.9	0	0.6
		Mixed	3	.5	1	.5	1	.5	1	0
		Total	559	100.0	186	100.0	219	100.0	154	100.0
		Visa	145	25.9	49	26.3	76	34.7	20	12.9
		Mastercard	155	27.7	56	30.1	74	33.8	25	16.1
		Visa and Mastercard	209	37.3	64	34.4	58	26.5	87	56.1
		Total	560	100.0	186	100.0	219	100.0	155	100.0
6	Type	Below 1 year	21	3.8	8	4.3	9	4.1	4	2.6
		1-5 years	168	30.1	59	31.9	75	34.2	34	22.1
		6-10 years	192	34.4	53	28.6	80	36.5	59	38.3
		11-15 years	103	18.5	29	15.7	38	17.4	36	23.4
		16-20 years	39	7.0	18	9.7	10	4.6	11	7.1
		Total	560	100.0	186	100.0	219	100.0	155	100.0
		Visa and American Express	11	2.0	3	1.6	5	2.3	3	1.9
		Mastercard and American Express	10	1.8	6	3.2	1	.5	3	1.9
7	Years Using Credit card	Visa, Mastercard and American Express	30	5.4	8	4.3	5	2.3	17	11.0
		Total	560	100.0	186	100.0	219	100.0	155	100.0
		Below 1 year	21	3.8	8	4.3	9	4.1	4	2.6
		1-5 years	168	30.1	59	31.9	75	34.2	34	22.1
		6-10 years	192	34.4	53	28.6	80	36.5	59	38.3
		11-15 years	103	18.5	29	15.7	38	17.4	36	23.4
		16-20 years	39	7.0	18	9.7	10	4.6	11	7.1
		Total	560	100.0	186	100.0	219	100.0	155	100.0

NO	PROFILES		All		CCC		ICC		Both	
			N	%	N	%	N	%	N	%
8	Types Of Membership	above 21 years	35	6.3	18	9.7	7	3.2	10	6.5
		Total	558	100.0	185	100.0	219	100.0	154	100.0
		Platinum	100	18.0	33	17.9	39	17.9	28	18.1
		Gold	226	40.6	74	40.2	96	44.0	56	36.1
		Classic	144	25.9	47	25.5	70	32.1	27	17.4
		Platinum, Gold	33	5.9	13	7.1	5	2.3	15	9.7
		Platinum, Classic	5	.9	4	2.2	0	0	1	.6
		Gold, Classic	37	6.6	7	3.8	8	3.7	22	14.2
		Platinum, Gold and Classic	12	2.2	6	3.3	0	0	6	3.9
		Total	557	100	184	100.0	218	100.0	155	100.0
9	Religion	Islam	551	98.6	178	96.2	218	99.5	155	100.0
		Christian	5	.9	4	2.2	1	.5	0	0
		Buddhism	1	.2	1	.5	0	0	0	0
		Hinduism	2	.4	2	1.1	0	0	0	0
		Total	559	100.0	185	100.0	219	100	155	100.0
		Shafii	531	97.3	167	94.9	211	98.1	153	98.7
10	School Of References	Hanafi	7	1.3	6	3.4	0	0	1	.6
		Maliki	1	.2	0	0	1	.5	0	0
		Hambali	1	.2	0	0	1	.5	0	0
		All	6	1.1	3	1.7	2	.9	1	.6
		Total	546	100.0	176	100.0	215	100.0	155	100.0
		One	224	40.2	80	43.7	126	57.5	18	11.6
11	Total Credit cards	Two	188	33.8	64	35.0	65	29.7	59	38.1
		Three	88	15.8	25	13.7	23	10.5	40	25.8
		Four	32	5.7	10	5.5	3	1.4	19	12.3
		Five	17	3.1	1	.5	2	.9	14	9.0
		Six	4	.7	2	1.1	0	0	2	1.3
		Seven	1	.2	0	0	0	0	1	.6
		Eight	3	.5	1	.5	0	0	2	1.3
		Total	557	100.0	183	100.0	219	100.0	155	100.0
		One	88	15.9	33	17.9	38	17.4	17	11.1
		Two	96	17.3	28	15.2	47	21.6	21	13.7
12	Usage Frequencies	Three	73	13.2	26	14.1	30	13.8	17	11.1
		Four	49	8.8	18	9.8	18	8.3	13	8.5
		Five	80	14.4	22	12.0	32	14.7	26	17.0
		Six	27	4.9	10	5.4	6	2.8	11	7.2
		Seven	20	3.6	7	3.8	6	2.8	7	4.6
		Eight	17	3.1	4	2.2	8	3.7	5	3.3

NO	PROFILES		All		CCC		ICC		Both	
			N	%	N	%	N	%	N	%
13	Monthly Payment Behaviour	Nine	3	.5	0	0	3	1.4	0	0
		10 and above	102	18.4	36	19.6	30	13.8	36	23.5
		Total	555	100.0	184	100.0	218	100.0	153	100.0
		Pay the whole outstanding balance	251	45.3	83	45.4	113	51.8	55	35.9
		Pay most of the outstanding balance	219	39.5	69	37.7	77	35.3	73	47.7
		Pay the minimum payment	79	14.3	29	15.8	26	11.9	24	15.7
		Cannot pay the minimum payment requirement	5	.9	2	1.1	2	.9	1	.7
		Total	554	100.0	183	100.0	218	100.0	153	100.0
		No formal education	55	9.9	23	12.5	21	9.7	11	7.1
		Primary school	48	8.6	20	10.9	13	6.0	15	9.7
14	Formal Religious Education	High school	246	44.2	82	44.6	91	41.9	73	47.1
		University	194	34.9	57	31.0	84	38.7	53	34.2
		Pondok education	3	.5	1	.5	2	.9	0	0
		Middle East Universities	10	1.8	1	.5	6	2.8	3	1.9
		Total	556	100.0	184	100.0	217	100.0	155	100.0

