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# THE INFLUENCE OF BEHAVIORAL FACTORS ON CREDIT CARD DEFAULT AMONG MUSLIM IN KLANG VALLEY

**By**

**ROZAIMI AN**

**Thesis Submitted to**
**Othman Yeop Abdullah Graduate School of Business,**
**Universiti Utara Malaysia,**
**in Partial Fulfillment of the Requirement for the Doctor of Business Administration**

**Kolej Perniagaan**
*(College of Business)*
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Tarikh: **31 Julai 2017**
*(Date)*

Nama Pelajar
*(Name of Student)* : **Rozaimi An**

Tajuk Tesis / Disertasi
*(Title of the Thesis / Dissertation)* : **The Influence of Behavioral Factors on Credit Card Default Among Muslim in Klang Valley**

Program Pengajian
*(Programme of Study)* : **Doctor of Business Administration**

Nama Penyelia/Penyelia-penyelia
*(Name of Supervisor/Supervisors)* : **Prof. Dr. Nik Kamariah Nik Mat**

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# ABSTRACT

The increased of expenditure in recent years has led to the increase of credit card users. Unfortunately, due to certain circumstances, there has been a rise in credit card defaults among the users. Hence, this research aims to investigate the influence of behavioral factors on credit card default among Muslim in Klang Valley, mediating effects of attitude and intention to pay. By utilizing a quantitative approach, six variables namely credit card default, intention to pay, perceived behavior control, religiosity, subjective norm and attitude were measured based on previous validated instruments. 700 questionnaires were distributed to Muslim credit card defaulters in the Klang Valley. 323 questionnaires were returned, representing 46 percent response rate. The main statistical analysis used is structural equation modeling (SEM). The findings reveal that subjective norm, perceived behavior control, religiosity are significant predictors of intention to pay. Perceived behavior control, subjective norm and religiosity are also significant in predicting attitude. Additionally, attitude is the significant mediator between the linkage of perceived behavior control and credit card default. The result discovers there are high defaulters even though the credit card holders have positive intention and attitude towards payment. This result implies that credit card holders might have other financial commitments which made them use credit card to sustain living beyond their mean. They could not control their spending urge when credit card is available. Credit counseling body needs to educate credit card holders on financial management and credit control. These outcomes are immensely valuable for practitioners in planning and executing tailor-made strategic plans.

**Keywords:** credit card default, intention to pay, perceived behavior control, religiosity, subjective norm and attitude.

# ABSTRAK

Peningkatan perbelanjaan dalam tahun-tahun kebelakangan ini telah membawa kepada peningkatan jumlah pengguna kad kredit. Malangnya, keadaan ini turut mengakibatkan meningkatnya jumlah kad kredit tertunggak dalam kalangan pengguna. Oleh itu, kajian ini cuba menyelidik faktor yang mempengaruhi tingkah laku kad kredit tertunggak dalam kalangan penganut agama Islam di kawasan Lembah Klang, serta menyelidik kesan pengantara sikap dan hasrat untuk membuat pembayaran. Dengan menggunakan pendekatan kuantitatif, enam pembolehubah iaitu kad kredit tertunggak, hasrat untuk membayar, persepsi kawalan tingkah laku, ketaatan agama, norma subjektif dan sikap, diukur berdasarkan instrumen yang telah disahkan sebelum ini. 700 soal selidik diedarkan kepada peminjam kad kredit Islam di Lembah Klang. Daripada jumlah ini, 323 soal selidik yang mewakili kadar maklum balas sebanyak 46 peratus telah dikembalikan. Permodelan Persamaan Berstruktur (SEM) digunakan untuk menganalisis data secara statistik. Dapatan kajian menunjukkan bahawa norma subjektif, persepsi kawalan tingkah laku, dan ketaatan agama adalah peramal yang signifikan terhadap hasrat untuk membuat bayaran. Persepsi kawalan tingkah laku, norma subjektif, dan ketaatan agama juga signifikan dalam meramalkan sikap pengguna. Selain itu, sikap merupakan pengantara yang signifikan dalam hubungan di antara persepsi kawalan tingkah laku dengan kad kredit tertunggak. Dapatan kajian mendapati jumlah kad kredit tertunggak masih tinggi walaupun pemegang kad kredit mempunyai hasrat dan sikap yang positif dalam membuat pembayaran. Hasil kajian turut menggambarkan bahawa pemegang kad kredit mungkin mempunyai komitmen kewangan lain sehingga terpaksa menggunakan kad kredit untuk menampung perbelanjaan yang melangkaui keperluan. Mereka seolah-olah tidak dapat mengawal perbelanjaan apabila memiliki kad kredit. Badan kaunseling kredit perlu mendidik pemegang kad kredit tentang pengurusan kewangan dan kawalan kredit. Hasil kajian ini sangat berguna kepada pengamal bidang dalam merancang dan melaksanakan pelan strategik yang bersesuaian.

**Kata kunci**: kad kredit tertunggak, hasrat terhadap pembayaran , persepsi kawalan tingkah laku, ketaatan agama, norma subjektif dan sikap

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# ACKNOWLEDGEMENT

First and foremost, I would like to thank the ALLAH SWT, the ultimate giver of all wisdom and knowledge for HIS guidance, good health, strength and protection throughout my life.

I am most grateful to my supervisor, Professor Dr. Nik Kamariah Nik Mat for her motherly guidance, advice and encouragements, not only during dissertation writing period but also throughout my tenure as a DBA student. Without her broad knowledge and sound ideas, the chapters would not have been possible.

My special gratitude is extended to Associate Professor. Dr. Filzah Bt Md Isa for valuable inputs and suggestions pertaining to credit card default and analysis method. Truly admire your energy which spreads positive auras and uplift students' morale in time of need.

I am also grateful to have friends like Ahmad Kamal Bin Sindin and Aravindan Kalisri Logeswaran, who gave their untiring cooperation, support and assistance selflessly. Without them, I would not have accomplished the conclusion of my dissertation.

Finally, I would like to thank my family members, parents, An bin Sain and Maznah binti Abu Bakar, wife, Normahani, my girls, Nur Rifqah, Nur Rafiqah, Nur Raihan, Nur Raihah, Nur Raidah, Nur Raudhah and my lovely boys, Rafi'uddin, Rusydi, Raqib, Rakin and Razin for their unwavering support and love.

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# CHAPTER ONE
# INTRODUCTION

*"The soul of the believer is held hostage by his debt in his grave until it is paid off."*

Al-Tirmidhi: 1078

## 1.1 Chapter overview

The first chapter introduces the main inspiration of the study on credit card default. In Islam, debt should be settled even if either lender or borrower passes away. This chapter begins with the background of the study, problem statement, research questions, research objectives, significance of the study, the scope of the study, key terms' definitions, and finally, the outline of the thesis structure.

## 1.2 Background

Lately, there is remarkable increased in credit card users in Malaysia. This can be seen from an increased in number of cards in circulation from 8.0 million in 2014 to 8.4 million by July 2015. The number of card in circulation is expected to increase further to an estimated 9 million by December 2015. Furthermore, total overdue balances between three to six months from cardholders by July 2015 recorded RM 351 million which is higher than figure in 2014 which is RM336 million in 2014 (RM or Ringgit Malaysia is the local currency; 3.91 RM is approximately equivalent to 1 USD at the time of this research).

Credit cards such as Visa, Master Card, Diners Club, and others are lines of credit that once established, depending on the terms, allow an individual to spend a certain sum of money and pay back the amount spent either monthly or the full amount. Credit card issuers gain profit by charging interest on the credit card's outstanding balances.

Nowadays, more Malaysians are using credit cards to make purchases. The total credit card purchase in Malaysia has shown tremendous increase in the past few years. For example, the total purchases using credit card had increased to RM61 million in July 2015 (July) (Bank Negara Malaysia, 2015). The total purchases is expected to exceed total purchase in year 2014 which is RM100 billion. This statistics prove that credit cards have become increasing popular as an alternative to cash payment. Indirectly, the credit card industry has become a profitable business to credit card issuers such as banks.

However, credit card issuers are easily exposed to default in credit card payment. Credit card default is defined as those that has failed to make even the minimum payment at least once in the past six months/the number of times in the past 6-months that the respondent has failed to make even the minimum payment on their credit card (Scott, 2005). Similarly, the frequent credit card default definition use in Malaysian financial industry is when a credit card in arears for three months or more (Mansor Kesot@Ali, Head of Operation Department). The problems faced by credit card issuers have been brought up in previous researches. For example, previous studies have emphasized that credit card issuers are incessantly faced with default payment from their customers (Loke, 2008; Scott, 2005). A constantly increasing total outstanding balance due from cardholders is a challenge faced by credit card issuers in Malaysia. The issue is further alarming if the total outstanding balances have to be converted to non-performing loan.

The credit card's non-performing loans had reached RM 452 million in the first seven months year 2015 an increase from 431 million in 2014 (Bank Negara Malaysia, 2015). Loan is categories as non-performing loan when the borrower is not making interest payments or repaying any principal (Financial Times, 2016). Many loans become non-performing after being default for 90 days. However, this duration can depend on the contract term. Malaysia's household debt stood at RM1.03tril or 89.1% of gross domestic product (GDP) (Datuk Chua Tee Yong, Malaysian Deputy Finance Minister, 2015). Malaysian is transforming into a debt culture nation.

The statistics from AKPK confirm that there is a high number of credit cardholders who face difficulty in settling their debts. As at April 2016, credit card debts made up the bulk of cases at 70% of 150,706 persons attended the credit management program at AKPK (Azaddin Ngah Tasir, AKPK Chief Executive Officer, 2015). This figure shown tremendous increase from figure in 2010 which is 10.6% from 50,361 cases enrolled in debt management program was due to inability to pay their credit card debts (Nie, 2010).

From the above discussion, it is can be observed that non-performing credit card loans in Malaysia are still high. There is a need to identify the root cause of the non-performing loans especially since this defaulting occurs even though the credit card penetration is only 24% in Malaysia. Previously, the behavioral causes of credit card default were not empirically studied. Hence, there is a gap in credit card default study in Malaysia. Therefore, the main purpose of this study is to identify the antecedents of credit card default through investigation of consumer behavior factors among Muslim credit card holders in Malaysia. Finding answers to this jigsaw puzzle has motivated the researcher to carry out this research.

## 1.3 Problem Statement

This study has identified four (4) problem statements pertaining to credit card default in Malaysia. They are identified and derived from analyzing this study's issues. The problem statements are thoroughly discussed in the next paragraph.

### 1.3.1 High credit card default

High credit card default can be evidenced from total credit card outstanding balance and credit card non-performing loan. The credit card non-performing loans had also reached RM 452.5 million by July 2015 (Bank Negara Malaysia, 2015). This amount was 1.9% of the total non-performing loan for year 2015.

The total credit card outstanding balance has reached to RM34.9 billion by July 2015 from 35.7 billion in 2014 (Bank Negara Malaysia, 2015). The total credit card balance in end of year 2015 was expected to surpass figure in 2014.

### 1.3.2 Fragmented model and limited study.

The fragmented aspects in credit card default can be observed from previous study models from a simple to a complex research model. For example, Alex and Raveendran (2008) suggested four (4) direct antecedents and two (2) indirect determinants of credit card default. In a study by Scott (2005), 14 direct determinants were linked to credit card default. Lyons and Fisher (2006) employed a simple direct model that examined ten (10) antecedents of credit card debt (homeownership, age, income, education, children, week unemployed, health, average per capita income, state unemployment rate, and year dummy variables). Similarly, Stavins (1999) examined thirteen antecedents with direct relationships to delinquent. In addition, Dunn and Kim (1999) suggested 11 direct antecedents to credit card default.

Few previous studies in credit card default have examined the demographic profiles, ordinary data, and financial factors as the variables in predicting credit card default (Scott, 2005). Income, interest rate, house ownership, age and marital status are among the variables frequently used to predict credit card default (Lycas and Fisher, 2006; Scott, 2005; Stavins, 1999; Dunn and Kim, 1999). Previously, limited studies were conducted on credit card default using empirical analysis (Alex & Raveendran, 2008). Their study, however, used credit card spending behavior as the antecedents.

Previous researches on credit card default used demographic profiles, nominal, ordinary data, and economy to explain credit card default (Lycas & Fisher, 2006; Scott, 2005; Stavins, 1999; Dunn & Kim, 1999). For example, antecedents such as marital status, income, and age were used by Scott (2005) and Stavins (1999), while house ownership was used by Lycas and Fisher (2006), Scott (2005), Stavins (1999), Dunn and Kim (1999); number of children by Lycas and Fisher (2006), Stavins (1999), Dunn and Kim (1999); and number of credit cards that reached the credit-limits was used by Scott. 2005; Stavins, 1999; Dunn and Kim, 1999.

In addition, previous studies on credit card default had used descriptive rather than relationship analysis in explaining credit card default (Lycas & Fisher, 2006; Scott. 2005; Stavins, 1999; Dunn & Kim, 1999). For example, antecedents such as marital status, income, and age were used by Scott (2005) and Stavins (1999) while house ownership was used by Lycas and Fisher (2006), Scott (2005), Stavins (1999), Dunn and Kim (1999); number of children by Lycas and Fisher (2006), Stavins (1999), Dunn and Kim (1999); and number of credit cards that reached the credit-limits was used by Scott (2005); Stavins (1999); Dunn & Kim (1999).

Additionally, the antecedents, especially behavioral and attitudinal, leading to credit card default were not all verified empirically. A few factors are suspected to be causes of credit card default, but no empirical study is available to support the claim. It is therefore imperative to conduct a more comprehensive study on this topic by conducting an empirical study focusing on consumer behavioral factors expected to influence credit card default in Malaysia. Hence, the current research has included consumer behavior variables suspected to influence credit card default. The antecedents were chosen in line with the suggestion made by Alex and Raveendran (2008), who advocated that future studies on credit card default should include non-financial factors to predict credit card default in the retail market.

Further review of credit card debt models reveals that diversified factors are being used as the determinants of behavior for the models. For example, Jiang, Lv, & Wang (2011) suggested two (2) direct determinants (revolving credit use and petty installment used) and six (6) direct determinants for credit card debt (money attitude, satisfaction, credit card attitude, debt attitude, risk attitude, and unrealistic optimism). Ahmed et al. (2010) proposed one (1) direct determinant (attitude) and seven (7) indirect determinants (time, consciousness, lifestyle, peer group pressure, exposed to advertisement, self-esteem, and gregariousness). In addition, Chien and Devaney (2001) suggested ten (10) direct determinants (age, household size, ethnicity, marital status, professional status, education, homeownership, income, liquid assets, and specific attitude).

Examining the Theory of Planned Behavior (TPB) revealed that the framework had been used successfully in predicting consumer behaviors. Hence, the model has the potential to predict credit card default successfully. Some of the previous researches, which have been done using the TPB as the underpinning theory are on ethical sales (Ferdous & Polonsky, 2013), Halal food (Alam *et al*., 2012; Alam & Sayuti, 2011), tourism (Jalilvand & Samiei, 2012), purchasing fake products (Riquelme, Abbas, & Rios, (2012), speeding intention (Cestac, Delhomme, & Paran, 2011), technology usage (Teo & Lee, 2010), credit card usage (Rutherford & DeVaney (2009), technology implementation (Baker, Al-Gahtani, & Hubona, 2007), deshopping behaviour (King & Dennis, 2006), credit counseling (Xiao & Wu, 2006), and illegal software copying (Chang, 1998).

Attitude, subjective norm, perceived behavior control, intention, and religiosity were identified among the important antecedents in predicting unethical customer behavior. However, the interrelationship among the factors in credit card default is still unknown.

Several past studies have suggested that religiosity is important in shaping one's behavior. Studies indicate a clear association between religiosity and its influence on various dimensions of consumer behavior (Yousaf & Malik, 2012). Religiosity is defined as an intricate concept and a variegated human phenomenon, and seems to cover considerable ground such as behaviors, attitudes, beliefs, feelings, and experiences (Khraim, 2010). Similarly, Butt and Mukhtar (2011) defined religiosity as the intensity of one's religious beliefs.

Hence, there would be a major handicap in studying credit card default if religiosity is not examined as one of the antecedents. The influence of religiosity in credit card default is another area that should be explored. Considering many researchers have agreed that religiosity is an important determinant of consumer behavior, the current research investigates the influence of religiosity in credit card default. This decision is further supported by Muhamad and Mizerski (2010) who suggested that the influence of religion on consumers and buyers' decision making and marketplace behaviors in the marketing areas is still unknown.

Moreover, Lindridge (2005) suggested that religion significantly determines cultural and social behaviors in Eastern societies as compared to the Western. The fact that this study is conducted in Malaysia, which is located in the Eastern region, gives an opportunity to confirm the influence of religion in the Eastern society.

Furthermore, the TPB allows additional variables to be incorporated into the model (Bailey, 2006; Ajzen, 1991; Peace *et. al*., 2003; Tonglet, 2002). Therefore, religiosity has been added as a new variable to TPB to study credit card default. It is chosen because the factor is likely to affect the intention and behavior towards credit card default. The rest of the variables chosen for this study have been used in previous applications of TPB. Hence, the current study adapts the instruments from the previous studies.

In order to give a more comprehensive view of this topic, an empirical study using consumer behaviors especially behavioral and attitudinal factors to predict credit card defaulter is needed.

### 1.3.3 Lack of Mediation Studies

Previous studies lack the use of an underpinning theory to explain credit card default. In addition, most previous credit card default studies did not consider a mediating effect instead they mainly focused on direct relations (Lycas & Fisher, 2006; Scott, 2005; Stavins, 2000, Dunn & Kim, 1999). Only in a study by Alex and Raveendran (2008), was compulsive buying suggested as the mediating effect on credit card default. However, the mediation effect was not established in the study.

Similarly, intention has been suggested in consumer behavior studies that adopted the TPB as the underpinning theory. However, no mediation test was performed by most researchers. Hence, this has caused ambiguity on the intervening variables of intention towards consumer behavior studies. For instance, in unethical behavior studies, the mediation test was not tested by the researchers (Ferdous & Polonsky, 2013; Riquelme, Abbas, & Rios, 2012; Cestac, Delhomme, & Paran, 2011; King & Dennis, 2006; Chang, 1998). Similarly, in other consumer behavior studies, the mediation test was also not established by the researchers (Jalilvand & Samiei, 2012; Alam et al., 2012; Alam & Sayuti, 2011; Teo & Lee, 2010; Rutherford & DeVaney, 2009; Baker, Al-Gahtani, & Hubona, 2007; Xiao & Wu, 2006). Hence, the current study aims to examine the mediating effect of intention on the determinants towards credit card default.