Appendix 22: Descriptive Statistics for Study Construct

Constructs		Study Response Scale %					Mean	SD	CCC Response Scale %					Mean	SD	ICC Response Scale %					Mean	SD	Both CC Response Scale %					Mean	SD
		(1)	(2)	(3)	(4)	(5)			(1)	(2)	(3)	(4)	(5)			(1)	(2)	(3)	(4)	(5)			(1)	(2)	(3)	(4)	(5)		
Reliability	r1	2.3	5.5	32.5	42.1	17.5	3.67	.907	1.6	4.3	34.9	40.3	18.8	3.70	.878	1.8	5.9	30.1	44.7	17.4	3.70	.889	3.9	6.5	32.9	40.6	16.1	3.59	.966
	r2	2.9	8.8	28.8	42.1	17.5	3.63	.965	3.8	9.1	29.6	39.2	18.3	3.59	1.011	1.8	6.8	29.7	43.8	17.8	3.69	.906	3.2	11.0	26.5	43.2	16.1	3.58	.993
	r3	2.7	8.0	26.1	44.1	19.1	3.69	.959	2.2	4.8	31.7	39.8	21.5	3.74	.924	2.7	9.6	21.9	47.9	17.8	3.68	.966	3.2	9.7	25.2	43.9	18.1	3.64	.993
	r4	2.0	6.1	26.1	47.3	18.6	3.74	.896	1.6	4.8	29.6	42.5	21.5	3.77	.896	1.8	5.9	24.7	49.3	18.3	3.76	.882	2.6	7.7	23.9	50.3	15.5	3.68	.917
	r5	.5	3.0	12.1	47.1	37.1	4.17	.796	1.1	2.7	14.5	40.9	40.9	4.18	.855	.5	3.7	10.5	49.8	35.6	4.16	.790	0	2.6	11.6	51.0	34.8	4.18	.734
Assurance	as1	2.1	7.2	29.3	43.6	17.7	3.68	.920	1.1	7.0	33.5	37.3	21.1	3.70	.917	3.2	9.1	22.4	47.9	17.4	3.67	.973	1.9	4.5	34.2	45.2	14.2	3.65	.850
	as2	1.3	3.9	18.9	49.5	26.4	3.96	.850	1.6	2.7	18.3	46.2	31.2	4.03	.866	1.4	4.1	18.3	50.7	25.6	3.95	.853	.6	5.2	20.6	51.6	21.9	3.89	.826
	as3	2.1	4.1	24.3	50.0	19.5	3.81	.871	1.6	2.7	27.4	46.8	21.5	3.84	.848	1.8	5.0	22.4	51.1	19.6	3.82	.869	3.2	4.5	23.2	52.3	16.8	3.75	.902
	as4	2.9	6.3	22.5	49.8	18.6	3.75	.926	2.2	2.2	24.7	51.6	19.4	3.84	.836	2.3	9.6	17.4	50.7	20.1	3.77	.956	4.5	6.5	27.1	46.5	15.5	3.62	.975
Tangible	tan1	.9	2.1	19.1	50.9	26.9	4.01	.793	1.1	1.1	19.0	45.7	33.2	4.09	.812	.9	3.2	18.7	53.0	24.2	3.96	.801	.6	1.9	20.0	54.2	23.2	3.97	.755
	tan2	.9	2.7	20.7	52.1	23.6	3.95	.793	.5	1.6	20.4	46.8	30.6	4.05	.790	1.4	3.2	20.1	54.3	21.0	3.90	.810	.6	3.2	21.9	55.5	18.7	3.88	.764
	tan3	.5	2.7	20.4	52.8	23.6	3.96	.772	.5	3.2	22.6	46.8	26.9	3.96	.821	.9	1.8	17.4	57.5	22.4	3.99	.745	0	3.2	22.1	53.2	21.4	3.93	.751
	tan4	.7	5.0	28.5	47.2	18.5	3.78	.829	0	4.3	29.7	45.4	20.5	3.82	.805	.9	4.6	27.1	50.0	17.4	3.78	.817	1.3	6.5	29.2	45.5	17.5	3.71	.876
Empathy	emp1	2.5	7.5	27.9	47.2	14.8	3.64	.910	1.6	5.9	29.0	43.0	20.4	3.75	.904	1.8	8.3	25.2	53.7	11.0	3.64	.854	4.5	8.4	30.3	43.2	13.5	3.53	.982
	emp2	3.2	9.3	22.0	46.5	19.0	3.69	.988	2.7	7.0	24.2	40.9	25.3	3.79	.989	2.3	10.6	20.6	49.1	17.4	3.69	.957	5.2	10.3	21.3	49.7	14.2	3.56	1.020
	emp3	4.3	10.9	31.3	40.1	13.4	3.47	.998	4.3	11.9	27.0	38.4	18.4	3.55	1.058	4.6	9.1	34.2	43.4	8.7	3.42	.937	3.9	12.3	32.3	37.4	9.7	3.46	1.008
	emp4	4.7	11.5	37.3	35.7	10.9	3.37	.981	4.9	12.4	42.2	27.6	13.0	3.31	1.010	3.7	11.9	33.0	41.3	10.1	3.42	.953	5.8	9.7	37.4	37.4	10.3	3.35	.985
	emp5	3.0	13.2	37.2	35.4	11.1	3.38	.952	2.7	14.6	38.4	32.4	11.9	3.36	.963	3.2	13.7	33.3	38.8	11.0	3.41	.965	3.2	11.0	41.3	34.2	13.5	3.37	.927
Responsiveness	res1	5.5	13.2	27.5	39.1	14.6	3.44	1.067	3.8	12.4	30.1	34.4	19.4	3.53	1.056	5.0	13.2	25.6	43.8	12.3	3.45	1.032	8.4	14.2	27.1	38.1	12.3	3.32	1.121
	res2	6.3	12.0	32.9	33.5	15.4	3.40	1.079	4.3	11.8	36.0	27.4	20.4	3.48	1.077	6.8	12.8	31.5	35.2	13.7	3.36	1.085	7.8	11.0	31.2	38.3	11.7	3.35	1.076
	res3	4.3	12.6	43.7	29.1	10.3	3.28	.960	2.7	13.5	46.5	24.9	12.4	3.31	.948	3.7	10.1	43.6	32.6	10.1	3.35	.925	7.2	15.0	40.5	29.4	7.8	3.16	1.014
	res4	5.0	15.2	34.0	35.4	10.4	3.31	1.014	6.5	11.9	36.8	30.8	14.1	3.34	1.067	3.2	17.8	33.8	36.1	9.1	3.30	.972	5.8	15.5	31.0	40.0	7.7	3.28	1.011
Staff conduct	St1	.9	3.6	22.5	52.9	20.2	3.88	.798	.5	2.2	25.8	48.4	23.1	3.91	.787	0	5.9	16.9	55.3	21.9	3.93	.790	2.6	1.9	26.5	54.8	14.2	3.76	.815
	St2	2.1	6.3	33.0	41.6	17.0	3.65	.907	2.7	4.8	36.6	37.6	18.3	3.64	.927	.5	6.4	31.1	42.5	19.6	3.74	.861	3.9	7.7	31.6	45.2	11.6	3.53	.935
	St3	1.4	4.8	25.5	49.3	18.9	3.80	.85	1.6	3.2	26.6	47.9	20.7	3.83	.85	1.8	4.5	21.4	52.3	20.0	3.84	.858	.7	7.2	30.3	46.7	15.1	3.68	.841
	St4	2.7	5.9	27.0	48.4	16.1	3.69	.90	3.2	4.8	25.5	44.1	22.3	3.78	.96	2.3	7.7	25.5	50.9	13.6	3.66	.890	2.6	4.9	30.9	50.0	11.8	3.64	.850

Technical ability	ta1	1.8	7.7	29.0	46.8	14.6	3.65	.886	2.2	7.0	28.6	42.2	20.0	3.71	.939	.9	6.9	28.0	49.5	14.7	3.70	.836	2.6	9.9	30.9	48.7	7.9	3.49	.876
	ta2	1.4	6.7	31.0	46.8	14.1	3.65	.854	1.6	4.9	32.4	41.6	19.5	3.72	.888	.9	5.5	29.4	50.9	13.3	3.70	.802	2.0	10.5	31.6	47.4	8.6	3.50	.869
	ta3	3.4	9.4	30.6	42.3	14.2	3.55	.963	3.3	7.7	32.2	39.3	17.5	3.60	.972	2.7	9.6	30.6	43.8	13.2	3.55	.934	4.6	11.1	28.8	43.8	11.8	3.47	.994
	ta4	4.2	10.5	29.4	43.9	12.1	3.49	.976	3.8	9.3	31.7	42.1	13.1	3.51	.966	4.1	11.5	24.3	45.4	14.7	3.55	1.011	4.6	10.5	34.0	43.8	7.2	3.39	.933
	ta5	3.6	8.6	33.0	42.9	11.9	3.51	.937	2.7	5.9	33.5	42.7	15.1	3.62	.908	2.8	9.3	35.2	42.1	10.6	3.49	.905	5.8	11.0	29.2	44.2	9.7	3.41	1.007
Employee knowledge	ek1	2.2	7.0	20.9	52.1	17.8	3.76	.899	2.2	4.3	20.4	52.7	20.4	3.85	.869	1.8	7.8	19.7	52.8	17.9	3.77	.897	2.6	9.3	23.2	50.3	14.6	3.65	.932
	ek2	2.0	7.3	24.6	48.2	17.9	3.73	.907	1.6	4.3	28.6	44.9	20.5	3.78	.876	1.8	8.7	21.9	48.9	18.7	3.74	.924	2.6	9.1	23.4	51.3	13.6	3.64	.919
	ek3	4.1	13.5	43.8	31.2	7.4	3.24	.922	3.8	13.4	48.4	26.3	8.1	3.22	.911	3.7	12.0	42.9	34.1	7.4	3.29	.906	5.2	15.6	39.6	33.1	6.5	3.20	.959
Communication	com1	2.7	9.6	26.8	47.4	13.6	3.59	.932	2.7	10.3	30.8	39.5	16.8	3.57	.976	1.4	10.1	24.3	52.3	11.9	3.63	.871	4.7	8.0	25.3	50.0	12.0	3.57	.965
	com2	2.1	6.3	17.4	49.2	25.0	3.89	.925	2.7	3.8	19.4	47.3	26.9	3.92	.924	1.8	7.3	15.5	52.1	23.3	3.88	.913	1.9	7.8	17.5	47.4	25.3	3.86	.950
	com3	1.1	1.6	12.1	42.8	42.4	4.24	.807	1.6	.5	12.1	39.0	46.7	4.29	.825	1.4	2.3	12.4	40.8	43.1	4.22	.852	0	1.9	11.7	50.0	36.4	4.21	.720
	com4	1.8	4.9	21.1	41.5	30.7	3.94	.936	1.1	4.3	24.5	37.5	32.6	3.96	.920	2.8	5.1	18.0	41.9	32.3	3.96	.978	1.3	5.4	21.5	45.6	26.2	3.90	.899
	com5	2.4	4.5	20.5	42.0	30.5	3.94	.950	2.2	3.3	23.9	35.6	35.0	3.98	.963	3.2	5.1	15.7	45.2	30.9	3.95	.980	1.3	5.2	23.5	45.1	24.8	3.87	.894
Employee technical ability	eta1	4.4	8.9	37.5	36.6	12.6	3.44	.970	4.9	10.3	39.7	30.4	14.7	3.40	1.019	3.7	5.6	33.3	43.5	13.9	3.58	.926	4.7	12.1	40.9	34.2	8.1	3.29	.947
	eta2	2.0	4.1	31.7	45.8	16.4	3.70	.860	2.2	3.8	38.0	35.3	20.7	3.68	.917	2.3	3.7	25.2	54.1	14.7	3.75	.833	1.3	5.2	33.3	46.4	13.7	3.66	.828
	eta3	1.4	6.3	29.1	47.2	15.9	3.69	.876	1.1	4.9	33.2	40.8	20.1	3.74	.873	1.4	7.4	25.3	51.6	14.3	3.70	.854	2.0	6.6	29.6	48.7	13.2	3.64	.864
Technology	tech1	2.9	6.5	20.4	37.1	33.2	3.90	1.036	4.8	7.0	19.4	33.3	35.5	3.88	1.120	2.3	6.5	18.9	40.6	31.8	3.93	.986	1.3	5.9	23.7	36.8	32.2	3.93	.957
	tech2	1.1	6.0	25.8	42.5	24.7	3.83	.918	1.1	4.9	28.3	39.7	26.1	3.85	.905	1.4	8.4	22.0	43.0	25.2	3.82	.953	.7	3.9	28.1	45.1	22.2	3.84	.836
	tech3	1.1	5.2	17.5	45.8	30.3	3.98	.902	1.6	2.7	18.4	41.1	36.2	4.08	.894	.9	7.8	14.7	48.4	28.1	3.95	.909	.7	4.6	20.4	48.0	26.3	3.95	.844
	tech4	2.2	4.7	21.2	44.7	27.2	3.89	.941	2.7	4.3	19.6	42.9	30.4	3.94	.959	2.3	7.0	22.8	41.4	26.5	3.83	.978	1.3	2.0	20.9	51.6	24.2	3.95	.806
Shari'ah Compliance	sc1	9.9	10.9	29.4	31.2	18.6	3.38	1.192	22.2	13.6	35.2	21.6	7.4	2.78	1.223	2.8	9.2	21.2	38.2	28.6	3.81	1.041	5.8	10.3	34.2	32.3	17.4	3.45	1.076
	sc2	34.5	15.6	16.5	17.2	16.1	2.65	1.495	56.3	13.8	13.2	8.0	8.6	1.99	1.343	19.9	18.1	16.7	22.2	23.1	3.11	1.457	30.3	14.2	20.0	20.6	14.8	2.75	1.452
	sc3	13.9	9.4	27.9	30.1	18.7	3.30	1.268	28.5	11.6	34.9	18.0	7.0	2.63	1.261	6.5	6.9	23.1	36.1	27.3	3.71	1.134	7.8	10.5	26.8	35.3	19.6	3.48	1.153
	sc4	26.2	11.8	30.3	18.9	12.8	2.80	1.353	42.8	10.4	29.5	9.8	7.5	2.29	1.311	21.0	11.7	28.5	22.9	15.9	3.01	1.353	14.9	13.6	33.8	23.4	14.3	3.08	1.242
	sc5	13.6	8.4	28.4	30.8	18.8	3.33	1.259	27.7	11.6	32.4	19.7	8.7	2.70	1.299	7.5	6.1	22.1	37.1	27.2	3.70	1.154	6.0	8.0	32.7	34.7	18.7	3.52	1.073

Ethical dimension	eth1	1.8	5.2	34.1	40.3	18.6	3.43	.914	2.7	6.0	36.1	31.7	23.5	3.67	.990	1.8	3.7	29.4	47.2	17.9	3.76	.854	.7	6.5	38.6	40.5	13.7	3.60	.830
	eth2	2.9	7.1	46.6	30.8	12.7	2.63	.733	6.1	7.2	58.6	18.2	9.9	3.19	.930	1.8	2.8	36.4	42.4	16.6	3.69	.845	.6	13.0	46.8	29.2	10.4	3.36	.861
	eth3	7.9	7.7	33.1	36.0	15.3	3.43	1.087	14.6	9.7	42.7	20.0	13.0	3.07	1.184	3.7	6.0	21.7	47.9	20.7	3.76	.971	5.8	7.8	37.7	38.3	10.4	3.40	.980
	eth4	1.4	4.3	26.8	45.0	22.4	3.82	.890	1.1	4.3	28.6	36.8	29.2	3.89	.917	1.9	4.2	21.8	52.8	19.4	3.84	.850	1.3	4.6	31.6	44.1	18.4	3.74	.859
	eth5	1.6	4.0	30.9	44.7	18.7	3.74	.875	1.1	4.9	38.0	37.0	19.0	3.68	.875	1.9	3.7	21.8	51.4	21.3	3.87	.855	2.0	3.3	35.3	44.7	14.7	3.67	.841