Previous studies on consumer behavior (Malik & Yousaf, 2012; Butt & Mukhtar, 2011) showed a positive relation between religiosity and attitude. The significant result of this relationship shows the importance of attitude as a mediating factor in consumer behavior. Subsequently, this study aims to examine the mediating effect of attitude in credit card default.

The empirical research on consumer behavior using a credit card model still demands further study. There are gaps such as the lack of empirical behavioral studies, usage of mostly demographic variables in previous studies, and mediating effects were never established.

A mediating effect is examined in this current study. The essence of the study is to increase empirical literature and to understand the possible reasons for high credit card default. Due to all the problem statements, the researcher aims to close the previously existing gaps in credit card default study by conducting this current research.

### 1.3.4 Other Reasons for High Credit Card Default

The increase in the number of credit card defaulters could be due to many factors. The behavior aspects of the users are suspected to be among the factors that contribute to this issue. One of the factors could be attributed to the attitude of credit card users. This is asserted by Mohamed Akwal Sultan, AKPK Chief Executive Operation:

*"Some individuals start to have repayment issues when they are even younger because many of them do not have salaries that commensurate with their lifestyle" (Sultan, 2010).*

Credit card holders' attitude to live beyond their means has forced them to look for alternative funds to commensurate their living. At the end, they are trapped with credit card bills for which they cannot even afford to pay the required minimum amount payment.

Besides attitude, previous studies indicate that consumers' behavior is also influenced by those whom he/she thinks is important in his/her life (subjective norm). The influence on their behavior might come from peers, society, and parents. The affected behavior includes consumers' financial behavior. This is asserted by the statement below:

*"43% of the respondents make their own choices without anyone's advice while 21% seek advice from friends, relatives and colleagues when deciding on personal finance or wealth matters" (Nielsen Global Survey of Investment).*

## 1.4 Research Questions

The main purpose of this study is to investigate the antecedents that influence credit card default in Malaysia. In order to fulfill this objective, the framework for this study has been developed based on the Theory of Planned Behavior (Ajzen, 1991). This study adds religiosity as the new antecedent since religion, especially Islam, takes the matter of debt seriously. In addition, attitude and intention to pay act as the mediating variables, and they are verified in the current study.

In view of the research problem, this research highlights five (5) research questions for this study.

1- What are the significant predictors (intention to pay, perceived behavior control, religiosity, subjective norm and attitude) of credit card default?

2- What are the significant predictors (subjective norm, perceived behavior control, and religiosity) of intention to pay?

3- What are the significant predictors (perceived behavior control, subjective norm, and religiosity) of attitude?

4- What is the mediating role of attitude between subjective norms - credit card default, perceived behavior control - credit card default, and religiosity - toward credit card default?

5- What is the mediating role of intention to pay between subjective norms - credit card default, perceived behavior control - credit card default, and religiosity - toward credit card default?

## 1.5 Research objectives

The general objective of this study is to identify the antecedents that influence credit card default in Malaysia. There are five (5) specific objectives in this study.

1. To examine the direct relationship between intention to pay, perceived behavior control, religiosity, subjective norm, and attitude toward credit card default.

2. To investigate the direct relationship between subjective norm, perceived behavior control, and religiosity toward intention to pay.

3. To determine the direct relationship between perceived behavior control, subjective norm, and religiosity toward attitude of credit card default.

4. To examine the mediating effect of attitude between subjective norms - credit card default, perceived behavior control - credit card default, and religiosity - toward credit card default.

5. To explore the mediating effect of intention to pay between subjective norms - credit card default, perceived behavior control - credit card default, and religiosity - toward credit card default.

## 1.6 Significance of Study

The objective of this study is to examine the direct and indirect antecedents of credit card default by using the underpinning theory of TPB as suggested by Ajzen (1991). The study is conducted to benefit academic research and credit card issuers especially banks in Malaysia.

The new contribution to this study, religiosity is a new variable included in this study since it has not be linked in previous study to credit card default. Furthermore, there are fragmented models and very limited study investigating credit card default empirically. In the following paragraph, the study's contributions are discussed:

### 1.6.1 Contribution to Academia

The proposed TPB may enhance the credit card holders' usage behavior, as previous research in credit card default did not refer to any underpinning theory. This study extends the construct of the TPB model in order to have a more comprehensive impact on credit card default in Malaysia. This study has included religiosity as the new antecedent with mediation by attitude to the original TPB model.

In addition, the outcome of the research especially pertaining to direct and indirect effects of the proposed antecedents of credit card default may improve the empirical literature in the marketing field and other related disciplines such as Islamic studies. The results could assist researchers in the future on how customers behave towards selected antecedents to credit card default based on the proposed theoretical framework.

### 1.6.2 Contribution to Practitioner

Credit card issuers, especially in Malaysia, could gain an advantage from this study's results. This is mainly based on the revelation of new insights that influence credit card default. Credit card issuers can benefit via a lesser number of credit card defaults and increase their profit amount from the credit card business. This can be achieved by strategic marketing activities, in-line with findings of this study. Moreover, the finding on religiosity's influence will also give a new dimension on the improvement of consumers' attitude.

The results of the research would help credit card issuers to determine their target credit cardholders who would be more disciplined in making constant repayment. The comparison study to understand the knowledge gap (if any) on credit card default between credit card consumers and industry practitioners would assist practitioners to come up with credit services that would mitigate credit card defaulters. In the long run, this could result in reduced customer default and improved credit card payment collection.

The findings also have important implications for financial professionals, debt management, and consumer educators who provide financial education and other related services. If variables on consumer behaviors are found to influence credit card default problems then proper education and awareness of the consumer behavior factors might reduce the credit card default issue. Proper programs and modules that specifically educate consumers about debt management strategies and various behaviors to control credit card default can be developed from this study's outcome.

### 1.6.3 Contribution to the Government and Bank Negara Malaysia

The finding from this study could provide new guidelines for establishing policy in the banking industry especially on credit card service. The related agencies that provide guidelines and regulations to the banks are BNM and the Ministry of Finance (MOF). New guidelines and regulatory enforcements by BNM could protect the interest of credit card holders especially in the area of security and privacy issues that are related to default by bank customers.

## 1.7 Scope of the Study

The scope of this study is limited to Muslim credit cardholders in Malaysia from an estimated 2.8 million credit cardholders. This figure is derived from the total number of credit card in circulation was 8.4 million in the first half of 2015 (Bank Negara Malaysia). Every Malaysian credit card holder owns an average of three credit cards (Teoh, Chong and Yong, 2013; Daily Express 2007) The researcher selected this population because Malaysians are the worst credit card re-payers and credit default has been constantly high in recent years (Lee, 2012).

The study is conducted in the Klang Valley (Kuala Lumpur, Selangor, and Putrajaya) because it is has the most highly dense population in Malaysia. Currently, reported total population here is 26% of the total Malaysian population. The population frame, which consists of credit cardholders in Klang Valley, is chosen because most banks' headquarters are located in the Klang Valley such as Citibank, Maybank, CIMB, and Bank Islam.

## 1.8 Definitions of key terms

A few key terms are used throughout this research.

Table 1.1
*Definition of Key Variables in this study*

| **Variable Name** | **Definition** | **Sources/Reference** |
|---|---|---|
| Credit card default | is the point which consumers are no longer able to make the minimum payments on their credit card balances | (Scott, 2007; Dunn and Kim, 1999). |
| Credit card debt | is the total outstanding balance on the credit cards that respondents are currently holdings. | (Chien & DeVaney, 2001) |
| Attitude | Perception of personal desirability to perform that said behavior | Ajzen (1991) |
| Subjective Norm | Represents an individual's normative belief concerning a particular referent weighted by the motivation to comply with that referent | Shih and Fang (2004) |
| Perceived Behavioral Control | An individual's perceived ease or difficulty of performing the particular behavior | Ajzen (1991) |
| Intention | The individual's observable response in a given situation with respect to a given target, behavior is a function of compatible intentions | Ajzen and Fishbein (1975) |
| Religiosity | is defined as the intensity of one's religious beliefs | Butt and Mukhtar (2011) |

## 1.9 Organization of the Thesis

This research's main objective is to investigate the behavior factors on credit card defaulter among Muslims credit cardholders in Klang Valley. The research contains five chapters.

Chapter one commences by providing the background of the study. This section discussed issues that give motivation to the researcher to conduct this study. The discussion is continued further towards the antecedents of credit card default. Then, it is continued with the problem statement, research objectives, research questions, and finally, with the significance of the research followed by the scope of the study.

Chapter Two offers a thorough discussion of the literature review on the credit card industry. It also provides credit card default models, credit card debt models and other consumer behavior models. These models are discussed followed by a discussion on the direct and indirect antecedents of credit card default. This chapter's literature discussion demonstrates relevant and important knowledge on credit card default based on past studies.

Chapter Three provides the research methodology for this current research. Research and hypotheses derived from the literature and theories are presented at the beginning of the research. The chapter continues with the discussion by giving operational definitions and justification for the selection of the instruments. The instruments for each variable are given followed by the discussion on sampling, data collection procedure, and data analysis method.

Chapter Four represents the data analysis and findings of this research. The research findings are referred back to the hypotheses identified in Chapter Three. The research findings are tabulated in the form of tables, figures, and charts to make them visual and easier to understand. This chapter concludes on the hypothesis status based on the research findings. This outcome of the hypothesis conclusion then relates back to the problem statement and research objectives.

Chapter Five concludes the research outcome based on each objective. The research outcome refers to the outcome of each hypothesis. Each hypothesis outcome is discussed in detail including the possible factor, which could have caused the outcome. Then, this chapter proceeds with the discussion on the implications of the research outcome on academicians and practitioners. This research wraps up with a discussion on the study limitations and suggestions for future study.

# CHAPTER TWO
# LITERATURE REVIEW

*"And if one of you deposit a thing on trust with another. Let the trustee (Faithfully) discharge His trust: and let him fear his Lord."*

Quran 2: 283

## 2 Introduction

This chapter's discourse on literature review starts with credit card default and its impact. This is followed by a discussion on the underpinning theory and a discussion on previous determinants of credit card default. Attitude, subjective norm, perceived behavior control, religiosity, and intention to pay are among the determinants presented in this chapter.

## 2.1 Background of Credit Card Industry in Malaysia

Credit card was first introduced in Malaysia during the mid-1970s (Loke, 2007; Ahmed et al., 2010). Credit card is a payment card issued to users as an alternative payment system to the previous cash payment. It allows the cardholder to pay for goods and services based on the holder's promise to pay for them. The issuers of the card, namely banks, create a revolving account and grant a line of credit to the consumer (or the user) from which the user can borrow money for payment to a merchant or as a cash advance.

A credit card is a flexible financial tool for day-to-day life. It creates an attractive credit history, and can serve as a safe means to purchase online at the purchaser's convenience. It is handy, gives access to funds 24/7, and covers emergency costs, conveniently. Credit cards are accepted worldwide, therefore creating a safe and convenient environment for users. With all the interesting features, this alternative payment method has given a new dimension to consumers' daily spending.

The right to ownership of a credit card has changed from those early days. Credit card issuers look into applicants' demographic factors such as income, employment, and education in approving any credit card requisition. Credit cards were only issued to the rich, professionals, or those considered as successful businesspersons during the early days (Ahmed, Alias, Ismail, Sohail, & Tabsh, 2010; Loke, 2008). However, the minimum prerequisite income to qualify for credit card ownership has experienced tremendous change in the Malaysian financial market. Currently, credit card issuers even allow spouses and children to possess credit cards through supplementary methods.

The credit card's user friendly and widely accepted features have helped the industry to grow. In addition, this industry also gets support and encouragement from the government. This definitely helps the industry to continue flourishing.  Credit card industry continues to grow in this country due to the support from the local government and the highly accepted credit card as a medium of payment (Phau & Woo, 2008).

The card has gained popularity as a new payment method. The popularity, aside from the early introduction years, continues until today as a medium of payment  (Teoh, Chong, & Yong, 2012). In fact, it has been viewed as a new payment technology to process payments and settlements for merchants (Loke, 2008).

Similarly, credit card growth is an important source of income to the bank. This can be seen from the profiling of credit card issuers and the statistics that continue to rise;

for example, the number of credit cards in circulation and credit card transactions in Malaysia.

Statistics show that the number of credit cards has increased. The circulation of credit cards in Malaysia has reached a total of 9.0 million as at August 2016. This is the highest statistics since 2012 (Table 2.1).

Table 2.1
*Number of Credit Cards in Circulation*

| | Number of Credit Card in Circulation (mil) | | | | |
|---|---|---|---|---|---|
| Year | 2012 | 2013 | 2014 | 2015 | 2016 (up to August) |
| Principal cards | 7.2 | 7.2 | 7.1 | 7.7 | 8.0 |
| Supplementery cards | 0.9 | 0.9 | 0.9 | 0.9 | 1.0 |
| Total | 8.1 | 8.1 | 8.0 | 8.6 | 9.0 |

Source: Bank Negara Malaysia (2016)

Similarly, the number of credit card transactions shows an increasing trend. For example, in 2013, the number of credit card transactions was 332.4 million and increased to 356.6 million in 2015. By August 2016 the number of credit card transactions had reached 252.1 million (Table 2.2).

Table 2.2
*Number of Card Transactions*

| | Number of Card Transactions (mil) | | | | |
|---|---|---|---|---|---|
| Year | 2012 | 2013 | 2014 | 2015 | 2016 (up to August) |
| Number | 325.3 | 332.4 | 345.7 | 359.6 | 252.1 |

Source: Bank Negara Malaysia (2016)

In addition, total purchase using credit card has increased. For example, local cardholders' total purchase has shown an increasing trend for the past five years. The total purchase amount by local cardholders is RM81, 372.9 million, RM86, 705.2 million, RM91, 503.1 and RM96,793.2 in the years 2012, 2013, 2014 and 2015 respectively (Table 2.3).

Table 2.3:
*Total Credit Card Purchases (RM mil) 2012 to 2016 (August)*

| | Total Purchases (RM mil) | | | | |
|---|---|---|---|---|---|
| Year | 2012 | 2013 | 2014 | 2015 | 2016 (up to August) |
| Local Cardholders | 81,372.9 | 86,705.2 | 91,503.1 | 96,793.2 | 66,173.5 |
| Foreign Cardholders | 7,043.8 | 9,420.8 | 8,693.0 | 7,985.3 | 5,633.2 |
| Abroad | 9,897.4 | 10,586.1 | 12,000.1 | 13,542.4 | 9,590.1 |
| Total | 88,416.7 | 96,126.0 | 100,196.1 | 104,778.5 | 81,396.8 |

Source: Bank Negara Malaysia (2016)

Furthermore, total credit card outstanding balances have increased. For example, in 2012, the number of credit card transactions was RM34, 031 million and it increased to RM 36, 373 million in 2015 (Table 2.4).

Table 2.4:
*Total Outstanding Balances (RM mil) 2012 to 2016 (August)*

| | Total Outstanding Balances due from Cardholders (RM mil) | | | | |
|---|---|---|---|---|---|
| Year | 2012 | 2013 | 2014 | 2015 | 2016 (up to August) |
| Current Balances | 31,564.60 | 32,882.60 | 32,841.40 | 33,651.60 | 33,150.3 |
| Less than 3 Months | 2,028.10 | 2,178.00 | 2,493.90 | 2,358.10 | 2,331.9 |
| Between 3 to 6 Montl | 405.30 | 403.70 | 335.80 | 352.40 | 351.8 |
| More than 6 Months | 32.60 | 19.20 | 7.20 | 10.50 | 9.0 |
| Total | 34,030.60 | 35,483.50 | 35,678.30 | 36,372.60 | 35,843.00 |

Source: Bank Negara Malaysia (2016)

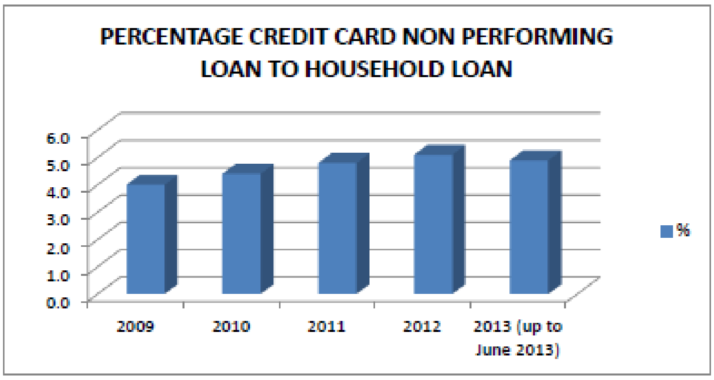

Figure 2.1
*Percentage of credit card non-performing loan against household loan.*
Source: Bank Negara Malaysia (2013)

## 2.2 Types of Credit Card in Malaysia

There are at least two types of credit cards in Malaysia, namely the "Islamic based credit card" and the "conventional credit card" (Yee et al., 2007). Bank Negara Malaysia (BNM, 2009) reported that there were 24 credit card issuers in Malaysia, of which 21 were banking institutions. Table 2.5 lists a sample of credit cards provided by Malaysian local banks and Table 2.6 lists a sample of credit cards provided by foreign local banks in Malaysia.

Table 2.5
*Sample of Credit Card Services Provided by Malaysian Local Banks*

| Credit Card Issuer | Name of Credit Card | Benefits | Free Gift |
|---|---|---|---|
| Malayan Banking Berhad | Maybankard 2 Gold Cards | Unleash the power of 2 with Maybankard 2 Gold Card – apply for a MasterCard and get an American Express Card absolutely free! | Free RM200 The Body Shop e-Voucher - Only at RinggitPlus! |
| Malayan Banking Berhad | Maybankard 2 Platinum Cards | Double the benefit – get a Maybankard 2 American Express Card for free when you apply for a Maybankard 2 MasterCard. Get accepted everywhere. | Free RM200 The Body Shop e-Voucher - Only at RinggitPlus! |
| Malayan Banking Berhad | Maybankard Visa Gold | A Visa card with bigger and better benefits for folks who want to upgrade their Classic cards and enjoy exclusive dining, shopping, and travel perks. | Free RM200 The Body Shop e-Voucher - Only at RinggitPlus! |
| CIMB Bank | CIMB Preferred Visa Infinite | Providing CIMB Preferred members with excellent priority banking services, whether its for investments or ever day transactions. | None |

Table 2.5 (Continued)

| Name of Credit Card | Benefits | Free Gift |
|---|---|---|
| CIMB Cash Rebate Platinum MasterCard | Rebates galore! 5% cashback for online shopping, 2% cashback on groceries, petrol, mobile and utilities, and 0.2% cashback on everything else. | None |
| CIMB Platinum MasterCard | The CIMB Platinum MasterCard - enjoy year after year of financial freedom with zero annual fees, reward points, and interest free instalments. | None |
| Bank Islam Platinum Visa Credit Card-i | Live the Platinum Lifestyle with a wealth of travel and shopping privileges, loyalty reward points and generous Takaful coverage. | None |
| Bank Islam World MasterCard Card-i | An exclusive premium credit card for the world traveller craving unique experiences - based on Shariah principles. | None |
| Hong Leong MATTA Platinum Visa | Tons of fun to be had abroad with 1% cashback on shopping, free travel insurance of up RM1.7 million, and VIP entry to MATTA fairs nationwide. | Get a Free Lebensstil Pyramid Kettle - Only at RinggitPlus! |
| Public Bank World MasterCard Credit Card | Enjoy free access to Plaza Premium Lounges in Malaysia for 5 times a year! You can now save even more with 8% cashback on dining and groceries | None |
| BSN Gold MasterCard Credit Card-i | No fool's gold here. Swipe your way to more savings, no annual fees, and complimentary Takaful travel insurance with the BSN Gold MasterCard-i! | None |
| AmBank M-Platinum Visa Card | Collect tons of reward points when you spend in Malaysia or overseas. Secure your holiday with free travel insurance and purchase protection! | None |
| AmBank Islamic Visa Gold CARz Card-i | AmBank Islamic Visa Gold CARz Card-I, a credit card that caters for motorists packed with auto related benefits - get cash rebates on any petrol brand! | None |

Table 2.6

*Sample of Credit Card Services Provided by Foreign Local Banks in Malaysia*

| Credit Card Issuer | Name of Credit Card | Benefits | Free Gift |
|---|---|---|---|
| CitiBank Berhad | Citibank CashBack Credit Card | Get attractive cash back of up to 5% on all your purchases including petrol and groceries everyday. There's no minimum spend required! | Complimentary Robot Vacuum - Only at RinggitPlus! |
| CitiBank Berhad | Citibank CashBack Platinum | Up to 5% cash back on petrol, groceries, phone bills, pharmacies and more. No registration, no minimum spend. Just shop and save! | Complimentary Robot Vacuum - Only at RinggitPlus! |
| CitiBank Berhad | ShellCitibank Gold Credit Card | New enhanced Shell-Citi Gold Credit Card - combine all your spending to earn cash rebates of up to 8% on petrol at any Shell station nationwide. | Complimentary Robot Vacuum - Only at RinggitPlus |
| CitiBank Berhad | Citibank Clear Visa | Whatever your spending your money on the Citi Clear Visa offers priority access and a host of great rewards for life in the fast lane. | Complimentary Robot Vacuum - Only at RinggitPlus! |
| CitiBank Berhad | Citi Business Platinum Card | A unique card that balances your business and lifestyle needs, both locally or abroad. Whenever and wherever you spend, you earn cash back. | Complimentary Robot Vacuum - Only at RinggitPlus! |
| Standard Chatered | Standard Chartered JustOne Gold MasterCard | | |
| Standard Chatered | Standard Chartered JustOne Platinum Master | Shop online, swipe on petrol and setup auto-billing to enjoy great rebates up to 15% each month with the cashback card that's designed for the savvy user. | Complimentary iDover Air Fryer - Only at RinggitPlus! |
| HSBC | Standard Chartered JustOne Platinum Master Card-i | | |
| HSBC | HSBC Visa Platinum | Meet your new shopping buddy. Grab up to 8X reward points on your purchases at the mall, and claim for awesome dining and travel rewards! | Get a Free Pressure Cooker - Only at RinggitPlus! |
| UOB | UOB PRVI Miles Card | Giving you rewards and cashback for swiping - 5x UNIRinggit and up to 10% SMART$ Rebate. Enjoy 12x access to Plaza Premium Lounge in Malaysia and more cashback on trips to KLIA using ride-hailing services and KLIA Ekspres. | None |
| UOB | UOB Preffered Platinum MasterCard | Pay for your shopping for cheap with high SMART$ Rebates of up to 10%. Earn 2x rewards points on all your online and overseas spending. | None |
| Alliance Bank | Alliance Bank Visa Gold | Enjoy thrilling discounts, Timeless Bonus Points that never expire on every Ringgit spent with your Alliance Bank Visa Gold card. | Complimentary Barry Smith Luggage - Only at RinggitPlus! |
| Alliance Bank | Alliance Bank Master Card Classic | Earn your way to free air tickets from Malaysia Airlines and Air Asia wherever you swipe. Book your next holiday with reward points that never expire! | Complimentary Barry Smith Luggage - Only at RinggitPlus! |

## 2.3 Credit Card Defaults

Besides its newly convenient features and wide acceptance as an alternative mode of payment, the credit card has inflicted consumers with a new habit. Credit card consumers have become more prone to debt. Credit card offers a revolving loan without any collateral. Changing from installments to a revolving loan affects consumer household debt. Some characteristics of the revolving loan have contributed to the increase of the household loan.

Most loans, for example, have fixed interest rates and fixed repayment schedule. Credit card, on the other hand, has different interest rates based on the consumers' payment records. In addition, credit card payment does not have a fixed payment schedule; instead, it has a flexible payment method whereby only a minimum payment of five percent of the current balance is needed as a monthly repayment.

Hence, credit card users have the option to decide on how much monthly payment they want to make as long as they meet the minimum monthly payment.

The system allows the credit card to be considered as an unofficial loan made against a customer's monthly purchase. Besides the characteristics of the revolving loan, it is also claimed that a credit card bill has features that encourage more borrowing. For example, the figure for minimum payment is printed in bold whereas the full amount is shown in a small font. Some credit card holders use credit cards for both transacting and borrowing. Those consumers pay less than the full amount due each month. As a result, they pay interest from the date of purchase. The system allows for more defaulters since unpaid balance accumulates due to interest charges and new spending.

The credit card defaulters place a greater risk on the credit card issuers. They affect the credit card issuers' revenue. Therefore, the ability to predict these high-risk groups could help credit card issuers to manage the high-risk group from their credit card consumers and reduce the possibility of loss income.

A global survey has revealed that Malaysians are among the worst credit card re-payers in the Asia-Pacific region. Less than 50% of the local respondents polled online say they repay their credit card debts in full every month. The highest repayment rate was in Taiwan. In that country, 89% of the respondents service their credit card bills in full. This was followed by Japan (87%), and South Korea (85%). Malaysian's neighbors specifically, Singapore and Indonesia, also have better percentages with 80% and 59%, respectively (Lee, 2012).

As a result of the low percentage of Malaysians who pay their credit card debts in full every month, the total outstanding balances due from cardholders in Malaysia have increased. Credit card debt is one of the household debts that has shown a major increase in the past year. Increase of credit card debt reports by CIMB research dated 28 October 2010 shows that credit card lending has accelerated by 16.4% per annum between 2000 and August 2010 – the fastest growing component of household debt at the present time (The Edge Malaysia, 2010). More recent statistics show that there is an increase of credit card debt among credit card holders in Malaysia. Malaysia's household debt has steadily increased from 75.8 percent in 2010 to 76.6 percent in 2011, and to 80.5 percent 2012. It is mainly due to credit card and personal debts. This phenomenon had prompted calls for attentions from financial analysts in the region (The Malaysian Insider, 2013).

Credit card default was defined by Scott (2005) as, “the number of times in the past 6-months that the respondent has failed to make even the minimum payment on their credit card debt”. Similarly, Kim (2000) described credit card default as the delinquency of a consumer or household in paying at least the minimum payment due on their credit card balance(s)”. Both definitions are similar encompassing failure in paying at least the minimum amount due on total outstanding balance. These default definitions are in line with a credit card contract definition in which a credit card default is when the card is not even paid at a minimum.

As mentioned earlier, only a few empirical studies were found in credit card default especially studies that used consumer behaviors as the variables (Alex & Raveendran, 2013; Kim, 2000; Scott, 2005; Stavins, 2000). Hence, to commensurate the shortage of literature on credit card default, the researcher has reviewed substantial studies in credit card default, credit card debt, and in non-credit card default.

Several studies in consumer behavior such as in credit card debt (Ahmed et. al., 2010; Jiang, LV, & Wang; 2011), unethical behavior (Mohamed, Karim, & Hussein, 2012; Bakar, Lee, & Hashim, 2012; Riquelme, Abbas, & Rios, 2012; King & Dennis, 2006), and credit card industry were done by Devaney and Rutherford (2009), Devlin, Gerrad, and Wortington (2006), and Palmer, Parente, and Pinto (2001). It was found that consumer behavior is affected by culture, values, and environmental factors specific to a region (Khare, 2013).

## 2.4 Debt in Islam

Islam takes the matter of debt seriously. One still needs to settle his debt even after his death. The debt is usually paid off by relatives whom he has left behind.

*The Prophet (peace and blessings of Allah be upon him) refrained from offering the funeral prayer for one who had died owing dinars, until Abu Qataadah (may Allah be pleased with him) promised to pay it off for him. When he saw him the following day and said, I have paid it off, the Prophet (peace and blessings of Allah be upon him) said, "Now his skin has become cool for him."*

Musnad Ahmad (3/629); classes as Hasan by al-Nawawi in al-Khalaasah (2/931) and by Ibn Muflih in al-Adaab al-Shar'iyyah (1/104).

This hadith signifies the importance of paying debt in Islam. Hence, failure to pay a debt (default) is considered an unethical behavior especially in Islam.

In addition Quran also mention on how Islam take debt issue seriously. Quran 2:283 is one of proves that Islam takes the debt issue seriously.

*"O ye who believe! When ye deal with each other, in transaction involving future obligations in a fixed period of time, reduce them to writing. Let a scribe write down faithfully as between the parties: let not the scribe: as Allah Has taught him, so let him write. Let him who incurs the liability dictate, but let him fear His Lord Allah, and not diminish aught of what he owes. If the party liable is mentally deficient,* or *weak, or unable Himself to dictate, Let his guardian dictate faithfully, and get two witnesses, out of your own men, and if there are not two men, then a man and two women, such as ye choose, for witnesses, so that if one of them errs, the other can remind her. The*

*witnesses should not refuse when they are called on (For evidence). Disdain not to reduce to writing (your contract) for a future period, whether it be small or big: it is juster in the sight of Allah, More suitable as evidence, and more convenient to prevent doubts among yourselves but if it be a transaction which ye carry out on the spot among yourselves, there is no blame on you if ye reduce it not to writing. But take witness whenever ye make a commercial contract, and let neither scribe nor witness suffer harm. If ye do (such harm), it would be wickedness in you. So fear Allah. For it is God that teaches you. And Allah is well acquainted with all things."*

Quran 2:283

Several past studies suggest that religion is a key element in determining the decision making styles of consumers (Yousaf & Malik, 2012). Religion also shapes its believers' behavior. Islam, for example, takes the matter of debt very seriously. Muslims are warned against it. Moreover, they are urged to avoid it as much as possible.

This phrase explains in detail how an agreement especially the one related to debt needs to be carried out in Islam. Prof. Dr. Hamka in his Tafsir Al-Azhar (Tafsir Quran by Prof. Dr. Hamka) wrote that Al-Baqarah: 283 orders that all agreements between sides need to be written clearly by those who are knowledgeable and responsible. Those who are believers of Allah need to write down their debt agreement between parties as Allah taught even if the parties have already agreed on all the terms and conditions. Written documentation on terms and conditions is important especially for both the lender and borrower who might not know what would happen in the future.

Death, for example, can happen at any time. Hence, writing down this agreement makes debt collection easier especially if either party passes away before the debt is completely collected. All the detailing on the debt agreement such as debt amount, payment terms and others need to be spelled out in the agreement. In Islam, debt should be settled even if either lender or borrower passes away.

The phrase further expounds on the number of witnesses and their responsibilities. Two male witnesses are needed. If two male witnesses are not available then it is sufficient to use one male and two women witnesses. These witnesses should not let either the scribe or the witness suffer harm. At the end of this phrase, Allah reminds the believers to obey Allah. Allah makes their transaction easier, since Allah is well acquainted with all things.

From this phrase, it is demonstrated clearly that Islam is not only about praying and fasting. In fact, Islam also emphasizes the importance of *mu'amalah* (activities among human beings), such as that pertaining to debt as in this *ayah*, which is thoroughly explained in detail.

Some Hadiths also teach Muslims about the seriousness of debt. It was narrated by 'Aa'ishah (may Allah be pleased with her) that the Prophet (peace and blessings of Allah be upon him) used to say this in his prayer:

*"O Allah, I seek refuge with you from sin and heavy debt".*

If the Prophet (peace and blessings of Allah be upon him) prays to Allah to protect him from debt, definitely debt is seen as a serious matter in Islam. The answer to the question of why Islam sees debt as a serious matter lies in the next Hadith. Someone said to the Prophet (peace and blessings of Allah be upon him):

*"How often you seek refuge from heavy debt!" He said, "When a man gets into debt, he speaks and tells lies, and he makes a promise and breaks it,"*

*al-Bukhaari (832) and Muslim (589).*

From the phrases in Al Quran and hadiths, it is indicated how seriously Islam looks at the debt issue. Default is definitely not acceptable and considered unethical in Islam. Subsequently, this has made the current researcher eager to find out the relation between religiosity (Islam) and credit card default among credit cardholders in Malaysia.

Although the repercussions from credit card defaulters are numerous and indicate a negative impact, empirical studies on this issue are still minimal especially in developing countries such as Malaysia. Moreover, this topic has not been explored intensively in developing countries. Most of the previous credit card studies were done in advanced countries such as the USA. The scarcity of previous research in this subject might also be due to its private and confidential perspective. Credit card is under the financial institution non-disclosure Act. In addition, it also involves personal financial matters.

Two previous assumptions that may lead to the lack of research attention paid to credit card default are revealed in the following. First, researchers may have assumed that the credit card default behavior cannot be predicted hence, there is nothing to be examined. Second, they may assume that there is no relation between total credit card debts to consumers' buying behavior. However, the study by Teoh, Chong, and Yong (2013) shows the relation between awareness of the total debt owed in credit card versus spending behavior among credit card holders in Malaysia. Hence, it is important to understand the default factor in credit card because it will affect the spending behavior.

The Malaysian government's concern and seriousness in managing credit card default has been proven with the establishment of the AKPK. Agensi Kaunseling Pengurusan Kewangan (Credit Counseling and Debt Management Agency) or better known as AKPK was established in 2006. This agency was formed to help those with financial problems.

In mid-November 2011, Bank Negara Malaysia announced a new regulation in which credit card holders earning RM36,000 and below per annum, can only hold a maximum of two credit cards as a principal cardholder. The maximum credit limit for each card shall not exceed twice the cardholder's monthly income. This means the cardholder's combined credit limit will be capped at RM12,000. This move was executed to control the debts by credit cardholders especially those earning RM36, 000 and below per annum. Another move by the government to manage credit card default is with the new regulation on credit card only for those whose income is RM36, 000 per annum.

## 2.5 The Credit Card Default Models

Previous studies in credit card default had produced models that prevail opportunities to explore further in the subject. Existing models lack emphasis on behavioral factors, which in several occasions were the determination of either intentional or unintentional behaviors. A few previous models emphasized on the financial aspects of the respondent. The others were on demographic factors. These have resulted in fragmented models. In addition, a mediating effect was not examined in previous credit card default researches. Thus, the researcher thoroughly evaluates and discusses five (5) existing credit card default models to gain a better understanding of the absence of behavioral variables in the present models.

Current credit card default models are rather too simple, as they do not consider non-financial factors in predicting credit card default. Besides, the determinant factors are diversified in nature as they consist of a varying range of determinant factors. In addition, the studies were conducted in a fragmented manner that lacked the examination of a mediating effect. Five of the credit card default frameworks from years 1999 to 2008 are demonstrated in Figures 2.2, 2.3, 2.4, 2.5, and 2.6, and thoroughly discussed in the following.

The first model of credit card default in this study was utilized by Alex and Raveendran (2008) in a study in India comprising five independent variables such as compulsive buying, materialism, enhanced spending, financing behavior, and agreeableness (Figure 2.2). Alex and Raveendran (2008) study was confined to the psychological and socio-cultural domains. Compulsive buying, materialism, enhanced spending, and financing behavior acted as the direct antecedents of credit card default. Materialism and agreeableness had an indirect relation to credit card default. In addition, compulsive buying acted as a mediator in this study but the study failed to establish the mediation results.

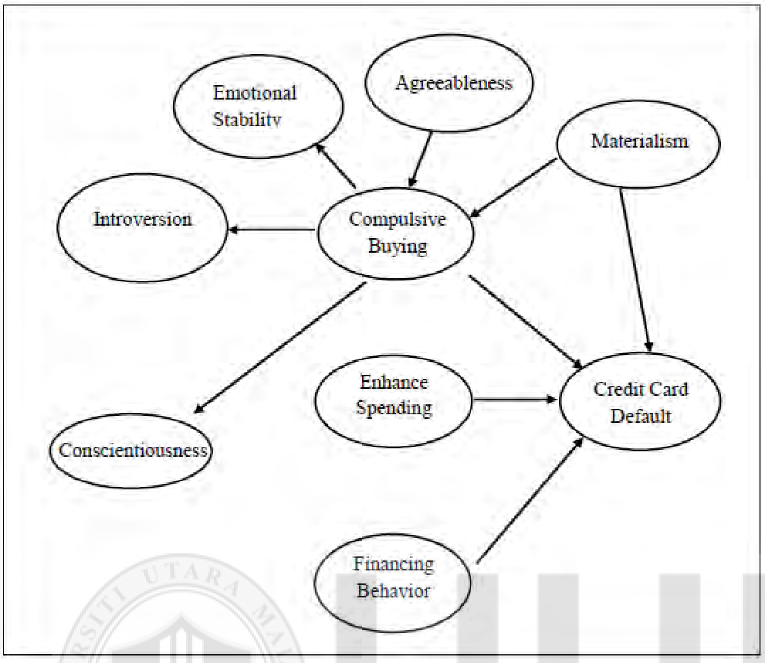
Emotional Stability
Agreeableness
Materialism
Introversion
Compulsive Buying
Enhance Spending
Credit Card Default
Conscientiousness
Financing Behavior

Figure 2.2
*Credit Card Default Model 1: The Psychological and Socio-Cultural Factors in Categorizing the Credit Card Users as Non-defaulters and Defaulters.*
Source: Alex and Raveendran (2008)

The two indirect relations are materialism as the predictor of credit card default while compulsive buying and agreeableness were predictors of credit card default via compulsive buying. Eight hypotheses were suggested in the study. They were tested using the step-wise regression method. The study used household consumers as the respondents.