Appendix 23: Convergent and Discriminant Validity for FSQ

Constructs	Items	Standardised Regression	Critical Ratio	R^2	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal						Staff Conduct
					Composite Reliability	AVE	MSV	ASV	Responsiveness	Reliability	Assurance	Tangible	Empathy		
Responsiveness	res1	0.833	24.219***	0.748	0.876	0.641	0.651	0.533	0.801						
	res2	0.806	23.035***	0.709											
	res3	0.862	-----	0.792											
	res4	0.677	17.881***	0.526											
Reliability	r1	0.784	21.869***	0.706	0.873	0.634	0.75	0.566	0.702	0.796					
	r2	0.767	21.329***	0.685											
	r3	0.745	23.047***	0.661											
	r4	0.865	-----	0.846											
Assurance	as1	0.777	20.24***	0.697	0.871	0.629	0.796	0.667	0.741	0.866	0.793				
	as2	0.734	18.802***	0.639											
	as3	0.852	22.886***	0.799											
	as4	0.798	-----	0.771											
Tangible	tan1	0.732	16.061***	0.591	0.854	0.595	0.501	0.421	0.569	0.586	0.708	0.771			
	tan2	0.766	17.605***	0.64											
	tan3	0.748	17.22***	0.613											
	tan4	0.799	-----	0.689											
Empathy	emp1	0.809	21.718***	0.727	0.896	0.632	0.762	0.644	0.806	0.783	0.861	0.672	0.795		
	emp2	0.702	18.014***	0.578											
	emp3	0.789	20.973***	0.698											
	emp4	0.837	29.199***	0.767											

Constructs	Items	Standardised Regression	Critical Ratio	R^2	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal						Staff Conduct
					Composite Reliability	AVE	MSV	ASV	Responsiveness	Reliability	Assurance	Tangible	Empathy		
Staff Conduct	emp5	0.814	-----	0.733	0.905	0.705	0.796	0.665	0.807	0.793	0.892	0.698	0.873	0.84	
	st1	0.825	23.737***	0.752											
	st2	0.771	21.413***	0.676											
	st3	0.89	26.845***	0.845											
	st4	0.836	-----	0.768											
Note: CR= *** Significance at 0.001, Composite reliability, AVE= Average Variance Explained, MSV=Maximum Shared Squared Variance and ASV= Average Shared Squared Variance															

Appendix 24: Reliability, Convergent and Discriminant Validity (TSQ)

Constructs	Items	Standardised Regression	Critical Ratio	R ²	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal				
					CR	AVE	MSV	ASV	ETA	TA	EK	COM	TECH
ETA	eta3	0.85	-----	0.722									
	eta2	0.762	20.57***	0.58	0.837	0.631	0.771	0.66	0.795				
	eta1	0.762	20.59***	0.581									
	ta5	0.852	-----	0.726									
TA	ta4	0.744	20.38***	0.554									
	ta3	0.842	24.81***	0.709	0.915	0.683	0.738	0.628	0.859	0.826			
	ta2	0.853	25.27***	0.728									
	ta1	0.824	23.79***	0.679									
EK	ek3	0.77	-----	0.592									
	ek2	0.929	24.17***	0.862	0.904	0.761	0.661	0.588	0.805	0.813	0.872		
	ek1	0.904	23.53***	0.818									
	com5	0.678	-----	0.46									
COM	com4	0.66	16.50***	0.436									
	com3	0.714	14.78***	0.51	0.832	0.499	0.771	0.663	0.878	0.821	0.801	0.706	
	com2	0.711	14.90***	0.505									
	com1	0.756	15.70***	0.571									
TECH	tech4	0.857	-----	0.734									
	tech3	0.875	24.13***	0.766									
	tech2	0.728	19.20***	0.53	0.84	0.576	0.567	0.472	0.695	0.662	0.632	0.753	0.759
	tech1	0.519	12.46***	0.269									
Note: *** Significance at 0.001, CR= Composite reliability, AVE= Average Variance Explained, MSV=Maximum Shared Squared Variance and ASV= Average Shared Squared Variance													

Appendix 25: Convergent and Discriminant Validity for SC and ETH

									Factor Correlation Matrix with the Square Root of AVE in the Diagonal	
					Convergent Validity		Discriminant Validity			
Constructs	Items	Standardised Regression	C.R.	R^2	CR	AVE	MSV	ASV	SC	ETH
SC	sc5	0.89	-----	0.787	0.876	0.779	0.513	0.1	0.883	
	sc4	0.65	17.65***	0.421						
	sc3	0.849	25.10***	0.739						
	sc2	0.663	17.60***	0.444						
	sc1	0.815	19.74***	0.631						
ETH	eth5	0.552	-----	0.353	0.805	0.675	0.513	0.16	0.716	0.822
	eth4	0.431	15.50***	0.216						
	eth3	0.942	11.70***	0.755						
	eth2	0.865	11.2**	0.616						
	eth1	0.641	16.13***	0.46						
Note: *** Significance at 0.001, CR= Composite reliability, AVE= Average Variance Explained, MSV=Maximum Shared Squared Variance and ASV= Average Shared Squared Variance										

Appendix 26: Convergent and Discriminant Validity for Integrated Models

					Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal												
Constructs	Items	Standardise	Critical Ratio	R^2	CR	AVE	MSV	ASV	TA	EK	ETA	TECH	Emp	R	Tan	Res	SC	Eth	Assurance	ST	COM
TA	ta1	0.849	21.247	0.72	0.920	0.698	0.704	0.513	0.835												
	ta2	0.872	21.921	0.76																	
	ta3	0.847	21.164	0.71																	
	ta4	0.754		0.56																	
	ta5	0.849	21.223	0.72																	
EK	ek1	0.905	23.79+8	0.81	0.903	0.758	0.643	0.477	0.802	0.871											
	ek2	0.925	24.37	0.85																	
	ek3	0.774		0.59																	
ETA	eta1	0.77	20.581	0.59	0.840	0.637	0.731	0.523	0.839	0.794	0.798										
	eta2	0.771	20.421	0.59																	
	eta3	0.851		0.72																	
TECH	tech1	0.578	14.214	0.33	0.852	0.594	0.563	0.365	0.646	0.621	0.690	0.771									
	tech2	0.768	20.468	0.58																	
	tech3	0.863	23.889	0.74																	
	tech4	0.842		0.70																	
Emp	emp1	0.79	22.904	0.62	0.900	0.645	0.719	0.503	0.767	0.747	0.779	0.594	0.803								
	emp2	0.692	18.766	0.47																	
	emp3	0.786	22.71	0.61																	
	emp4	0.877	27.342	0.77																	
	emp5	0.857		0.73																	
R	r1	0.771	22.698	0.59	0.866	0.569	0.750	0.474	0.760	0.707	0.744	0.628	0.763	0.755							
	r2	0.756	21.981	0.57																	
	r3	0.778	23.051	0.60																	
	r4	0.891		0.79																	
	r5	0.531	13.424	0.28																	