A previous study used buying behavior patterns instead of behavioral variables to examine credit card default. This gap is closed in this study by including behavioral variables such as attitude to examine its influence on credit card default. In addition, the structural equation modelling is used to analyze the relationships among the chosen variables.

The second model under review is the model proposed by Lyons and Fisher (2006) who proposed four direct antecedents for credit card default, which were income, household characteristics, state level characteristics, and year dummy variables (Figure 2.3). It used demographic variables as the antecedents to credit card default. The respondents were household consumers in the USA. The study examined how the debt repayment problem differed based on marital status and gender.

Contrary to a previous study by Lyons and Fisher (2006), this study proposes direct and indirect antecedents of credit card defaults. In addition, in the indirect path, attitude and intention's mediating roles are established.

Moreover, this study uses behavioral variables as the direct antecedents (intention, subjective norms, perceived behavior control, religiosity, and attitude). This study employs the structural equation modelling as the data analysis approach as compared to the regression method used by Lyons and Fisher (2006).

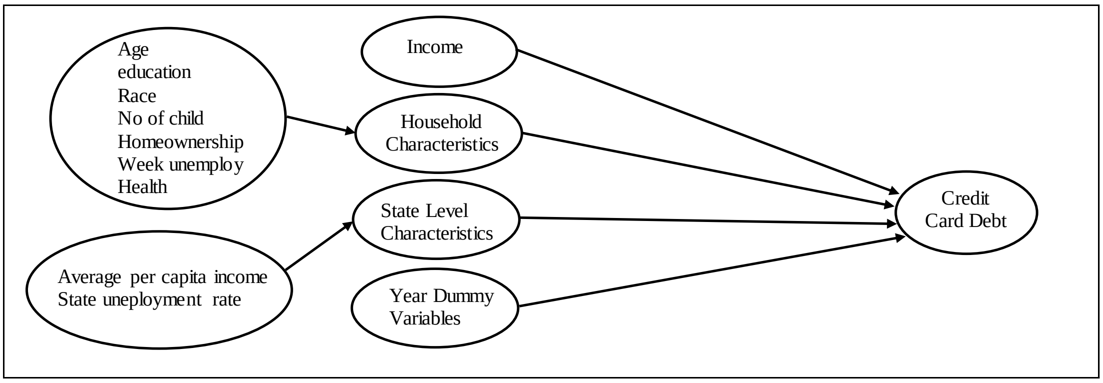
Age
education
Race
No of child
Homeownership
Week unemploy
Health
Income
Household Characteristics
State Level Characteristics
Year Dummy Variables
Average per capita income
State uneployment rate
Credit Card Debt

Figure 2.3
*Credit Card Default Model 2. "Gender Differences in Debt Repayment Problems and Divorce."*
Source: Lyons and Fisher (2006), Journal of Consumer Affairs, 40(2).

The third model under review is the model by Scott (2005) (Figure 2.4). This study was conducted in the USA using secondary data. It used the Buckeye State Poll (BSP), which was collected by the Center for Survey Research at the Ohio State University using a random telephone survey method among Ohio's residents. This research's data collection period was from November 1996 to April 2002. In his study, Scott (2005) used independent variables mainly consisting of demographic factors.

In this model, Scott (2005) proposed income, interest rate, homeownership, age, binary variable, credit card reach limit, marital status, card balance, credit card, minimum pay, gender, and working as direct antecedents to credit card default. This model was fragmented in nature because the research only used demographic profiling as the independent variables of the study. In addition, this study only had direct relations. Neither indirect nor mediating variables were examined in this study.

However, in the current study, the researcher uses the Theory of Planned Behavior (Ajzen, 1975) as the underpinning theory. Intention, subjective norms, perceived behavior control, religiosity, and attitude are the predictors of credit card default. In addition, subjective norms, perceived behavior control, and religiosity are the predictors of attitude and intention. The mediating effect of attitude and intention are established in this study. In addition, the structural equation model is employed as the data analysis approach as compared to the regression method employed by Scott (2005). Lastly, this study is done in a developing country as compared to the previous study that was carried out in an advanced country such as the USA.

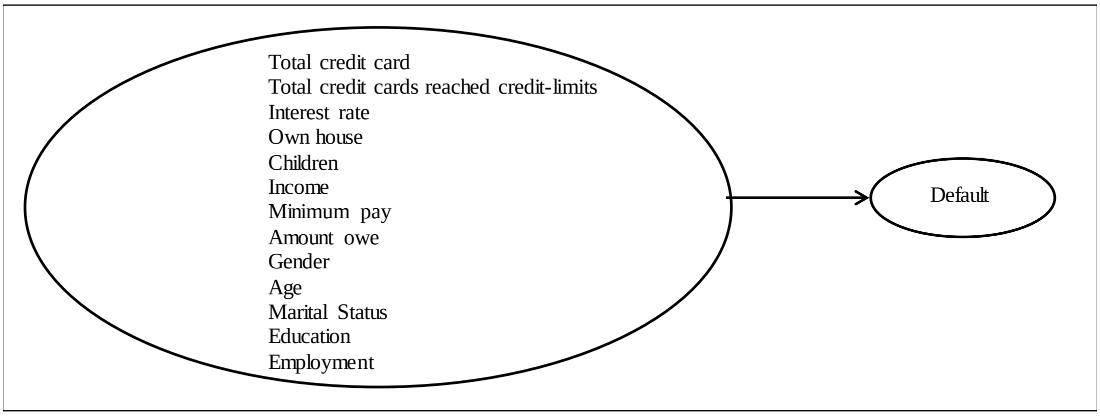
Total credit card
Total credit cards reached credit-limits
Interest rate
Own house
Children
Income
Minimum pay
Amount owe
Gender
Age
Marital Status
Education
Employment
Default

Figure 2.4
*Credit Card Default Model 3: The Determinants of Default on Credit Card Debt*
Source: Scott (2005)

The fourth model reviewed is from the research done by Stavins (2000) in USA that proposed a model with thirteen direct antecedents (income, interest rate, homeownership, age, binary variable, credit card reach limit, marital status, credit card balances, credit card, education, family, health, card, ratio debt/come, bankrupt, dummy variables, and net worth) to credit card delinquency (Figure 2.5). Delinquency was defined as the number of times in the past twelve months the respondent had defaulted on his/her credit card payment(s) (Stavins, 2000). The research used survey data from the 1998 Survey of Consumer Finances (SCF). The findings may or may not be generalized.

Previous study by Stavins (1999) only employed direct antecedents to credit card delinquency. Moreover, the study proposed demographic factors as the antecedents. The previous study in credit card default showed a lack of a mediating factor. This motivated the current research to fill the gap. The current research proposes a mediating perspective. Attitude and intention are used as the mediating factors in the current study. This current study investigates the factors of subjective norms, perceived behavior control, and religiosity, towards attitude and intention as the intervening variable and predictor of credit card default. In addition, the SEM analysis method is employed as a data analysis approach compared to the regression analysis to establish the results (Stavins, 2000).

The final credit card default model under review for this research was taken from a study conducted by Dunn and Kim (1999) in USA by using household consumers in Ohio as the respondents via random telephone survey by the Center for Survey Research Center at the Ohio State University. This study's variables consist of financial explanatory variables and socioeconomic and demographic factors.

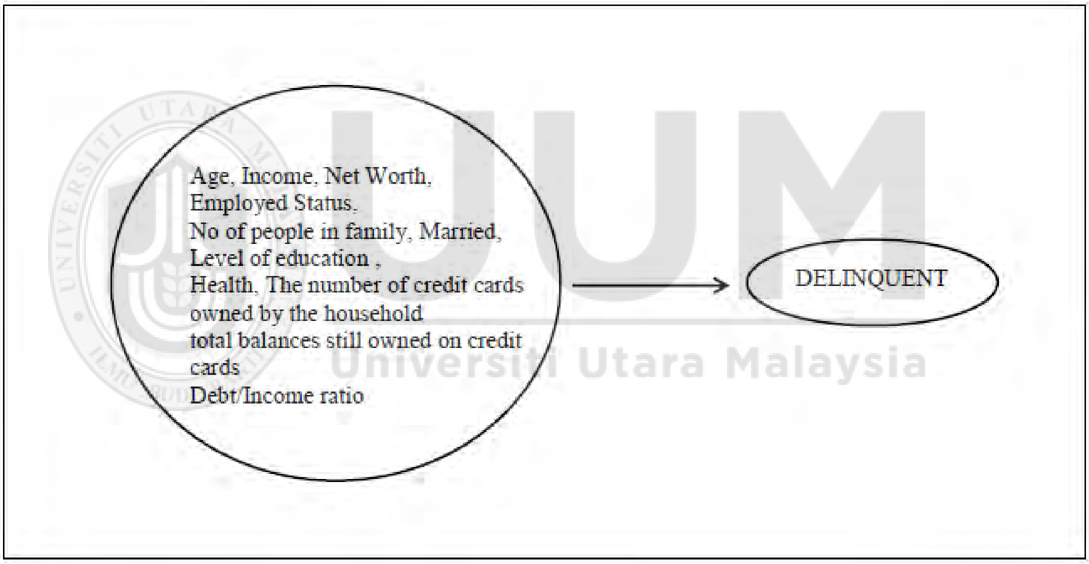
Age, Income, Net Worth,
Employed Status,
No of people in family, Married,
Level of education ,
Health, The number of credit cards owned by the household
total balances still owned on credit cards
Debt/Income ratio
DELINQUENT

Figure 2.5
*Credit Card Default Model 4: The Relationship Between Consumer Credit Card Borrowing, Delinquency Rates and Personal Bankruptcies.*
Source: Stavins (2000)

Socioeconomic and demographic factors included income, homeownership, education, marital status, age, number of children, and credit cards, which had reached the borrowing limit and employment status. Meanwhile, the financial explanatory variables consisted of total minimum required payment-to-income ratio, carried balance-to-income ratio, and percentage of total credit line used (Figure 2.6). Their research has similarities with Scott’s (2005). First, both studies only had direct relations. Second, some of the variables are also used by Scott (2005), for example, income, age, marital status, and credit cards that had reached their limits.

The current study has taken a different approach compared to Dunn and Kim (1999). The current research uses consumer behavior variables to predict credit card default.

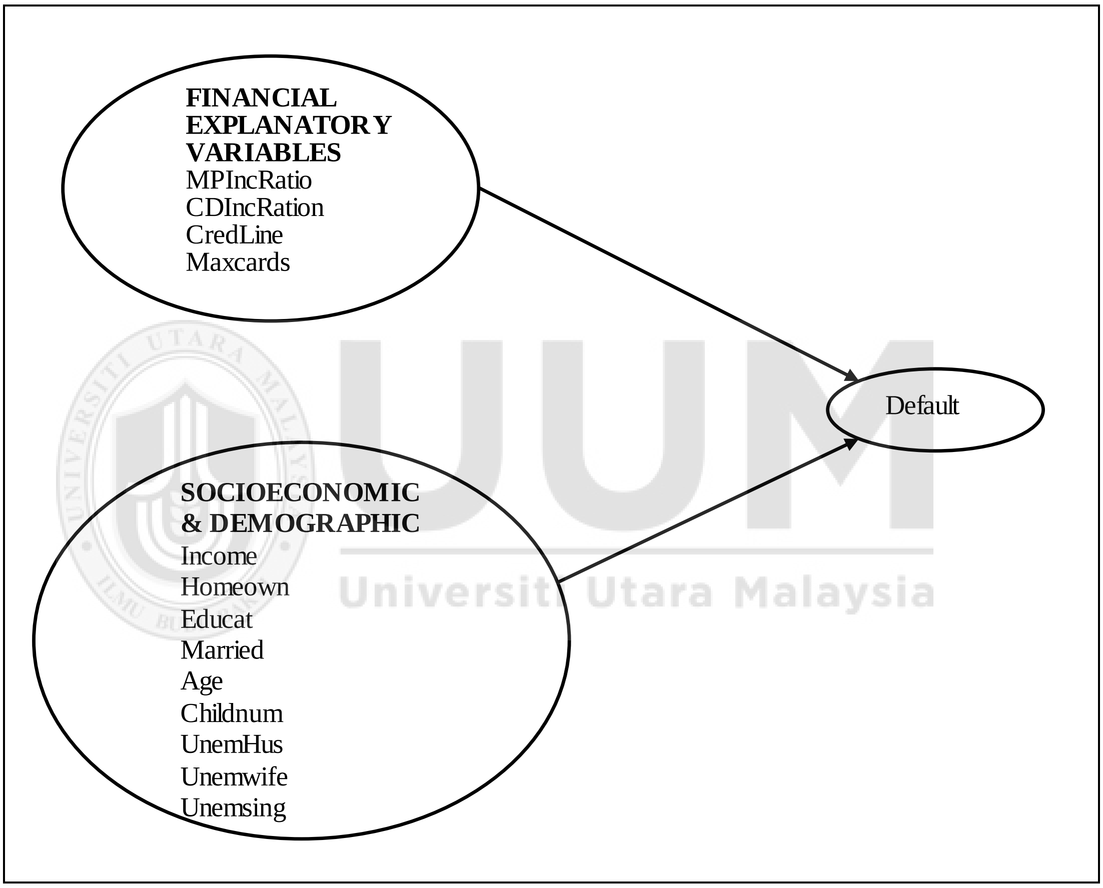
FINANCIAL
EXPLANATORY
VARIABLES
MPIncRatio
CDIncRation
CredLine
Maxcards
Default
SOCIOECONOMIC
& DEMOGRAPHIC
Income
Homeown
Educat
Married
Age
Childnum
UnemHus
Unemwife
Unemsing

Figure 2.6
*Credit Card Default Model 5: Credit Card Default*
Source: Dunn and Kim (1999)

Having discussed the previous models in credit card default, it clearly demonstrates the diversified variables used in predicting credit card default. This causes the five models to be fragmented and inconclusive. In addition, most of the studies used demographic profiling variables.

Moreover, most of the studies only examined a direct relationship. This is an opportunity for the present study to fill the gap by examining direct and indirect effects of attitude and intention in predicting credit card default in the proposed model in this research.

### 2.5.1 The Determinants of Credit Card Default

Table 2.7
*Antecedents of Credit Card Default*

| **Antecedents** | **Authors** | **Country** | **Analysis Method/ Scale** | **Respondent** | **Underpinning** |
|---|---|---|---|---|---|
| Compulsive Buying (CB)<br>Materialism (MAT)<br>Enhance Credit Card Spending (ECCS)<br>Credit Card Financing Behavior (CCFB)<br>Introversion (INTRO)<br>Emotional Instability (Eis)<br>Agreeableness (AGREE)<br>Conscientiousness (CONSC) | Alex and Raveendran (2008) | India | Stepwise regression/(CB - Five Points Scale, INTRO, EiS, AGREE, CONSC - Nine Points Scale, ECCS, CCFB - Seven Points Scale) | 191 credit card holders | Social Cognative Theory (SCT), Social Learning Theory (SLT), Classical Learning Theory (CLT) |

## 2.6 Credit Card Debt Models

The first credit card model under review for this research was taken from a research conducted by Jiang, Lv, and Fang (2011) in the USA by using 573 household consumers as the respondents via convenience sampling on revolving credit and petty installment users.

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Table 2.7 (Continued)

| **Antecedents** | **Authors** | **Country** | **Analysis Method/ Scale** | **Respondent** | **Underpinning** |
|---|---|---|---|---|---|
| Homeownership<br>Age<br>Income<br>Education<br>Children<br>Week unemploy<br>Health<br>Average per capita income<br>State unemployment rate<br>Year (Dummy Variable) | Lycas and Fisher (2006) | USA | Pooled Probit Model | 19,939 household years (Panel Study of Income Dynamics (PSID)) | Life Cycle Theory |
| Income<br>Interest rate<br>Homeownership<br>Age<br>Binary variable<br>Number of credit card reach limit<br>Marital status<br>Card balance (amount still owe)<br>Number of credit card<br>Min Pay<br>Gender<br>Working<br>Workself<br>Dmag | Scott (2005) | USA | Negative Binomial Regression | Buckeys State Poll (BSP) - 39,313 Households via random telephone survey | Explanatory Data Analysis (EDA) |

Table 2.7 (Continued)

| **Antecedents** | **Authors** | **Country** | **Analysis Method/ Scale** | **Respondent** | **Underpinning** |
|---|---|---|---|---|---|
| Age<br>Income<br>Networth<br>Unemployment<br>Homeownership<br>Family<br>Marital status<br>Education<br>Health<br>Card<br>Card balance (amount still debt/income<br>Bankcrupt<br>Number of credit card<br>Dummy variables | Stavins (1999) | USA | Regression | Survey of Consumer Finances (SCF) | Social Cognitive Theory. Social Learning Theory. Classical Learning Theory |
| Minpay/income<br>Balance carry/income<br>Percentage credit line used<br>Credit card reach limit<br>Income<br>Homeownership<br>Education<br>Marital status<br>Age<br>Number children<br>Unemployment household | Dunn and Kim (1999) | USA | Order probit model, Regression | Center for Survey Research Center Feb 1998 to May 1998 - 500 households via random telephone survey | |

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They investigated two direct antecedents of credit card debt, which are revolving credit use and petty installment use. Money attitude, satisfaction with life, credit card attitude, debit attitude, risk attitude, and unrealistic optimism are indirect antecedents to credit card debt via revolving credit use and petty installment use (Figure 2.7). This study employed regression as the data analysis method.

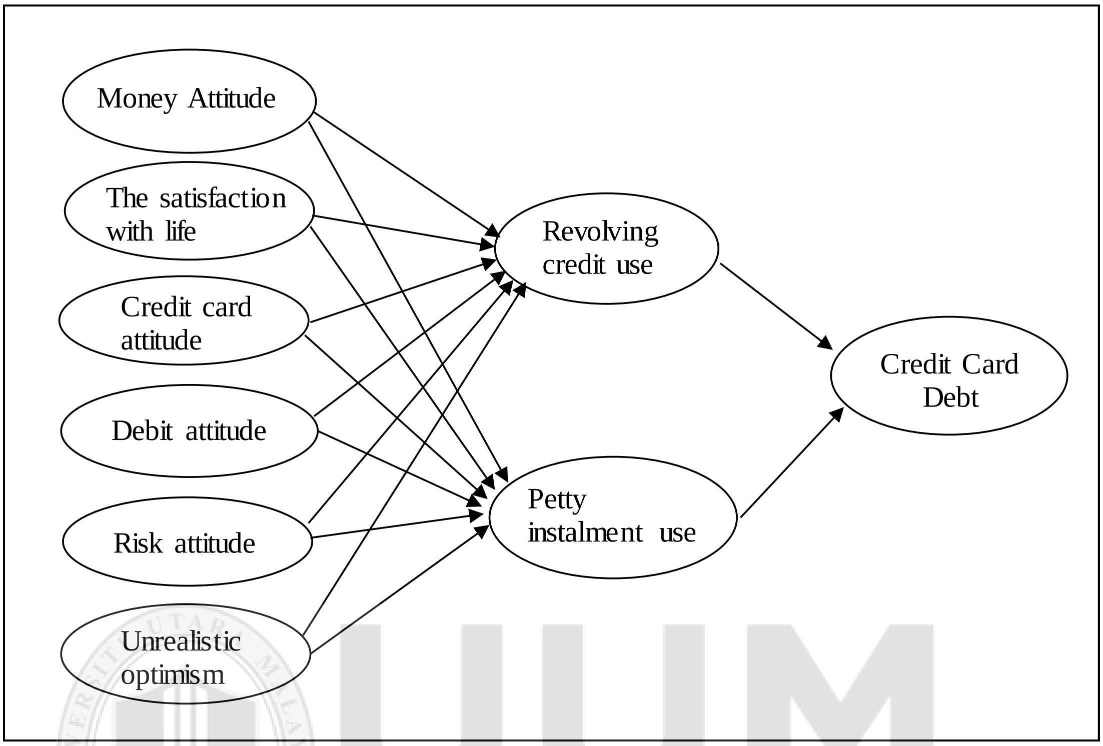
Money Attitude
The satisfaction with life
Credit card attitude
Debit attitude
Risk attitude
Unrealistic optimism
Revolving credit use
Petty instalment use
Credit Card Debt

Figure 2.7
*Credit Card Debt Model 1: The Impact of Attitude on Credit Card Debt*
Source: Wang, Lv, and Jiang (2011)

In this current study, attitude is also used as one of the variables. However, attitude in this study has dual functions. First, it functions as a direct antecedent of credit card default and secondly, as a mediating factor in the relationship between perceived behavior control, subjective norm and religiosity with credit card default. In this study, the researcher proposes that attitude has a direct relationship with credit card default, as previous studies did not reveal a direct relationship and attitude appeared to have a significant relationship with credit card usage (Teoh, Chong, & Yong, 2012). The current research employs SEM as the data analysis method. This enables the overall model to be tested and not just individual coefficients.

The second credit card debt model under review in this study is the model proposed by Ahmed, Ismail, Sohail, Tabsh and Alias (2010) where a study was conducted in Malaysia. This study's respondents were 1,210 credit card users in Penang, Malaysia using the mall-intercept survey technique.

The main objective of their study was to understand consumers' attitude and spending behavior using credit cards. Six direct determinants of attitude were investigated (time consciousness, life style, peer group pressure, exposure to advertisement, self-esteem and gregariousness) and one direct hypothesis towards attitude was established. In addition, attitude was proposed to have a direct relation to credit card debt (Figure 2.8).

There was no significant relation found between attitude toward credit cards and average credit card debt. Only life style, among the psychographic variables, was found to have a significant relation with cardholders' attitude toward credit card spending. The mediating test for attitude was not established.

This study employs SEM as the method for data analysis contrary to the Pearson's correlation that was used to examine the relationships among the variables in the previous study (Ahmed et. al., 2010). This study also establishes the mediating effect of attitude in the subjective norm, perceived behavior control, religiosity and credit card default relationship.

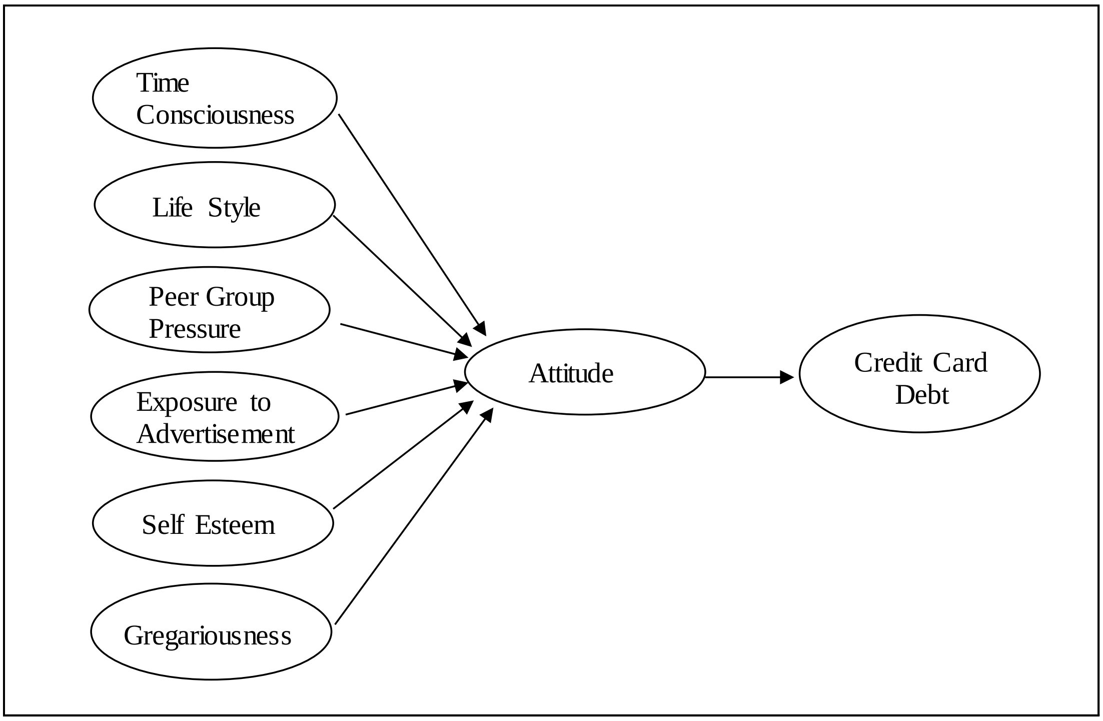
Time Consciousness
Life Style
Peer Group Pressure
Exposure to Advertisement
Self Esteem
Gregariousness
Attitude
Credit Card Debt

Figure 2.8
*Credit Card Debt Model 2: Malaysia consumers' credit card usage behavior.*
Source: Ahmed, Ismail, Sohail, Tabsh, and Alias (2010)

The last credit card debt model under review in this research is from the study conducted by Chien and Devaney (2001) in USA on credit card usage. Credit used was the dependent variable of this research, which was measured by an installment loans amount and a credit card debt amount. The three direct determinants of credit card usage were demographic, socioeconomic, and attitude (Figure 2.9).

Data for this research was retrieved from the 1998 Survey of Consumer Finances (SCF) on 4,305 household consumers in Chicago. Household size, education, marital status, professional status, income, and specific attitudes were found to have significant relations with credit card debt. The study concluded that the higher the specific attitude index, the higher the outstanding credit card balances.

This current research employs the bank intercept method for data collection, whereas their previous research used secondary data from the 1998 SCF (Chien & Devaney, 2001), contrary to the present research that uses primary data. In addition, the current study examines the mediating effect on credit card default whereas their previous study only had direct relations.

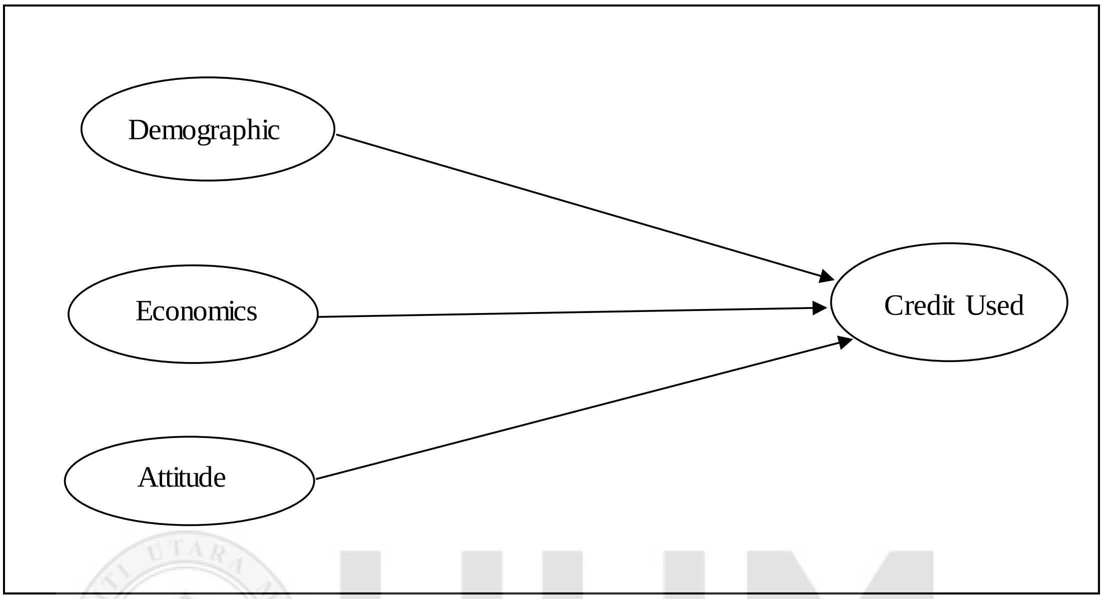

Figure 2.9
*Credit Card Debt Model 3. "The Effects of Credit Attitude and Socioeconomic Factors on Credit Card and Installment Debt."*
Source: Chien and Devaney (2001), Journal of Consumer Affairs, 35(1).

After the above discussion on the previous models of credit card debt, it is clearly demonstrated that the determinants of credit card debt in the past studies have used various variables that mainly concentrate on demographic factors (Table 2.8).

This causes the three models to be fragmented and inconclusive. Moreover, the determinants' relationship with credit card debt is ambiguous. This inconclusive results might be due to the lack of an underpinning framework in the previous credit card debt studies.

Moreover, most of the studies only examined a direct relation. It is an opportunity for the present study to fill the gap by examining direct and indirect effects of attitude and intention in predicting credit card default in the proposed model in this research.

Table 2.8
*The Antecedents of Credit Card Debt*

| Determinants | Author | Country | Industry Area | Analysis Method/Scale | Respondent | Underpinning |
|---|---|---|---|---|---|---|
| Money attitude<br>The satisfaction with life<br>Credit card attitude<br>Debit attitude<br>Unrealistics optimism<br>Revolving credit use<br>Petty installment use | Jiang, Lv and Wang (2011) | Malaysia | Credit card debt | Stepwise regression model/Five-point Likert scale | 573 revolving and petty installments credit card users via mail questionnaire | Goal theory, Double-entry mental account theory, Reactance theory |
| Time consciousness<br>Life style<br>Peer group pressure<br>Expose to advertisement<br>Self esteem<br>Gregariousness<br>Attitude | Ahmed, Ismail, Sohail, Tabsh and Alias (2010) | Malaysia | Credit card debt | Pearson's correlation, multiple regression/Five points Likert scale | 1,210 Credit Card Consumers via mall intercept | Theory of Reason Action (Ajzen and Fishbein, 1980) Theory of Planned Behaviour (Ajzen, 1991) Fazio et. al |
| Age<br>Household Size<br>Ethnicity<br>Marital status<br>Profesional status<br>Education<br>Home ownership<br>Income<br>Liquid assets<br>Specific Attitude | Chien and Devaney (2001) | USA | Credit used | Stepwise Regression/Seven-point Likert scale | 4,305 respondents from 1998 Survey of Consumers Finances | Theory of Reason Action (Ajzen and Fishbein,1980 ) Cognitive dissonance theory (Festinger, 1957) |

## 2.7 Other Consumer Behavior Models

Consumer behavior models using non-credit cards have undergone comprehensive researches. Among the past behavioral studies that were taken into consideration were on computer ethics (Mohamed et al., 2012), ethical judgment (Bakar et al., 2012), purchasing fake products (Riquelme et al., 2012), deshopping behavior (King and Dennis, 2006), ethical belief (Paolillo & Vitell, 2003), and ethical behavior (Chang, 1998). Therefore, ten models were studied on other consumer behaviors (refer to consumer behavior Models 11 to 20, *Appendix 1)* (Figures 2.10 to 2.18).

Similar outcomes were discovered in which results were fragmented in the context of consumer behavior (Table 2.2). For example, Mohammed et al. (2012) analyzed computer ethics in Malaysia by considering gender, level in organizational hierarchy, and Islamic work ethic to actual computer usage. In addition, the fragmentation was accentuated as the researchers used the five-point Likert scale to measure Islamic work ethic. On the other hand, Mohammed, Karim, and Hussein (2012) used the seven-point Likert scale to evaluate agreement to statements about work ethic in studying computer ethics in Malaysia. The presence of inconsistencies, diversity, and model fragmentation is clearly visible in the direct and indirect relationships affecting credit card default.

Table 2.9
*The antecedents of non-credit card default*

| Antecedents | Authors | Country | Industry | Analysis Method/ Scale | Respondent | Underpinning |
|---|---|---|---|---|---|---|
| Attitude<br>Subjective norms<br>Perceived behavior control<br>Ethical selling Intention | Ferdous and Polonsky (2013) | Bangladesh | Ethical Sales | Structural Equation Model/Five-Likert scale | 209 salepeople | Theory of Planned Behavior (Ajzen, 1991) |
| Demographic - Age<br>Income<br>Occupation<br>Marital status<br>Banks' policies<br>Benefits given<br>Qualifications of applying credit card<br>Payment policies<br>Attitudes toward money<br>Willingness to pay<br>Awareness about the total debt owed<br>Management of income and expenses | Teoh, Chong and Yong (2013) | Malaysia | Credit card spending | Structural equation model/Five-point Likert scale | 150 credit card consumers via area sampling and convenience snowball sampling method | not applicable |

Table 2.9 (Continued)

| **Antecedents** | **Authors** | **Country** | **Industry** | **Analysis Method/ Scale** | **Respondent** | **Underpinning** |
|---|---|---|---|---|---|---|
| Religious Commitent<br>Product Involvement<br>Brand Decision Involvement<br>Intensity of Information Search | Razzaque and Chaudhry (2012) | Australia | Consumer decision | Regression/ Five-point Likert Scale | 108 households | Theory of Planned Behavior (Ajzen, 1985) |
| Extrinsic Religiosity<br>Intrinsic Religiosity<br>Religiosity<br>Guilt<br>Materialism | Bakar, Lee and Hashim (2012) | Pakistan | Consumer ethics | Structural equation model/ Seven-point Likert scale | 267 students | |
| Gender<br>Level in organizational hierarchy<br>Islamic work ethics<br>Attitude | Mohammed, Karim and Hussein (2012) | Malaysia | Computer usage | Exploratory factor analysis, t-test, Hierarchical multiple regression/ Seven-point Likert scale | 550 academic staffs and students | Theory of Reason Action (Ajzen and Fishbein, 1980) Theory of Planned Behavior (Ajzen, 1991) |

Table 2.9 (Continued)

| **Antecedents** | **Authors** | **Country** | **Industry** | **Analysis Method/ Scale** | **Respondent** | **Underpinning** |
|---|---|---|---|---|---|---|
| Value consciousness<br>Performance risk<br>Prosecution risk<br>Subjective norms<br>Descriptive norms<br>Ethical consciousness<br>Social status<br>Trustworthiness<br>Previous experience<br>Attitude | Riquelme, Abbas and Rios (2012) | Kuwait | Purchase Fake products | Structural equation modeling/ Five-point Likert scale | 401 households | Ajzen and Fishbein Theory (1975) |
| Attitude<br>Subjective norm<br>Inter-personal<br>Intra-personal | Mukhtar and Butt (2012) | Pakistan | Halal products | Stepwise regression/ Seven-point Likert scale | 150 consumers | Theory of Reason Action (Ajzen and Fishbein, 1980) |
| Intention<br>Attitude<br>Subjective norms<br>Perceived behavior control | Baker, Al-Gahtani and Hubona (2007) | Saudi Arabia | Technology implementation | Structural Equation Model/Seven-point Likert scale | 1088 knowledge workes | Theory of Planned Behavior (Ajzen, 1991) |

Table 2.9 (Continued)

| **Antecedents** | **Authors** | **Country** | **Industry** | **Analysis Method/ Scale** | **Respondent** | **Underpinning** |
|---|---|---|---|---|---|---|
| Attitude<br>Subjective norm<br>Perceive behavior control<br>Intention<br>Actual Control<br>Past Experience | King and Dennis (2006) | London | Deshopping behavior | Regression/ Structural interview | 535 female shoppers | Theory of Planned Behavior (Ajzen, 1991) |
| Attitude<br>Subjective norm<br>Perceive behavior control<br>Intention<br>Satisfaction<br>Positive financial behavior | Xiao and Wu (2006) | /USA | Credit Counseling | Regression/ Seven-point Likert scale | 326 consumer | Theory of Planned Behavior (Ajzen, 1991) |
| Attitude<br>Beliefs about consequences<br>Moral belief<br>Social beliefs<br>Control beliefs | Vian and Burak (2006) | Albania | Informal payment | Regression/ Five-point Likert scales | 222 households | Theory of Planned Behavior (Ajzen, 1991) |

Table 2.9 (Continued)

| **Antecedents** | **Authors** | **Country** | **Industry** | **Analysis Method/** | **Respondent** | **Underpinning** |
|---|---|---|---|---|---|---|
| Behavioral intention<br>Attitude<br>Subjective norms<br>Perceived behavior control<br>Relative advantage<br>Compatibility<br>Complexity<br>Normative influence<br>Efficacy<br>Facilitating conditions | Shih and Fang (2004) | Taiwan | Internet banking | Structural equation model/Seven-point Likert scale | 425 consumers | Theory of Reason Action (Ajzen and Fishbein,1980) Theory of Planned Behavior (Ajzen, 1991) Decomposed Theory of Planned Behavior (Taylor and Todd, 1995) |
| Religiosity<br>Idealism<br>Relativism<br>Consumer alienation<br>Age<br>Income | Vitell and Paolillo (2003) | USA | Consumer ethic | Regression/Seven-points Likert scale | 353 adult consumers | Marketing ethics theory (Ferrel and Gresham, 1985; Hunt and Vitell, 1986; Ferrel et.al., 1989; Hunt and Vitell, 1993) |

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Table 2.9 (Continued)

| **Antecedents** | **Authors** | **Country** | **Industry** | **Analysis Method/ Scale** | **Respondent** | **Underpinning** |
|---|---|---|---|---|---|---|
| Attitude - BI<br>Subjective norm - BI<br>Perceived behavior control - BI<br>Subjective norm - Attitude<br>SN (indirect) - Attitude (mediating) - BI | Chang (1998) | Hong Kong | Unetical behavior | Structural equation model/ Seven-point Likert scale | 181 students | Theory of Reason Action (Ajzen and Fishbein, 1980)<br>Theory of Planned Behavior (Ajzen, 1991) |

## 2.8 The Antecedents of Credit Card Default/Credit Card Debt/Non-Credit Card: Direct Relationship

From the previous discussion, the relationships in credit card default and other consumer behaviors in literature clearly consist of a variety of factors. For example, the direct relationships consist of demographic, financial, and consumer behavior factors. Demographic variables examined in credit card default are income, gender, age, marital status, education, and interest. These variables, however, are not examined in this study because they are not consumer behavior variables. This research also studies the antecedents of credit card debt and other consumer behaviors. The antecedents’ vary from one research to another. Consumer behavior variables such as attitude, subjective norm, perceived control behavior, and religiosity were used in a few of these studies, resulting in ambiguity and inconsistent results.