Constr ucts	Items	Stand ardise	Critical Ratio	R^2	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal												COM
					CR	AVE	MSV	ASV	TA	EK	ETA	TEC H	Emp	R	Tan	Res	SC	Eth	Assu ranc	ST	
Tan	tan1	0.851		0.72	0.857	0.60	0.423	0.32	0.62	0.60	0.60	0.618	0.58	0.56	0.77						
	tan2	0.89	24.623	0.79		4		6	6	2	0		3	0	7						
	tan3	0.633	15.912	0.40																	
	tan4	0.707	18.416	0.49																	
Res	res1	0.833		0.69	0.874	0.63	0.656	0.43	0.75	0.69	0.72	0.569	0.79	0.70	0.51	0.79					
	res2	0.808	22.19	0.65		7		5	6	6	8		3	1	5	8					
	res3	0.86	24.245	0.73																	
	res4	0.679	17.489	0.46																	
SC	sc1	0.734		0.53	0.879	0.59	0.389	0.07	0.24	0.19	0.28	0.216	0.22	0.17	0.20	0.21	0.77				
	sc2	0.684	15.748	0.46		6		9	0	6	0		3	9	1	6	2				
	sc3	0.882	20.368	0.77																	
	sc4	0.68	15.65	0.46																	
Eth	sc5	0.856	19.836	0.72																	
	eth1	0.813		0.66	0.848	0.53	0.389	0.29	0.55	0.55	0.58	0.494	0.58	0.51	0.48	0.45	0.62	0.72			
	eth2	0.661	15.546	0.43		0		9	9	7	0		7	5	0	9	4	8			
	eth3	0.728	17.473	0.53																	
Assur ance	eth4	0.67	15.684	0.44																	
	eth5	0.759	18.377	0.57																	
	as1	0.775		0.6	0.870	0.62	0.787	0.53	0.77	0.76	0.76	0.651	0.84	0.86	0.65	0.73	0.24	0.56	0.792		
	as2	0.737	18.344	0.54		6		4	8	9	7		3	6	0	8	9	5			
ST	as3	0.846	21.712	0.71																	
	as4	0.804	20.401	0.64																	
	st1	0.828		0.68	0.900	0.69	0.787	0.55	0.82	0.79	0.82	0.606	0.84	0.79	0.64	0.81	0.24	0.59	0.887	0.83	
	st2	0.776	21.471	0.60		2		2	0	3	6		8	4	5	0	0	1		2	
COM	st3	0.889	26.459	0.79																	
	st4	0.83	23.755	0.68																	
	com1	0.719		0.51	0.845		0.731					0.750							0.774		0.722

Constr ucts	Items	Stand ardise	Critical Ratio	R^2	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal												COM
					CR	AVE	MSV	ASV	TA	EK	ETA	TEC H	Emp	R	Tan	Res	SC	Eth	Assu ranc	ST	
	com2	0.742	16.696	0.55		0.52		0.50	0.78	0.76	0.85		0.74	0.77	0.62	0.68	0.23	0.52		0.81	
	com3	0.749	16.859	0.56		1		8	7	9	5		2	4	5	7	1	1		0	
	com4	0.692	15.591	0.47																	
	com5	0.706	15.897																		

Appendix 27: Reliability, Convergent and Discriminant Validity for CCC (FSQ)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal					
	CR	AVE	MSV	ASV	Respon siveness	Relia bility	Assu rance	Tang ible	Emp athy	Staff Condu ct
Responsiveness	0.915	0.730	0.752	0.644	0.855					
Reliability	0.912	0.722	0.826	0.659	0.780	0.850				
Assurance	0.927	0.761	0.826	0.734	0.805	0.909	0.872			
Tangible	0.881	0.650	0.596	0.520	0.682	0.651	0.772	0.807		
Empathy	0.932	0.732	0.828	0.731	0.863	0.858	0.886	0.749	0.856	
Staff Conduct	0.932	0.773	0.828	0.730	0.867	0.836	0.903	0.746	0.910	0.879

Appendix 28: Reliability, Convergent and Discriminant Validity for ICC (FSQ)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal					
	CR	AVE	MSV	ASV	Respon siveness	Relia bility	Assur ance	Tang ible	Emp athy	Staff Conduc t
Responsiveness	0.885	0.661	0.691	0.608	0.813					
Reliability	0.907	0.709	0.806	0.685	0.788	0.842				
Assurance	0.917	0.735	0.857	0.734	0.786	0.898	0.857			
Tangible	0.870	0.626	0.604	0.538	0.654	0.748	0.750	0.791		
Empathy	0.908	0.666	0.828	0.703	0.826	0.830	0.910	0.731	0.816	
Staff Conduct	0.916	0.732	0.857	0.737	0.831	0.867	0.926	0.777	0.884	0.856

Appendix 29: Reliability, Convergent and Discriminant Validity for Both (FSQ)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal					
	CR	AVE	MSV	ASV	Responsi veness	Reliab ility	Assur ance	Tang ible	Emp athy	Staff Conduct
Responsi veness	0.902	0.698	0.781	0.656	0.835					
Reliabilit y	0.924	0.753	0.856	0.674	0.786	0.868				
Assuranc e	0.895	0.682	0.882	0.776	0.830	0.925	0.826			
Tangible	0.879	0.644	0.630	0.531	0.644	0.640	0.794	0.803		
Empathy	0.930	0.726	0.893	0.758	0.882	0.844	0.906	0.764	0.852	
Staff Conduct	0.936	0.786	0.893	0.789	0.884	0.880	0.939	0.784	0.945	0.887

Appendix 30: The Multigroup Difference Analysis between CCC vs ICC, ICC vs Both and CCC vs Both (FSQ)

			CCC		ICC		z-score	ICC		Both		z-score	CCC		BOTH		z-score
Loadings			Esti mate	P	Esti mate	P		Esti mate	P	Esti mate	P		Esti mate	P	Esti mate	P	
as1	<---	AS	0.930	0.00	1.003	0.00	1.090	1.003	0.00	0.667	0.00	-4.722***	0.930	0.00	0.667	0.00	-3.615***
as2	<---	AS	0.831	0.00	0.787	0.00	-0.651	0.787	0.00	0.690	0.00	-1.387	0.831	0.00	0.690	0.00	-1.97**
as3	<---	AS	0.941	0.00	0.900	0.00	-0.704	0.900	0.00	0.925	0.00	0.408	0.941	0.00	0.925	0.00	-0.248
as4	<---	AS	1.000		1.000			1.000		1.000			1.000		1.000		
emp1	<---	EMP	0.915	0.00	0.811	0.00	-1.365	0.811	0.00	1.143	0.00	3.369***	0.915	0.00	1.143	0.00	2.284**
emp2	<---	EMP	0.942	0.00	0.777	0.00	-1.875*	0.777	0.00	0.954	0.00	1.621	0.942	0.00	0.954	0.00	0.110
emp3	<---	EMP	1.060	0.00	0.792	0.00	-3.145***	0.792	0.00	1.246	0.00	4.308***	1.060	0.00	1.246	0.00	1.715*
emp4	<---	EMP	0.980	0.00	1.021	0.00	0.62	1.021	0.00	1.237	0.00	2.744***	0.980	0.00	1.237	0.00	3.051***
emp5	<---	EMP	1.000		1.000			1.000		1.000			1.000		1.000		
r1	<---	R	0.862	0.00	0.853	0.00	-0.145	0.853	0.00	0.898	0.00	0.641	0.862	0.00	0.898	0.00	0.497
r2	<---	R	1.037	0.00	0.798	0.00	-3.256***	0.798	0.00	0.952	0.00	2.069**	1.037	0.00	0.952	0.00	-1.077
r3	<---	R	0.803	0.00	0.915	0.00	1.591	0.915	0.00	0.953	0.00	0.56	0.803	0.00	0.953	0.00	2.078**
r4	<---	R	1.000		1.000			1.000		1.000			1.000		1.000		
res1	<---	RES	1.057	0.00	1.081	0.00	0.261	1.081	0.00	1.062	0.00	-0.204	1.057	0.00	1.062	0.00	0.053
res2	<---	RES	1.070	0.00	1.171	0.00	1.061	1.171	0.00	0.927	0.00	-2.511**	1.070	0.00	0.927	0.00	-1.531
res3	<---	RES	1.000		1.000			1.000		1.000			1.000		1.000		
res4	<---	RES	0.950	0.00	0.788	0.00	-1.667*	0.788	0.00	0.767	0.00	-0.216	0.950	0.00	0.767	0.00	-1.909*
st1	<---	SC	0.849	0.00	0.962	0.00	1.511	0.962	0.00	0.830	0.00	-1.708*	0.849	0.00	0.830	0.00	-0.259
st2	<---	SC	0.951	0.00	0.863	0.00	-1.030	0.863	0.00	0.962	0.00	1.136	0.951	0.00	0.962	0.00	0.132
st3	<---	SC	0.913	0.00	1.090	0.00	2.326**	1.090	0.00	1.000	0.00	-1.184	0.913	0.00	1.000	0.00	1.263
st4	<---	SC	1.000		1.000			1.000		1.000			1.000		1.000		
tan1	<---	TAN	0.825	0.00	0.891	0.00	0.623	0.891	0.00	0.860	0.00	-0.274	0.825	0.00	0.860	0.00	0.308
tan2	<---	TAN	0.944	0.00	0.917	0.00	-0.266	0.917	0.00	0.869	0.00	-0.441	0.944	0.00	0.869	0.00	-0.684
tan3	<---	TAN	0.978	0.00	0.769	0.00	-2.058**	0.769	0.00	0.866	0.00	0.933	0.978	0.00	0.866	0.00	-0.996