### 2.8.1 Study on intention to pay with actual behavior

Intention proved to be predictive of consumer behavior as the antecedents of the Theory of Planned Behavior. Intention has been found to be an important determinant of consumer behavior in the previous studies (Table 2.10). For example, a research was conducted by Ferdous and Polonsky (2013) on ethical sales among sales people in Bangladesh and it was found that intention had a significant positive relationship toward ethical sales. Similarly, a study conducted by Xiao and Wu (2006) in USA displayed that intention had a significant effect on credit counseling in USA. In addition, a study that was conducted by Shih and Fang (2004) in Taiwan concluded that intention was a predictor of consumer behavior in internet banking. These results indicate that there are significant relationships between these variables. All the studies conclude that intention has a significant relationship with consumer behavior. Since intention has successfully predicted various consumer behaviors in previous studies, hence, it would be interesting to study the relationship between intention to pay and credit card default behavior in the current research to confirm the relationship.

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Table 2.10
*Summary of intention with behavior*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Ferdous and Polonsky (2013)/Bangladesh | Ethical Sales | Structural Equation Modelling | Five Likert scale | 209 salespeoples | Significant<br>$p$ =0.00 |
| Xiao and Wu (2006)/USA | Credit Couseling | Regression | Seven Likert scale | Consumer | Significant |
| Shih and Fang (2004)/Taiwan | Internet banking | t-test | Seven Likert scale | 425 consumers | Significant<br>$p$ =0.48 |

### 2.8.2 Study on perceived behavioral control with actual behavior

Perceived behavior control reflects the perceived ability to execute a target behavior (Ajzen, 1987) or an individual's perceived ease or difficulty in performing a particular behavior (Ajzen, 1988). As another antecedent of the Theory of Planned Behavior, perceived behavior control is an important determinant in consumer behavior.

Due to the important relationship in this construct, the relationship of perceived behavior control and behavior has been empirically studied. Some of the previous studies were found in the areas of banking (Bashir & Madhavaiah, 2015; Fathima & Muthumani, 2015), virtual learning (Mamat, Yusoff, Abdullah & Razak, 2015), ethical sales (Ferdous & Polonsky, 2013), credit card usage (Rutherford & DeVaney, 2009), and credit counseling (Xiao & Wu, 2006) (Table 2.11). The following paragraphs will further discuss the relationship between unethical behavior and other consumer behaviors.

Previous research results have indicated an inconclusive result on the relationship between perceived behavior control and actual behavior. Some studies found a positive direct relationship between perceived behavior control and consumer behavior. For example, Fathima & Muthumani (2015) did empirical study among 319 internet banking consumers to identify factors that influence internet banking technology adoption. Perceive ease of use was found has the most influential factors for user acceptance of internet banking technology. Similarly, Mamat, Yusoff, Abdullah & Razak (2015) study in virtual learning among 76 pre-school teachers concluded that perceived ease of use increased pre-school teachers to use virtual learning system. In addition, Rutherford and DeVaney (2009) conducted a study in USA to confirm the relationship between perceived behavior control and credit card usage. A positive significant relationship was found between these two variables. Similarly, Xiao and Wu (2006) conducted a research among credit counseling clients in the USA. Results confirmed that perceived behavior control had a significant influence on continuing credit counseling.

Table 2.11
*Summary of perceived behavioral control with behavior*

| **Authors** | **Industry** | **Analysis Method** | **Scale** | **Respondent** | **Findings** |
|---|---|---|---|---|---|
| Bashir & Madhavaiah (2015)/India | Banking | Structural Equation Model | Five-point Likert scale | 697 internet banking | Not Sig. $\beta$=0.058, CR=0.167, $p>0.01$ |
| Fathima & Muthumani (2015)/India | Banking | Regression | Five-point Likert scale | 319 internet banking consumers | Sig. $\beta$=0.173, t=17.081, $p<0.05$ |
| Mamat, Yusoff, Abdullah & Razak (2015)/Malaysia | Virtual learning | Structural Equation Model | Five-point Likert scale | 76 pre-school teachers | Sig. $\beta$=0.42, $p<0.05$ |
| Ferdous and Polonsky (2013)/Bangladesh | Ethical Sales | Structural Equation Model | Five-point Likert scale | 209 sales people | Not Sig. p=0.76 |
| Rutherford and DeVaney (2009)/USA | Credit card usage | Regression | Binary | 3,476 households | Significant |
| Xiao and Wu (2006)/USA | Credit counseling | Regression | Seven-point Likert scale | Consumer | Significant |

On the other hand, Bashir & Madhavaiah (2015) did a study among 697 internet banking consumers and concluded that perceived ease of use did not have significant relation with internet banking usage, Ferdous and Polonsky (2013) conducted a study among 209 salespeople in Bangladesh to find out the influence of perceived behavior control on consumer behavior. The result indicated that perceived behavior control did not have a significant relation with the salespeople.

The above discussion on past studies shows that there are inconsistent findings in determining the relationship between perceived behavior control and consumer behavior. This shows that the relation between perceived behavior control and consumer behavior is inconclusive. Hence, the relationship between perceived behavior control and consumer behavior in this research on credit card default demands further confirmation.

### 2.8.3 Study on religiosity with actual behavior

The Theory of Planned Behavior allows another new determinant to be added to the original theory. This research has decided to add religiosity as the new determinant based on the significant influence of religiosity towards consumer behavior. Financial and food sectors have observed the strongest of its implications in Islamic societies (Mukhtar & Butt, 2012). The role of religiosity has captured the attention of scholars motivating them to include it in their studies. A key research area that flourished in the post 1990 period concerns the relationship between religiosity and consumer ethics (Paolillo & Vitell, 2003; Vitell et al, 2007).

The role of religiosity has not received attention in consumer credit card default behavior. The fact that religiosity has received little attention in analyzing default is astonishing. Due to the clear directions from the Holy Scriptures, Muslims with a higher degree of religiosity are more likely to be influenced by friends, family members, and colleagues (Malik & Yousaf, 2012).

Therefore, the following paragraphs will further elaborate the relationship between religiosity and consumer behavior. The important role of religiosity on individual behavior has drawn researchers' interest in the last two decades as evidenced in the study on actual consumer behavior (Table 2.12). The study by Islam and Chandrasekaran (2015) in ecologically conscious consumption behavior in India has confirmed significant relation religiosity and ECCB. In addition, Hage and Posner (2015) conducted a study in leadership among organization leaders in Lebanon. The study result concluded religiosity has significant relation with leadership practices. Similarly, in the area of unethical consumer behavior, a research was done by Alleyne and Persaud (2012) in Barbados to examine the impact of religiosity on unethical behavior. The results confirmed that there was a positive significant relationship between religiosity and unethical behavior. Meanwhile, in another study conducted by Bakar, Lee, and Hisham (2012) in Pakistan using 267 college students as the respondents, it was concluded that religiosity did not have a significant relationship with ethical judgment. Similarly, Paolillo and Vitell (2003) conducted a study in the USA on the subject of ethical belief. They used 353 consumers as the respondents and concluded that religiosity did not have a significant relationship with ethical belief.

Table 2.12
*Summary of religiosity with behavior*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Islam and Chandrasekaran (2015)/India | Ecologocally conscious consumption behavior | Regression | Five-point Likert scale | 191 Muslim students | Significant |
| Hage and Posner (2015)/Lebanon | Leadership | Regression | Ten-point Likert scale | 384 leaders | Significant |

Table 2.12 (Continued)

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Yousaf and Malik (2013)/Pakistan | Product involvement | Structural Equation Model | Five-point Likert scale | 375 consumers | Significant |
| Alleyne and Persaud (2012)/Barbados | Ethical Perception | t-test | Seven-point Likert scale | 132 students | Significant |
| Bakar, Lee and Hisham (2012)/Pakistan | Ethical judgement | Structural Equation Model | Seven-point Likert scale | 267 students | Not Significant $p=0.305$ |
| Razzaque and Chaudhry (2012)/Australia | Brand decision | Regression | Five-point Likert scale | 108 households | Sig. $\beta=0.021$ |
| Razzaque and Chaudhry (2012)/Australia | Product decision | Regression | Five-point Likert scale | 108 households | Not Sig. $\beta=0.084$ |
| Al-Hyari et. All (2011)/Saudi Arabia | Consumer boycotts | Seven stages by Easter by Smitch *et. al.* (2008) | Qaulitatives, inductive, interpretive | 300 students | Significant |
| Gani, Hashim and Mohd (2011)/Malaysia | Employee performance | Structural Equation Model | Five-point Likert scale | 435 employees | Significant $\beta=0.16$ |
| Mueller, Bensyl, Vesely, Oman and Aspy (2010)/USA | Sexual intercourse | Regression | Three-point Likert scale | 1281 households | Significant $p<0.0001$ |
| Rehman and Shabbir (2010)/Malaysia | New product adaption | Regression | Five-point Likert scale | 300 students | Significant $p=0.000$ |
| Mokhlis (2009)/Malaysia | Shopping orientation | Structural Equatic | Five-point Likert scale | 236 households | Significant |
| Fatusi and Blum (2008) | Sexual intercourse | Regression (Multivariate analysis) | Continuos variable, dichotomous, discrete scale | 2,070 nerver-married adolescents | Significant |
| Vitell and Paolillo (2003)/USA | Ethical belief | Regression | Seven-point Likert scale | 353 consumers | Not significant |

On the other hand, Rehman and Sabbir (2010) conducted a study in Malaysia to find out the influence of religiosity on new product adoption using 300 students as the respondents. The results confirmed that there was a positive significant relationship between religiosity and new product adoption. The results concluded that there was an impact of religiosity with new product adaption. Razzaque and Chaudhry (2012) conducted a study in Australia to find out the relationship between religiosity and brand decision. The study found a positive linkage between religiosity and brand decision. However, in the same study, religiosity was found to not have a significant relationship with product decision.

A research was conducted by Gani *et al.* (2011) in Malaysia to find out the relationship between religiosity and employee performance. The results from this research indicated that there was a significant positive relationship between religiosity and employee performance. In another study in Malaysia conducted by Mokhlis (2009) on shopping orientation using 236 households as the respondents, it was found that the relationship between religiosity and shopping orientation. The study confirmed there was a positive significant relationship between religiosity and shopping orientation.

In addition, another research by Yousaf and Malik (2013) in Pakistan using 375 consumers as the respondents found that there was a positive relation between religiosity and product involvement. Similarly, a study was conducted by Mueller at el. (2010) in the USA using 1281 households as the respondents in the area of early sexual intercourse. The study’s results confirmed that religiosity had s significant relationship with early sexual intercourse.

The result echoes Fatusi and Blum’s (2008) study of sexual intercourse using 2,070 never married adolescents and it was found that religiosity has a significant relationship with sexual intercourse. Al-Hyari et al. (2011) in their study of Saudi

Arabia using 300 students as their respondents, found that religiosity had a significant relationship with consumer boycotts.

It can be concluded that the results on the influence of religiosity on consumers' behavior are unclear. Religiosity provides mixed results in its relationship with consumer behavior. Hence, this relationship justifies further confirmation. Moreover, religion is an important cultural factor to study. This is because it is one of the most universal and influential social institutions. It has a significant influence on people's attitudes, values and behaviors at both the individual and society levels (Mokhlis, 2009). In addition, Islam takes the issue of debt very seriously and Muslims are expected to exercise caution in taking a loan and to pay the loan on time. Therefore, it is important to further research this relationship.

### 2.8.4 Study on subjective norm with actual behavior

Subjective norm is important in determining an actual consumer behavior. As another antecedent of the Theory of Planned Behavior, subjective norm is an important determinant in consumer behavior.

The important role of subjective norm on individual behavior is reflected by a few consumer behavior studies that used subjective norm as antecedents. Many previous researchers have examined the influence of subjective norm on actual behavior and found results that were more toward a significant skewness (Table 2.13).

Table 2.13

*Summary of subjective norm with consumer behavior*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Alkafagi, Romli, Bahaudin, Alekam & Salameh (2015)/Iraq | Banking | Structural Equation Modelling | Seven Point Likert | 535 internet banking users | Sig neg β=0.151, t=3.736, p=0.00 |
| Bashir & Madhavaiah (2015)/India | Banking | Structural Equation Modelling | Five Point Likert | 697 internet banking | Sig β=0.081, CR=4.014, p<0.001 |
| Alam, Mohd and Hisham (2015)/Malaysia | Purchasing decision | Stepwise regression | Five Point Likert | 232 Muslim consumers | Significant β=0.462 |
| Rutherford and DeVaney (2009) | Credit card usage | Regression | Binary | 1350 households | Significant |
| Miller (1999)/USA | Buying illicit goods | Regression | Seven Point Likert | Student | Significant |

Alkafagi *et al.* (2015) conducted a research in banking industry to identify the influence of subjective norm on internet banking adoption. Their research was conducted in Iraq by surveying 535 internet banking consumers. They confirmed that there was significant relationship between subjective norm and internet banking adoption in inverse relationship. Similarly, Bashir and Madhavaiah (2015) carried out a study in India to further investigate this relationship. Their study was conducted in India by using 697 internet banking users. Their outcome of the study confirmed that subjective norm has influence on internet banking usage.

Rutherford and DeVaney (2009) conducted a study in the USA on credit card usage using 1350 households as the respondents and concluded that subjective norm had a significant influence on credit card usage. Similarly, Alam, Hisham and Mohd (2011) conducted another research in Malaysia on the subject of purchasing decision. The research used 232 Muslim consumers as the respondents.

The study results revealed that subjective norm had a significant relationship with purchasing decision. Previous researches were conducted on unethical consumer behavior such as the study by Miller (1999) on buying illicit goods. The study was conducted in the USA using students as the respondents. The results concluded that subjective norm indeed had a significant relationship with buying illicit goods.

In all these studies, subjective norm was found to have a significant relationship with consumer behavior. It can be concluded based on the results that subjective norm significantly influences consumer behavior. In addition, previous studies on subjective norm and consumer behavior included various behaviors. Hence, this study intends to justify the influence of subjective norm on credit card default.

### 2.8.5 Study on attitude with actual behavior

Attitude is important in determining an actual unethical consumer behavior. As another antecedent of the Theory of Planned Behavior, attitude is an important determinant in consumer behavior.

The relationship between attitude and consumer behavior has been examined in several studies such as Alkafagi *et al.* (2015), Bashir & Madhavaiah (2015), Ahmed *et al.* (2010), Chien and Devaney (2001), Riquelme, Abbas and Rios (2012), Rutherford and DeVaney (2009), Abdul-Muhmin and Umar (2007), and Teoh, Chong, and Yong (2012). However, outcomes from previous studies have produced inconsistent results in the relationship between attitude and consumer behaviors leading to ambiguity in this relationship. The next paragraph will further discuss this relationship based on previous studies (Table 2.14).

Table 2.14
*Summary of attitude with behavior*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Alkafagi, Romli, Bahaudin, Alekam & Salameh (2015)/Iraq | Banking | SEM | Seven Point Likert | 535 internet banking users | Sig neg: β=0.617, t=12.93, $p=0.000$ |
| Bashir & Madhavaiah (2015)/India | Banking | SEM | Five Point Likert | 697 internet banking | Sig: β=0.553, CR=15.297, $p<0.001$ |
| Teah and Lwin (2014)/Malaysia | Donation | Regression | Seven Likert scale | 310 households | Significant |
| Teoh, Chong and Yong (2012)/Malaysia | Credit card usage | Multiple regression, t-test | Five Likert scale | 150 credit card holders | Significant<br>β=-0.245 |
| Pattarin and Cosma (2012)/Italy | Credit use | Regression | Five Likert scale | 1,856 household | Significant |
| Ahmed, Alias, Ismail, Sohail, Tabsh and Alias (2010) | Credit card debt | Pearson's correlation | Five Likert scale | 1,210 credit card consumer/ mall intercept | Not Significant |
| Rutherford and DeVaney (2009) | Credit card usage | Logistic regression | Binary | 1350 households | Significant |
| Chien and Devaney (2001) | Credit card debt | Stepwise regression | Survey of Consumer Finance 3 | 4,305 households | Significant<br>$p=0.0001$<br>β=2123.8331 |
| Abdul-Muhmin and Umar (2007) | Credit card ownership | Multiple regression, t-test | Five Likert scale | 774 credit card consumers | Significant<br>$p=0.097$ |
| Abdul-Muhmin and Umar (2007) | Credit card usage | Multiple regression, t-test | Five Likert scale | 774 credit card consumers | Significant<br>$p=0.079$ |

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Quite a number of studies have examined the relationship of attitude with consumer behavior. For example, Alkafagi *et al.* (2015) conducted a research in banking industry to identify the influence of attitude on internet banking adoption. Their research was conducted in Iraq by surveying 535 internet banking consumers. They confirmed that there was significant relationship between attitude and internet banking adoption in positive relationship. Likewise, Bashir and Madhavaiah (2015) carried out a study in India to further investigate this relationship. Their study was conducted in India by using 697 internet banking users. Their outcome of the study confirmed that attitude has influence on internet banking usage.

In contrary, Ahmed *et al.* (2010) conducted a study in Malaysia using consumers as the respondents. The research results concluded that attitude did not have a significant relation with credit card debt. On the other hand, Chien and Devaney (2001) conducted a research in credit card debt to find out the influence of attitude on credit card debt by engaging 4,305 households as the respondents. The results contradicted with Ahmed *et al.* (2010) in which attitude was found to have a significant relation with credit card debt.

Similarly, Rutherford and DeVaney (2009) conducted a research in credit card usage by engaging 1350 households. Results concluded that attitude had a significant influence on credit card usage.  Abdul-Mukmin and Umar (2007) investigated ownership and usage of credit card among 774 credit card consumers. The results proved that attitude had a significant relationship with credit card ownership and credit card usage.