		CCC		ICC		ICC		Both		CCC		BOTH				
Loadings		Esti mate	P	Esti mate	P	z-score	Esti mate	P	Esti mate	P	z-score	Esti mate	P	Esti mate	P	z-score
tan4	<---	TAN	1.000		1.000		1.000		1.000			1.000		1.000		
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10																

Appendix 31: Reliability, Convergent and Discriminant Validity for CCC (TSQ)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal				
	CR	AVE	MSV	ASV	ETA	TA	EK	COM	TECH
ETA	0.862	0.676	0.696	0.598	0.822				
TA	0.922	0.703	0.701	0.589	0.829	0.839			
EK	0.884	0.720	0.714	0.608	0.828	0.837	0.849		
COM	0.805	0.453	0.714	0.640	0.834	0.808	0.845	0.673	
TECH	0.849	0.593	0.496	0.366	0.570	0.561	0.575	0.704	0.770

Appendix 32: Reliability, Convergent and Discriminant Validity for ICC (TSQ)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal				
	CR	AVE	MSV	ASV	ETA	TA	EK	COM	TECH
ETA	0.814	0.595	0.848	0.751	0.772				
TA	0.904	0.653	0.785	0.652	0.886	0.808			
EK	0.919	0.793	0.658	0.574	0.811	0.768	0.890		
COM	0.857	0.546	0.848	0.698	0.921	0.825	0.750	0.739	
TECH	0.863	0.614	0.714	0.612	0.845	0.742	0.696	0.837	0.784

Appendix 33: Reliability, Convergent and Discriminant Validity for Both (TSQ)

	Convergent Validity		Discriminant Validity		Factor Correlation Matrix with the Square Root of AVE in the Diagonal				
	CR	AVE	MSV	ASV	ETA	TA	EK	COM	TECH
ETA	0.831	0.623	0.769	0.613	0.789				
TA	0.916	0.688	0.712	0.637	0.841	0.829			
EK	0.904	0.758	0.728	0.590	0.742	0.840	0.871		
COM	0.824	0.488	0.769	0.688	0.877	0.844	0.853	0.698	
TECH	0.781	0.501	0.542	0.443	0.653	0.651	0.615	0.736	0.708

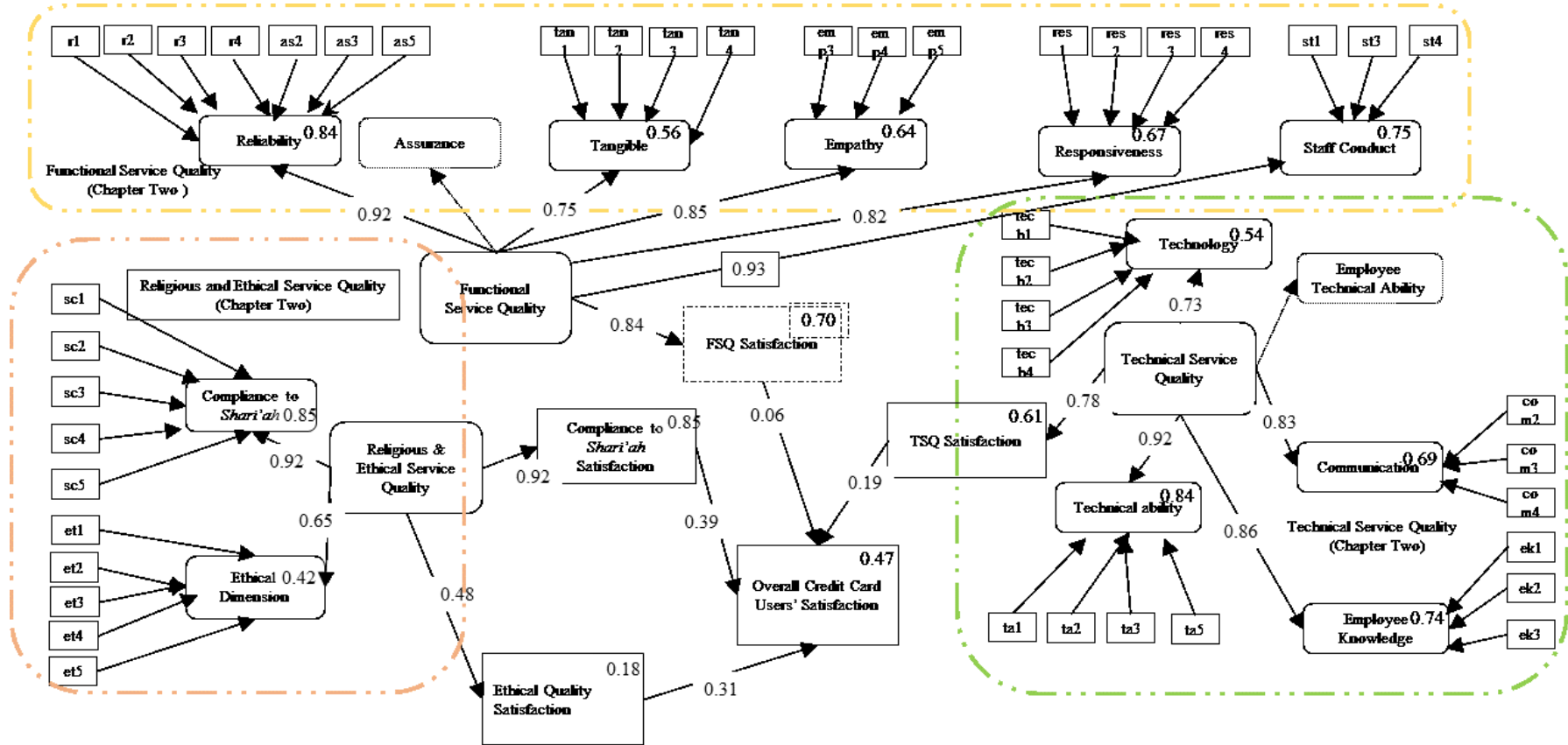
Appendix 34: The Multigroup Difference Analysis between CCC vs ICC, ICC vs Both and CCC vs Both (TSQ)