Moreover, Teoh, Chong, and Yong (2012) examined the relation of attitude with credit card usage in Malaysia by engaging 150 credit card holders as the respondents. The results indicated that attitude had a significant relation with credit card usage. Pattarin and Cosma (2012) conducted a study in Italy to verify the impact of attitude on credit use by engaging 1,856 households as the respondents. Results revealed a significant relation between attitude and credit use. Teoh and Lwin (2014) evaluated the behavior of donation among 310 households in Malaysia. Results indicated a significant relationship between attitude and donation behavior.

The previous studies examining the influence of attitude on consumer behavior show a skewness value that is more leaned towards a significant relationship. There was no study found on credit card default in Malaysia. Therefore, it has given the opportunity to study this linkage further.

### 2.8.6 Non-selected Determinants of Credit Card Default

The non-selected determinants of credit card default will also be discussed in this study. Some of the variables that were not chosen for this study include income, number of credit cards that have reached their limits, total required payment to income ratio, and a percentage of the total credit line used. These variables were not included in this study because either they were not significant based on previous studies or they might not represent the behavioral factors which is the focus of this study.

## 2.9 The Antecedents of Intention

There are quite a number of variables that predict intention such as subjective norm as studied in unethical behavior (King & Dennis, 2006; Chang 1998), ethical sales

(Ferdous & Polonsky, 2013), informal payment (Vian & Burak, 2006) technology implementation (Baker, Al-Gahtani & Hubona, 2007), Islamic credit card (Amin, 2012), credit counseling (Xiao & Wu, 2006), internet banking (Shih & Fang, 2004), Halal products (Mukhtar & Butt, 2012; Lada, Tanakinjal & Amin, 2009), speeding intention (Cestac, Delhomme & Paran, 2011), technology usage (Teo & Lee, 2010), takaful participation (Husin & Rahman, 2012), tourism (Jalilvand & Samiei, 2012), and home financing (Alam et al., 2012; Alam & Sayuti, 2011).

Similarly, perceived behavior control is often studied as a predictor of intention such as in unethical behavior (King & Dennis, 2006; Chang 1998), ethical sales (Ferdous & Polonsky, 2013), informal payment (Vian & Burak, 2006), technology implementation (Baker, Al-Gahtani & Hubona, 2007), credit counseling (Xiao & Wu, 2006), internet banking (Shih & Fang, 2004), Halal products (Awan, Siddiquei & Haider, 2014; Alam & Sayuti, 2011), shopping behavior (Fin & Fi, 2011), speeding intention (Cestac, Delhomme & Paran, 2011), technology usage (Teo & Lee, 2010), takaful participation (Husin & Rahman, 2012), tourism (Jalilvand & Samiei, 2012), and home financing (Alam *et al*., 2012).

In addition, studies on religiosity as a predictor to intention is done in the areas of halal food (Mukhtar & Butt, 2012; Awan, Siddiquei & Haider, 2014), Islamic enterprise (Hati & Idris, 2014), purchasing intention (Tabassi, Esmaeilzadeh & Sambasivan, 2012), and home financing (Alam et al., 2012).

### 2.9.1 Study on Subjective Norm with Intention

Previous studies have examined various behaviors in finding out the impact of subjective norm on behavior intention (Table 2.15). For example, Bashir and

Madhavaiah (2015) examined social influence relation with intention to adopt internet banking services by conducting a study among 420 post-graduate students of Pondicherry University in India. The study concluded that social influence has significant relationship with the behavioral intention. Similarly, King and Dennis (2006) conducted a study in the UK to find out the impact of subjective norm on intention toward deshopping behavior by engaging 535 female shoppers. Results stated that subjective norm had a significant relationship with intention to deshop. On the contrary, Chang (1998) conducted a study in Hong Kong to find out about unethical behavior in making illegal software copies by engaging 181 students. The results concluded that subjective norm did not have a significant relation with intention.

Table 2.15
*Summary of subjective norm with intention*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Bashir & Madhavaiah (2015)/India | Banking | Regression | Five Point Likert | 420 post graduate students | Sig $\beta=0.118$, $p<0.009$ |
| King and Dennis (2006)/UK | De shopping behavior | Regression | Structurak interview | 535 female shoppers | Significant |
| Chang (1998)/Hong Kong | Unethical behavior | Structural Equation Model | Five Point Likert | 181 students | Not significant coefficient =0.086 |
| Ferdous and Polonsky (2013)/Bangladesh | Ethical Sales | Structural Equation Model | Five Likert scale | 209 salespeoples | Significant $p=0.00$ |
| Vian and Burak (2006)/Albania | Informal payment | Regression | Five Likert scale | 222 households | Significant |
| Baker, Al-Gahtani and Hubona (2007)/Saudi Arabia | Technology implementation | Structural Equation Model | Seven Point Likert | 1088 knowledge workers | Significant $\beta=0.23$ |
| Amin (2012)/Malaysia | Islamic credit card | Ordered probit model | Five Point Likert | 354 consumers | Significant Z=5.39 |

Table 2.15 (Continued)

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Bashir & Madhavaiah (2015)/India | Banking | Regression | Five Point Likert | 420 post graduate students | Sig $\beta=0.118$, $p<0.009$ |
| King and Dennis (2006)/UK | De shopping behavior | Regression | Structurak interview | 535 female shoppers | Significant |
| Chang (1998)/Hong Kong | Unethical behavior | Structural Equation Model | Five Point Likert | 181 students | Not significant coefficient =0.086 |
| Ferdous and Polonsky (2013)/Bangladesh | Ethical Sales | Structural Equation Model | Five Likert scale | 209 salespeoples | Significant $p=0.00$ |
| Vian and Burak (2006)/Albania | Informal payment | Regression | Five Likert scale | 222 households | Significant |
| Baker, Al-Gahtani and Hubona (2007)/Saudi Arabia | Technology implementation | Structural Equation Model | Seven Point Likert | 1088 knowledge workers | Significant $\beta=0.23$ |
| Amin (2012)/Malaysia | Islamic credit card | Ordered probit model | Five Point Likert | 354 consumers | Significant $Z=5.39$ |
| Xiao and Wu (2006)/USA | Credit counseling | Bivariate Analyses | Seven Point Likert | Consumer | Not significant |
| Shih and Fang (2004)/Taiwan | Internet banking | t-test | Seven Point Likert | 425 consumers | Not significant |
| Mukhtar and Butt (2012)/Pakistan | Halal products | Stepwise regression | Seven Point Likert | 150 consumers | Significant $\beta=0.455$ $p<0.001$ |
| Lada, Tanakinjal and Amin (2009)/Malaysia | Halal products | Regression | Seven Point Likert | 485 consumers | Significant $\beta=0.814$ $p<0.001$ |
| Fin and Fi (2011)/China | Shopping behavior | Structural Equation Model | Seven Point Likert | 747 consumers | Significant $\beta=0.20$ $p<0.01$ |
| Cestac, Delhomme and Paran (2011) | Speeding intention | Regression | Five Point Likert | 3,002 young drivers | Significant |
| Teo and Lee (2010)/Singapore | Technology usage | Structural Equation Model | Five Point Likert | 157 student teachers | Significant |

Table 2.15 (Continued)

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Xiao and Wu (2006)/USA | Credit counseling | Bivariate Analyses | Seven Point Likert | Consumer | Not significant |
| Shih and Fang (2004)/Taiwan | Internet banking | t-test | Seven Point Likert | 425 consumers | Not significant |
| Mukhtar and Butt (2012)/Pakistan | Halal products | Stepwise regression | Seven Point Likert | 150 consumers | Significant<br>$\beta=0.455$<br>$p<0.001$ |
| Lada, Tanakinjal and Amin (2009)/Malaysia | Halal products | Regression | Seven Point Likert | 485 consumers | Significant<br>$\beta=0.814$<br>$p<0.001$ |
| Fin and Fi (2011)/China | Shopping behavior | Structural Equation Model | Seven Point Likert | 747 consumers | Significant<br>$\beta=0.20$<br>$p<0.01$ |
| Cestac, Delhomme and Paran (2011) | Speeding intention | Regression | Five Point Likert | 3,002 young drivers | Significant |
| Teo and Lee (2010)/Singapore | Technology usage | Structural Equation Model | Five Point Likert | 157 student teachers | Significant |
| Husin and Rahman (2012)/Malaysia | Takaful participate | t-test, ANNOVA | Binary scale | 350 credit card holders | Significant |
| Jalilvand and Samiei (2012)/Iran | Tourism | Structural Equation Model | Seven Point Likert | 296 tourists | Significant |

On the other hand, Ferdous and Polonsky (2013) conducted a study in Bangladesh to find out the relationship between subjective norm and intention on ethical sales among salespeople. This study was conducted by engaging 209 salespeople. Results revealed that subjective norm had a significant relation with intention. Similarly, Vian and Burak (2006) performed a study in Albania to verify the influence of subjective norm on informal payment intention by engaging 222 households. The results confirmed that subjective norm had a significant influence on behavior intention toward informal payment.

Likewise, Baker, Al-Gahtani, and Hubona (2007) performed a study in Saudi Arabia by recruiting 1088 knowledge workers to find out the relation between subjective norm and intention in technology implementation. The results revealed that subjective norm had a significant relationship with intention in technology implementation. In addition, Amin conducted a research in Malaysia in the area of patronizing Islamic credit cards. The study was done by engaging 354 consumers. The study concluded that subjective norm had a significant relationship with intention.

On the contrary, Xiao and Wu (2006) performed a study in the USA to find out the relationship between subjective norm and intention to stay in a credit counseling session. The results revealed that subjective norm did not have a significant relationship with intention to stay in a credit counseling session. Similarly, the study by Shih and Fang (2004) on internet banking in Taiwan revealed that subjective norm did not have a significant relation with intention.

On the other hand, previous studies on Halal products confirmed the significant influence of subjective norm on intention to choose Halal products. Mukhtar and Butt (2012) conducted a study in Pakistan by engaging 150 consumers. The results indicated that subjective norm had a significant influence in choosing Halal products. A similar study was done by Lada, Tanakinjal, and Amin (2009) in Malaysia on Halal products. This study engaged 485 consumers. The results revealed that subjective norm had a significant influence on intention to choose Halal products. In addition, Alam and Sayuti (2011) conducted a research on Halal food by engaging 251 consumers. The results revealed that subjective norm had a significant influence on the intention to choose Halal foods.

Similarly, Fin and Fi (2011) carried out a study in China on shopping behavior by engaging 747 consumers as the respondents to examine the significance of subjective norm in influencing intention to shop. The study results concluded that subjective norm had a significant relationship with intention to shop. In addition, a research was done by Cestac, Delhomme, and Paran (2011) in speeding intention by engaging 3,002 young driver to examine the influence of subjective norm on intention to speed. The study results concluded that subjective norm had a significant relationship with the intention to speed. Moreover, in a study conducted by Teo and Lee (2010) in Singapore to identify technology usage using 157 student teachers, the results concluded that subjective norm had a significant relation with intention to use technology.

In Takaful participation, Husin and Rahman (2012) conducted a study in Malaysia by engaging consumers and concluded that subjective norm had a significant relation with intention to participate in Takaful insurance. Similarly, Jalilvand and Samiei (2012) performed a study in Iran to examine the relationship between subjective norm and intention to visit a place of interest and found that subjective norm had a significant relation with a place to visit. On the other hand, Alam et al. (2012) conducted a study in Malaysia to examine the influence of subjective norm on intention to choose home financing by engaging 300 Muslim consumers and concluded that subjective norm did not have a significant relation with intention to choose home financing.

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It appears that previous studies on subjective norm and consumer behaviors have produced mixed results. The results of the previous studies are inconclusive. Therefore, this study intends to further investigate the relationship between subjective norm and credit card default behavior.

### 2.9.2 Study on Perceived Behavior Control with Intention

Previous studies were conducted on various behaviors to confirm the linkage of perceived behavior control with behavior intention (Table 2.16). For example, Farah (2017) did a study to identify factors that influence switching bank intention among consumers with related to bank mergers and acquisitions. The study results revealed perceived behavior control has a significant inverse relation with the intention behavior.

Table 2.16
*Summary of perceived behavioral control with intention*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Farah (2017) | Banking | Structural Equation Model | Five Point Likert | 515 account holders | Significant<br>r=-0.040<br>t=-13.98,<br>p=0.002 |
| King and Dennis (2006)/UK | De shopping behavior | Regression | Structurak interview | 535 female shoppers | Significant |
| Chang (1998)/Hong Kong | Unethical behavior | Structural Equation Model | Seven Point Likert | 181 students | Significant coefficient = 0.425 |
| Ferdous and Polonsky (2013)/Bangladesh | Ethical Sales | Structural Equation Model | Five Likert scale | 209 salespeoples | Significant<br>*p* =0.00 |
| Vian and Burak (2006)/Albania | Informal payment | Regression | Five Likert scale | 222 households | Significant |
| Baker, Al-Gahtani and Hubona (2007)/Saudi Arabia | Technology implementation | Structural Equation Model | Seven Point Likert | 1088 knowledge workers | Significant<br>β=0.23 |
| Xiao and Wu (2006)/USA | Credit counseling | Regression | Seven Point Likert | Consumer | Significant |
| Shih and Fang (2004)/Taiwan | Internet banking | t-test | Seven Point Likert | 425 consumers | Significant<br>p=0.4 |
| Awan, Siddiquei and Haider (2015)/Pakistan | Halal products | Pearson Correlation | Seven Point Likert | 300 consumers | Significant<br>p=0.016<br>β=0.23 |

Table 2.16 (Continued)

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Fin and Fi (2011)/China | Shopping behavior | Structural Equation Model | Seven Point Likert | 747 consumer | Significant<br>$p<0.01$<br>$\beta=0.25$ |
| Cestac, Delhomme and Paran (2011)/USA | Speeding intention | Regression | Five point Likert scale | 3,002 young drivers | Significant |
| Teo and Lee (2010) | Technology usage | Structural Equation Model | Five Point Likert | 157 student teachers | Significant |
| Husin and Rahman (2012) | Takaful participate | Descriptive analysis, t-test, ANNOVA | Binary scale | 350 credit card holders | Significant |
| Jalilvand and Samiei (2012) | Tourism | Structural Equation Model | Seven point Likert | 296 tourists | Significant |
| Alam *et. al* (2012)/Malaysia | Home financing | Regression | Six Point Likert | 300 Muslim consumers | Significant<br>$p=0.029$<br>$\beta=0.161$ |
| Alam and Sayuti (2011)/Malaysia | Halal food | Regression | Six Point Likert | 251 consumers | Significant<br>$p=0.000$<br>$\beta=0.205$ |

Likewise, King and Dennis (2006) conducted a study in the UK to find out the impact of perceived behavior control on behavior intention toward deshopping behavior by engaging 535 female shoppers. Results confirmed that perceived behavior control had a significant relationship with the intention to deshop. Similarly, Chang (1998) conducted a study in Hong Kong in the area of unethical behavior in making illegal software copies by engaging 181 students. The results concluded that perceived behavior control had a significant relation with intention.

Similarly, Ferdous and Polonsky (2013) conducted a study in Bangladesh to find out the relationship between perceived behavior control and intention in ethical sales. This study was conducted by engaging 209 salespeople. Results revealed that perceived behavior control had a significant relation with intention. Similarly, Vian and Burak

(2006) performed a study in Albania to verify the influence of perceived behavior control on informal payment intention by engaging 222 households. The results confirmed that perceived behavior control had a significant influence on behavior intention toward informal payment.

Likewise, Baker, Al-Gahtani and Hubona (2007) performed a study in Saudi Arabia by recruiting 1088 knowledge workers to verify the relation between perceived behavior control and intention in technology implementation. The results revealed that perceived behavior control had a significant relationship with intention in technology implementation. Similarly, Xiao and Wu (2006) performed a study in the USA to find out the relationship between perceived behavior control and intention to stay in a credit counseling session. The results revealed that perceived behavior control had a significant relationship with intention to stay in a credit counseling session. In addition, a study by Shih and Fang (2004) on internet banking in Taiwan revealed similar results in which perceived behavior control had a significant relation with intention.

Moreover, previous studies on Halal products confirmed the significant influence of perceived behavior control on intention to choose Halal products. A study was done by Ahmad, Siddiquei, and Haider (2014) in Pakistan on Halal products. This study engaged 300 consumers. The results revealed that perceived behavior control and subjective norm had a significant influence on intention to choose Halal products. In addition, Alam and Sayuti (2011) conducted a research on Halal food by engaging 251 consumers. The results revealed that perceived behavior control had a significant influence on intention to choose Halal foods.

Similarly, Fin and Fi (2011) carried out a study in China on shopping behavior by engaging 747 consumers as the respondents to examine the significance of perceived behavior control in influencing intention to shop. The study results concluded that perceived behavior control had a significant relationship with intention to shop. In addition, a research was done by Cestac, Delhomme, and Paran (2011) in speeding intention by engaging 3,002 young drivers to examine the influence of perceived behavior control on intention. The study results concluded that perceived behavior control had a significant relationship with intention to speed. Moreover, a study was conducted by Teo and Lee (2010) in Singapore to identify technology usage by engaging 157 student teachers and the results concluded that perceived behavior control had a significant relation with intention to use technology.

In takaful participation, Husin and Rahman (2012) conducted a study in Malaysia by engaging consumers and concluded that perceived behavior control had a significant relation with intention to participate in takaful insurance. Similarly, Jalilvand and Samiei (2012) performed a study in Iran to examine the relationship between perceived behavior control and intention to visit a place of interest and found that perceived behavior control had a significant relation with a place to visit. In addition, Alam et al. (2012) conducted a study in Malaysia to examine the influence of perceived behavior control on intention to choose home financing by engaging 300 Muslim consumers and concluded that perceived behavior control had significant relation with intention to choose home financing.

Hence, previous studies on perceived behavior control and intention of consumers' behavior had produced consistent results. However, the relationship is yet to be tested in a credit card default behavior. Thus, the current study intends to further investigate the influence of perceived behavior control on credit card default behavior.

### 2.9.3 Study on Religiosity with Intention

Previous studies have been conducted on various behaviors to confirm the linkage between religiosity and behavior intention (Table 2.17). For example, Jamshidi and Hussin (2016) did an Islamic credit card study among 327 bank consumers in Malaysia. Their study concluded religiosity significantly influenced intention to use an Islamic credit card. Similarly, Mukhtar and Butt (2012) conducted a study in Pakistan to find out the influence of religiosity with behavior intention toward Halal products by engaging 150 consumers. Results confirmed that religiosity had a significant relationship with intention to choose Halal products. In addition, Awan, Siddiquei, and Haider (2014) conducted a study in Pakistan on the subject of Halal products as well by engaging 214 consumers. The results concluded that religiosity had a significant relation with intention to choose Halal products.