Loadings			CCC		ICC		z-score	ICC		Both		z-score	CCC		BOTH		z-score
			Esti mate	P	Estim ate	P		Estim ate	P	Estim ate	P		Esti mate	P	Esti mate	P	
ta5	<---	TA	1.000		1.000			1.000		1.000			1.000		1.000		
ta4	<---	TA	0.915	0.00	1.038	0.00	1.073	1.038	0.00	0.779	0.00	-2.408**	0.915	0.00	0.779	0.00	-1.287
ta3	<---	TA	1.096	0.00	1.005	0.00	-0.869	1.005	0.00	0.963	0.00	-0.433	1.096	0.00	0.963	0.00	-1.389
ta2	<---	TA	0.999	0.00	0.915	0.00	-0.942	0.915	0.00	0.805	0.00	-1.286	0.999	0.00	0.805	0.00	-2.287**
ta1	<---	TA	1.032	0.00	0.952	0.00	-0.828	0.952	0.00	0.758	0.00	-2.113**	1.032	0.00	0.758	0.00	-2.967**
ek3	<---	EK	1.000		1.000			1.000		1.000			1.000		1.000		
ek2	<---	EK	1.295	0.00	1.241	0.00	-0.411	1.241	0.00	1.014	0.00	-2.126**	1.295	0.00	1.014	0.00	-2.125**
ek1	<---	EK	1.214	0.00	1.160	0.00	-0.423	1.160	0.00	1.068	0.00	-0.869	1.214	0.00	1.068	0.00	-1.122
com5	<---	COM	1.000		1.000			1.000		1.000			1.000		1.000		
com4	<---	COM	0.908	0.00	1.043	0.00	0.975	1.043	0.00	0.895	0.00	-1.018	0.908	0.00	0.895	0.00	-0.082
com3	<---	COM	0.866	0.00	0.924	0.00	0.392	0.924	0.00	0.931	0.00	0.045	0.866	0.00	0.931	0.00	0.389
com2	<---	COM	1.097	0.00	0.939	0.00	-0.983	0.939	0.00	1.035	0.00	0.555	1.097	0.00	1.035	0.00	-0.314
com1	<---	COM	1.133	0.00	0.911	0.00	-1.358	0.911	0.00	1.363	0.00	2.531**	1.133	0.00	1.363	0.00	1.112
eta3	<---	ETA	1.000		1.000			1.000		1.000			1.000		1.000		
eta2	<---	ETA	1.028	0.00	0.801	0.00	-2.158**	0.801	0.00	0.851	0.00	0.495	1.028	0.00	0.851	0.00	-1.567
eta1	<---	ETA	1.206	0.00	0.884	0.00	-2.764***	0.884	0.00	0.916	0.00	0.273	1.206	0.00	0.916	0.00	-2.235**
tech4	<---	TECH	1.000		1.000			1.000		1.000			1.000		1.000		
tech3	<---	TECH	1.002	0.00	0.976	0.00	-0.272	0.976	0.00	0.889	0.00	-0.897	1.002	0.00	0.889	0.00	-1.106
tech2	<---	TECH	0.862	0.00	0.880	0.00	0.183	0.880	0.00	0.630	0.00	-2.397**	0.862	0.00	0.630	0.00	-2.153**
tech1	<---	TECH	0.717	0.00	0.757	0.00	0.326	0.757	0.00	0.393	0.00	-2.864***	0.717	0.00	0.393	0.00	-2.278**

Loadings	CCC		ICC		z-score	ICC		Both		z-score	CCC		BOTH		z-score
	Estimate	P	Estimate	P		Estimate	P	Estimate	P		Estimate	P	Estimate	P	

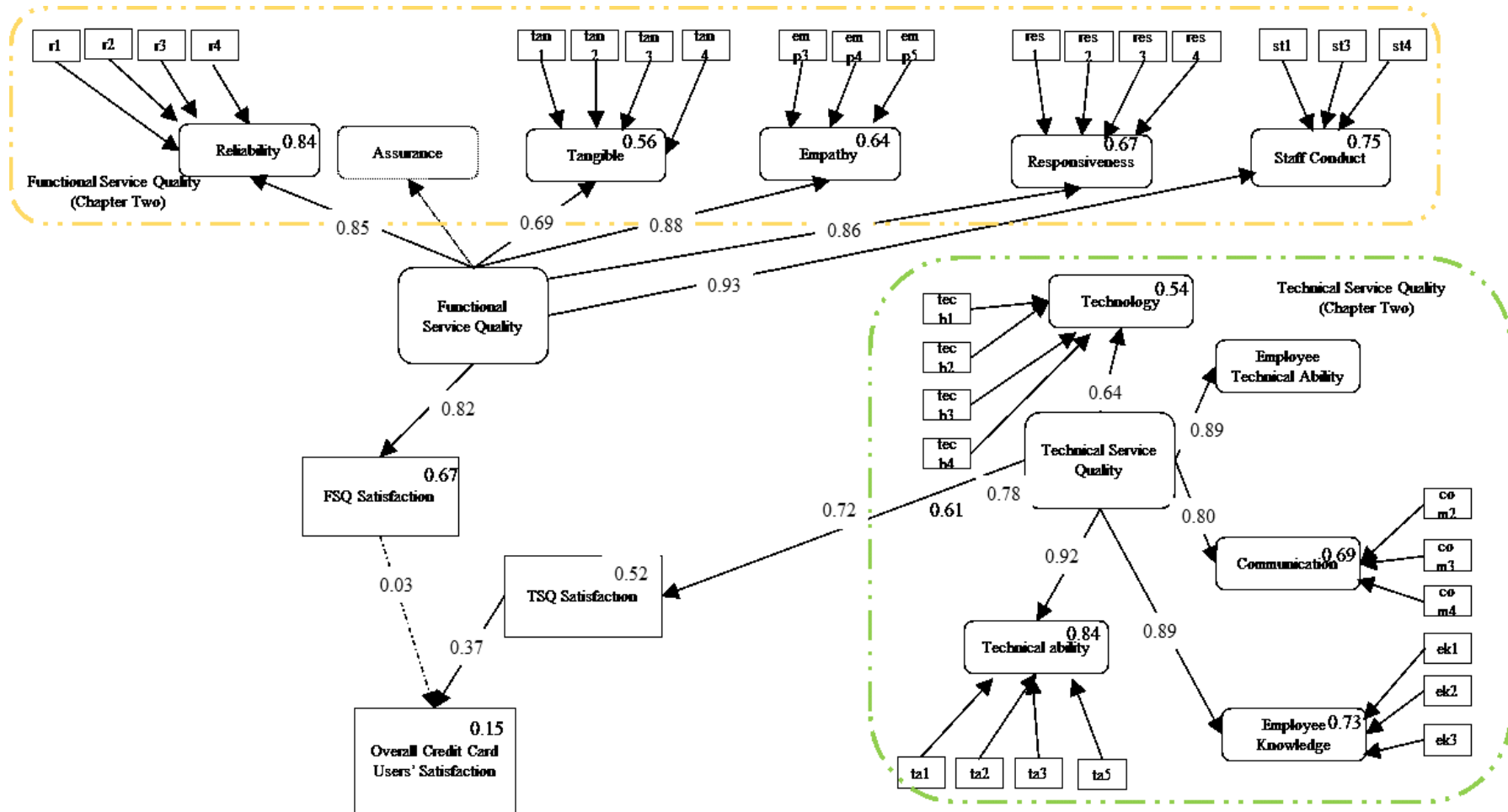
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10

Appendix 35: Structural Model for the Integrated Model (ALL)



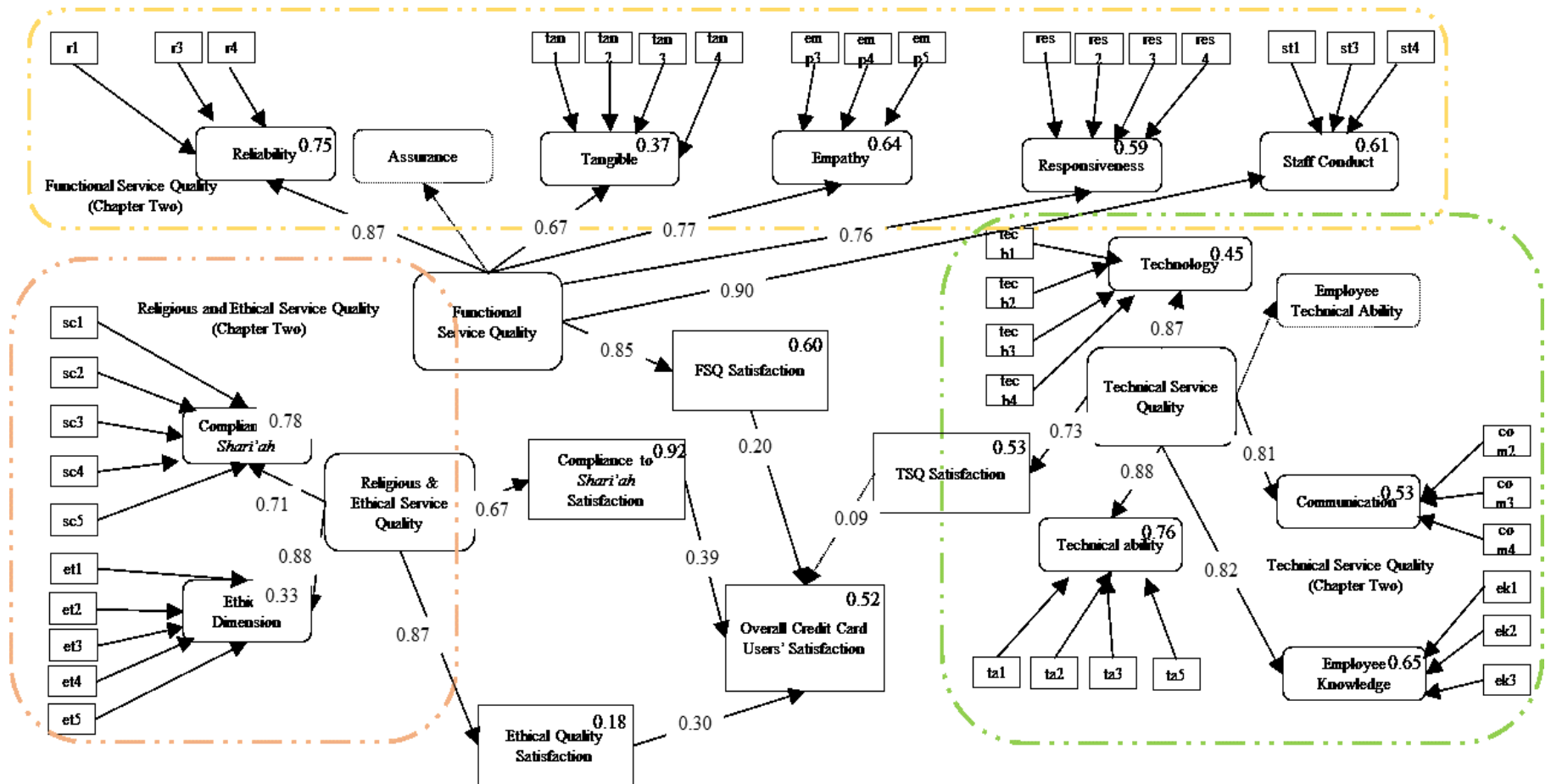
All

Appendix 36: Structural Model for the Integrated Model (CCC)



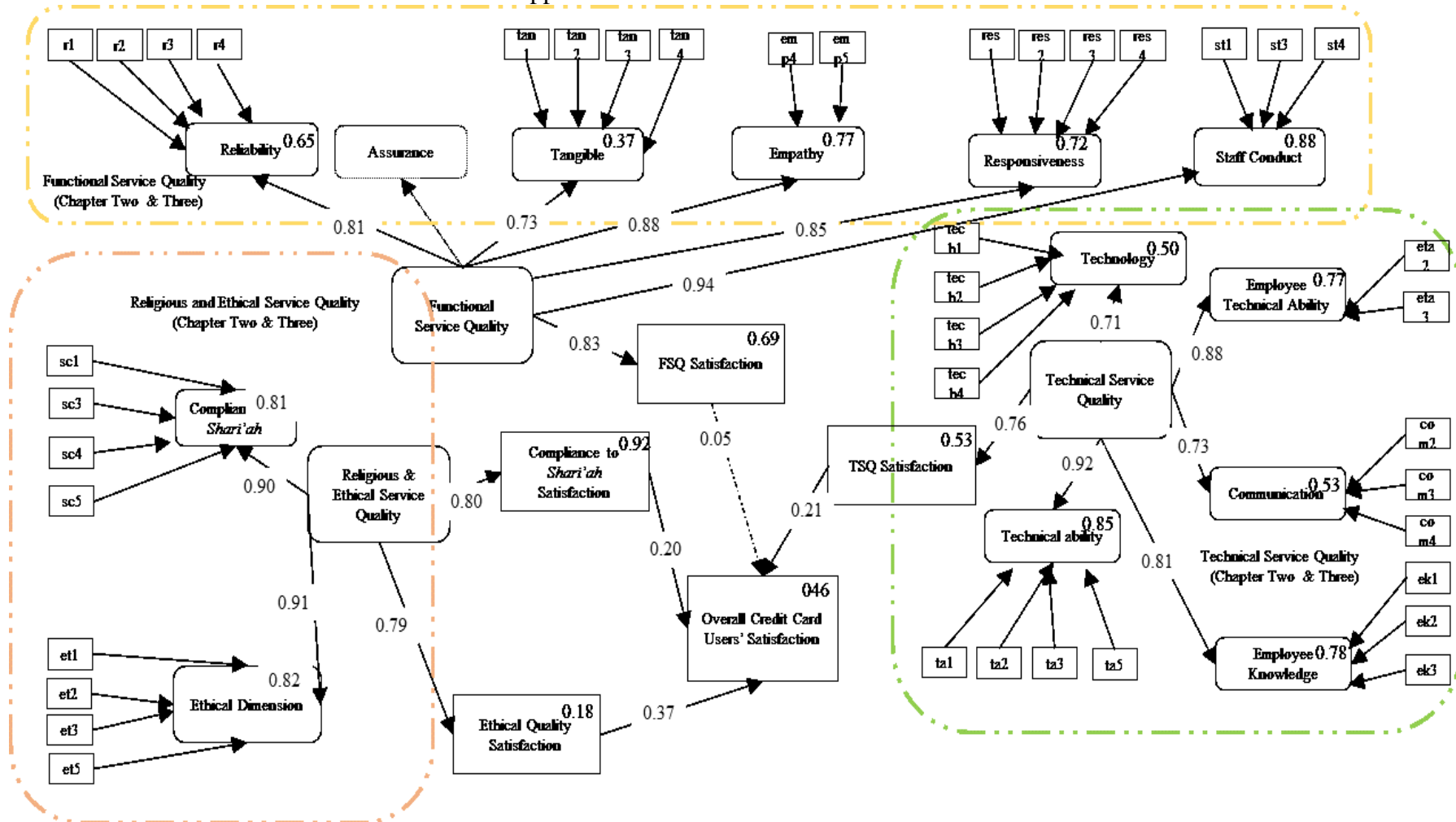
CCC

Appendix 37: The Structural Mode for ICC



ICC

Appendix 38: The Structural Model for Both



BOTH