Table 2.17
*Summary of religiosity with intention*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Jamshidi and Hussin (2016)/Malaysia | Credit card | Structural Equation Model | Five Point Likert | 327 bank consumers | Significant $\beta=0.4816$, $p<0.01$ |
| Mukhtar and Butt (2012)/Pakistan | Halal products | Stepwise regression | Seven Point Likert | 150 consumers | Not Significant |
| Mukhtar and Butt (2012)/Pakistan | Halal products | Stepwise regression | Seven Point Likert | 150 consumers | Significant $\beta=0.167$, $p=0.009$ |
| Hati and Idris (2014) | Islamic enterprise | Regression | Interval scale | 214 consumers | Not Significant |

Table 2.17(continued)

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Tabassi, Esmeilzadeh and Sambasivan (2012) | Purchase intention | Regression | Seven Point Likert | 500 consumers | Significant p=0.003, β=-0.114 |
| Alam *et. al* (2012) | Home financing | Regression | Six Point Likert | 300 Muslim respondents | Significant p=0.000, β=0.252 |

On the contrary, Hati and Idris (2014) conducted a study in Indonesia to find out the relationship between religiosity and intention to help an Islamic enterprise. This study was conducted by engaging 214 consumers. Results revealed that religiosity did not have a significant relation with intention to help an Islamic enterprise. A study was carried out by Tabassi, Esmaeilzadeh, and Sambasivan (2012) in Malaysia to verify the impact of religiosity on purchase intention by engaging 500 households. The results confirmed that religiosity had a significant influence on purchase intention. Likewise, Alam et al. (2012) performed a study in Malaysia by recruiting 300 Muslim respondents to verify the relation between religiosity and intention in choosing home financing. The results revealed that religiosity had a significant relationship with intention in choosing home financing.

Hence, previous studies on religiosity and consumers' behavior have produced mixed results and their results have been inconclusive in confirming the relationship. This study intends to further investigate the relationship between religiosity and credit card default behavior.

## 2.10 The Determinants of Attitude

Various variables were used in previous studies in predicting attitude. Among the variables used in predicting attitude include perceived behavioral control (Jamshidi and Hussin, 2016; Bashir and Madhavaiah, 2015; Sharma and Gonindahari, 2015; Ki and Hon , 2001; Naumann and A.Miles, 2001), subjective norm (Hamari, 2015; Zendehdel and Paim, 2015; Ahmed *et al.*, 2010; Riquelme *et al.*, 2012; Chang, 1998), and religiosity (Charsetad, 2015; Abou-Youssef, Kortam, Abou-Aish and El—assionary, Mohammed *et al.*, 2012).

### 2.10.1 Study on perceived behavior control with attitude

Previous studies were conducted on various behaviors to confirm the linkage between perceived behavior control and attitude (Table 2.18). For example, Jamshidi and Hussin (2016) did an Islamic credit card study among 327 bank consumers in Malaysia. Their study concluded perceive ease of use significantly influenced attitude to use an Islamic credit card. Likewise, Bashir and Madhavaiah (2015) examined perceived ease of use relation with intention to adopt internet banking services by conducting a study among 697 internet banking users in India. The study concluded that perceived ease of use has significant relationship with the behavioral intention to adopt internet banking. Equally Sharma and Gonindaluri (2015) did an internet adopted study in India and established that perceived ease of use has significant relation with intention to internet banking.

Table 2.18
*Summary of perceived behavior control with attitude*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Jamshidi and Hussin (2016)/Malaysia | Credit card | Structural Equation Model | Five Point Likert | 327 bank consumers | Significant $\beta=0.2981$, $p<0.01$ |

Table 2.18 (Continued)

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Bashir & Madhavaiah (2015)/India | Banking | Structural Equation Model | Five Point Likert | 697 internet banking | Sig β=0.165, CR=3.298 , p<0.001 |
| Sharma & Gonindaluri (2015)/India | Banking | Structural Equation Model | Five Point Likert | 344 consumers/ prospects | Significant β=0.402, p<0.000 |
| Naumann and A.Miles (2001)/USA | Hospitality | Path analysis | Seven Point Likert | 195 patients | Significant p=0.05 |
| Ki and Hon (2011) | Organization membership | Structural Equation Model | Nine Point Likert | 432 Florida Farm Bureau members | Significant p=0.05 |

Similarly, Naumann and A. Miles (2001) conducted a study in the USA to find out the influence of perceived behavior control on attitude toward hospitality service by engaging 195 patients as the respondents. Results confirmed that perceived behavior control had a significant relationship with attitude toward hospitality service rendered. Similarly, Ki and Hon (2011) conducted a study in USA on membership organization by engaging 432 farm bureau members in Florida as the respondents. The results concluded that perceived behavior control had a significant relation with attitude to join the association.

Hence, previous studies on perceived behavior control and attitude in consumers' behavior have produced consistent results. However, the relationship is yet to be tested for credit card default behavior. Thus, this study intends to further investigate the relationship between perceived behavior control and credit card default behavior.

### 2.10.2 Study on subjective norm with attitude

Previous studies were conducted on various behaviors to confirm the linkage between subjective norm and attitude (Table 2.19). For example, Hamari (2015) conducted a research in Finland. His research to investigate this relationship. His study pertaining to online shopping by engaging 2791 social games users. His results confirmed that there was a significant influence subjective norm on attitude of online shopping. Likewise in another study by Zendehdel and Paim (2015), subjective norm and attitude relationship on online shopping in Malaysia. Their study which engaged 375 university students conclude that subjective norm has significant relation with attitude on online shopping.

Table 2.19
*Summary of subjective norm with attitude*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Hamari (2015)/Finland | Online shopping | Structural Equation Model | Seven Point Likert | 2791 social games users | Significant β=0.748, p<0.001 |
| Zendehdel and Paim (2015)/Malaysia | Online shopping | Structural Equation Model | Five Point Likert | 375 university students | Significant β=0.44, p=0.01 |
| Riquelme, Abbas and Rios (2012)/Kuwait | Purchase Fake products | Structural Equation Model | Five Point Likert | 401 households | Significant p=0.019 |
| Mukhtar and Butt (2012)/Pakistan | Halal products | Stepwise regression | Seven point Likert | 150 consumers | Significant |
| Ahmed et. all (2010)/Malaysia | Credit card debt | Pearson's correlation | Five Point Likert | 1,210 credit card consumer | Not Significant |
| Chang (1998)/Hong Kong | Unethical behavior | Structural Equation Model | Seven point Likert | 181 students | Significant p<0.05 |
| Ahmed *et. all* (2010)/Ma;aysia | Credit card debt | Pearson's correlation | Five point Likert | 1,210 credit card consumer | Significant p=0.008 |

In contrary, Ahmed et al. (2010) conducted a study in Malaysia to find out the impact of subjective norm on attitude toward credit card debt by engaging credit card consumers. Results confirmed that subjective norm did not have a significant relationship with attitude towards credit card debt. On the other hand, Riquelme, Abbas, and Rios (2012) conducted a study in Kuwait on purchasing fake products by engaging 401 households as the respondents. The results concluded that subjective norm and attitude had a significant relation with purchasing fake products.

Similarly, Chang (1998) conducted a study in Hong Kong to find out the relationship of subjective norm with attitude in unethical behavior of making illegal software copies. This study was conducted by engaging 181 students. Results revealed that subjective norm and attitude had a significant relationship.

Hence, previous studies on subjective norm and attitude in consumers' behavior have produced mixed results and the results of the relationship are inconclusive. Thus, this study intends to further investigate the relationship between subjective norm and attitude.

### 2.10.3 Study of religiosity with attitude

Previous studies were conducted on various behaviors to confirm the linkage between religiosity and attitude (Table 2.20). For example, Charsetad (2015) investigated the role of religion in sculpting blood donation. His study was conducted on 242 undergraduates in Iran. The findings indicated religion has significant relation with attitude towards blood donation. Similarly, Mohammed, Karim, and Hussein (2012) conducted a study in Malaysia to find out the influence of religiosity on attitude toward computer ethics by engaging 550 academic staffs and students as the respondents. Results confirmed that religiosity had a significant relationship with attitude. Similarly, Abou-Youssef et al. (2015) conducted a study in Egypt on banking by engaging 417 consumers as the respondents. The results concluded that religiosity had a significant relation with attitude.

Table 2.20
*Summary of religiosity with attitude*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Charsetad (2015)/Iran | Blood donation | Structural Equation Model | Five point Likert | 242 undergarduate student | Significant β=0.55, p<0.005 |
| Abou-Youssef, Kortam, Abou-Aish, El-Bassiouny (2015)/Egypt | Banking | Rotated component matrix | Five point Likert | 417 consumers | Significant Pearson correlation =0.326, p<0.000 |
| Farrag and Hassan (2015)/Egypt | Fashion | Pearson's correlation | Five point Likert | 320 students | Significant p=0.036 |
| Rahman, Asrarhaghighi and Rahman (2015)/Malaysia | Cosmetic | Structural Equation Model | Five point Likert | 110 convenience sampling | Significant p<0.001 |
| Souiden and Rani (2013)/Tunisia | Banking | Structural Equation Model | Five Point Likert | 217 online questionnaire | Not Sig. β=0.029, p=0.807 |
| Mohammed, Karim and Hussein (2012)/Malaysia | Computer ethic | Exploratory factor analysis, t-test, Hierarchical multiple regression | Seven point Likert | 550 academic staffs and students | Significant β=-0.103, p<0.001 |

On the contrary, Souiden and Rani (2014) conducted a study in Tunisia to find out the relationship between religiosity and attitude in the banking industry. This study was conducted by engaging 217 online respondents. Results revealed that religiosity did not have a significant relation with attitude. A study was conducted by Farrag and Hassan (2015) in Egypt to verify the impact of religiosity on attitude by engaging 320 students. The results confirmed that religiosity had a significant influence on attitude in choosing fashion. Likewise, Rahman, Asrarhaghighi, and Rahman (2015) performed a study in Malaysia by recruiting 110 consumers as the respondents to verify the relation between religiosity and attitude in choosing halal cosmetics. The results revealed that religiosity had a significant relationship with attitude in choosing halal cosmetics.

Hence, previous studies on religiosity and attitude in consumers' behavior have produced mixed results and they are inconclusive in confirming the relationship. Therefore, this study intends to further investigate the relationship between religiosity and attitude.

## 2.11 Indirect relationship of Credit Card Default

There are many researchers who propose the intervening variable of attitude/intention in their studies but the intervening results have not been established (Ferdous & Polonsky, 2013; Jalilvand & Samiei, 2012; Riquelme, Abbas & Rios, 2012; Alam et. al., 2012; Delhomme & Paran, 2011; Alam & Sayuti, 2011; Teo & Lee, 2010; Rutherford & DeVaney, 2009; Baker, Al-Gahtani & Hubona, 2007; King & Dennis, 2006; Xiao & Wu, 2006). Only Chang (1998) was found to have studied the mediating effect of attitude on subjective norm with behavior intention on unethical behaviors. As the underpinning component of TPB, intention is an intervening variable of information system usage.

In a previous study, attitude was proposed as the intervening variable. However, the mediating effect was not established. For example, the mediating effect of attitude on subjective norm and behavior was not established (Riquelme, Abbas and Rios, 2012)

On the other hand, Chang (1998) established the mediation effect of attitude on subjective norm and behavior in illegal copy software. However, the study was not in credit card default.

The mediating effect of attitude on religiosity and behavior was not established (Mohammed, Karim and Hussein, 2012). This study was on computer ethic usage. Hence, this study will include attitude and intention as an intervening variable. This study will also include subjective norm and perceived behavior control as the predictors of attitude and intention. These are the two original links in the Theory of Planned Behavior. The additional indirect relationship proposed is religiosity acting as the predictor of intention and attitude.

## 2.12 Mediation effect of attitude (Attitude as a mediator)

Chang (1998) concluded that attitude mediated the relation between subjective norms and behavior intention on a previous unethical behavior study. Besides that study, the researcher could not find attitude being used as an intervening factor in credit card default. Hence, this research has decided to include attitude as the mediator with academic justification in the following paragraph.

### 2.12.1 Indirect Effect of Subjective Norm

In the present study, the mediating effects of attitude on subjective norm and credit card default are included based on the arguments found on the limited past studies investigating this relationship. For example, Bashir & Madhavaiah (2015) conducted a study in banking to examine the mediating effect of attitude on subjective norm and online banking. The result indicated the mediation effect is not supported. On contrary, Chang (1998) investigated the mediating effect of attitude on subjective norm and copying illegal software by students in Hong Kong and the result indicated that the mediating effect was supported.

Table 2.21
*Mediation Role of Attitude between Subjective Norm with Behavior*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Bashir & Madhavaiah (2015)/India | Banking | SEM | Five Point Likert | 697 internet banking | Mediation not supported: β=-0.004, |
| Hamari (2015)/Finland | Online shopping | SEM | Seven Likert scale | 2791 social games users | Mediation result not established |
| Riquelme, Abbas and Rios (2012)/Kuwait | Purchase fake products | SEM | Five Point Likert | 401 households | Mediation result not established |
| Chang (1998)/Hong Kong | Unethical behavior | SEM | Seven Likert scale | 181 students | Mediation supported |

However, the study had investigated this study based on other unethical behaviors (Chang, 1998) was on unethical behavior. It was not on credit card default. In addition, the attitude mediating was not establish in study by Hamari (2015) and Riquelme, Abbas and Rios (2012) (Table 2.21). Hence, this study aims to investigate the mediating effect of attitude on subjective norm with credit card default.

### 2.12.2 Indirect Effect of Perceived Behavior Control

In the current study, the mediating effects of attitude on perceived behavior control and credit card default are included due to limited past studies investigating this relationship. For example, Bashir & Madhavaiah (2015) conducted a study in banking to examine the mediating effect of attitude on perceived ease of use and online banking. The result indicated the mediation effect is supported. On contrary, study by Jamshidi and Hussin (2016) and Sharma and Gonindaluri (2015) did not establish the attitude mediating in their credit card study in Malaysia and internet banking adoption study in India respectively (Table 2.22).

Table 2.22
*Mediation Role of Attitude between Perceived Behavior Control with Behavior*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Jamshidi and Hussin (2016)/Malaysia | Credit card | Structural Equation Model | Five Point Likert | 327 bank consumers | Mediating not established |
| Bashir & Madhavaiah (2015)/India | Banking | Structural Equation Model | Five Point Likert | 697 internet banking | Mediation supported. $\beta$=-0.185, $p<0.01$ |
| Sharma & Gonindaluri (2015)/India | Banking | Structural Equation Model | Seven Point Likert | 2791 social games users | Mediating not established |

### 2.12.3Indirect Effect of Religiosity

This study examines the mediating effect of attitude on religiosity towards credit card default. Previous study by Souiden and Rani (2013) on banking found that attitude mediates the relation between religiosity with behavior. It was not on credit card default. In addition, the attitude mediating was not establish in study by Jamshidi and Hussin (2016) and Mohamed, Karim and Hussein (2012) (Table 2.23). Hence, this study aims to investigate the mediating effect of attitude on religiosity with credit card default.

Table 2.23
*Mediation Role of Attitude between Religiosity with Behavior*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Jamshidi and Hussin (2016)/Malaysia | Credit card | Structural Equation Model | Five Point Likert | 327 bank consumers | Mediating not established |
| Souiden and Rani (2013)/Tunisia | Banking | Structural Equation Model | Five Point Likert | 217 online questionnaire | Fully Mediating |
| Mohammed, Karim and Hussein (2012)/Malaysia | Computer ethic | Regression | Seven point Likert | 550 academic staffs and students | Significant $\beta$=-0.103, $p<0.001$ |

### 2.13 Mediation effect of intention to pay (Intention to pay as a mediator)

Many researchers have proposed the intervening variable of intention in their studies but the intervening results have not been established (Sommestad, Karlzen and Hallberg, 2015; Ferdous & Polonsky, 2013; Jalilvand & Samiei, 2012; Riquelme, Abbas & Rios, 2012; Alam et. al., 2012; Delhomme & Paran, 2011; Alam & Sayuti, 2011; Teo & Lee, 2010; Rutherford & DeVaney, 2009; Baker, Al-Gahtani & Hubona, 2007; King & Dennis, 2006; Xiao and Wu, 2006).

Hence, this study has chosen the mediation effect by examining the mediation effect of intention on subjective norm, perceived behavior control, and religiosity towards credit card default.

#### 2.13.1Indirect Effect of Subjective Norm

Previous studies have suggested the intervening variable of intention on subjective norm with behavior. However, the mediation test of this linkage was not performed by the researchers.

For example, Sommestad, Karlzen and Hallberg (2015) studied the theory of planned behavior (TPB) in explaining information security policy compliance among 306 respondents at a research organization, Ferdous and Polonsky (2013) investigated ethical sales among 209 salespeople in Bangladesh; King and Dennis (2006) investigated deshopping behavior among 535 female shoppers in the UK; Xiao and Wu (2006) studied credit counseling intention among consumers in the USA and Shih and Fang (2004) examined internet banking among 425 consumers in Taiwan (Table 2.24) . None of the researchers has performed the mediation test.

Hence, this study aims to close the gap by investigating the mediating effect of intention on subjective norms with credit card default.

Table 2.24
*Mediation Role of Intention to pay between Subjective Norm with Behavior*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Sommestad, Karlzen and Hallberg (2015)/Sweden | Information security policy | Regression | Seven point Likert | 303 at a research organization | Mediating not established |
| Ferdous and Polonsky (2013)/Bangladesh | Ethical sales | Structural Equation Model | Five point Likert | 209 salespeople | Mediating not established |
| King and Dennis (2006)/UK | Deshopping behavior | Regression | Structural interview | 535 female shoppers | Mediating not established |
| Xiao and Wu (2006)/USA | Credit counseling | Regression | Seven Point Likert | 326 consumers | Mediating not established |
| Shih and Fang (2004)/Taiwan | Internet banking | t-test | Seven Point Likert | 425 consumers | Mediating not established |

### 2.13.2Indirect Effect of Perceived Behavior Control

Previous studies have suggested the intervening variable of intention on perceived behavior control with behavior. However, the mediation test of this linkage was not performed by the researchers.

For example, Sommestad, Karlzen and Hallberg (2015) studied the theory of planned behavior (TPB) in explaining information security policy compliance, Ferdous and Polonsky (2013) investigated ethical sales among 209 salespeople in Bangladesh; King and Dennis (2006) investigated deshopping behavior among 535 female shoppers in the UK; Xiao and Wu (2006) studied credit counseling intention among consumers in the USA and Shih and Fang (2004) examined internet banking among 425 consumers in Taiwan. These studies also did not perform the mediation test (Table 2.25). Hence, this study aims to investigate the mediating effect of intention on perceived behavior control with credit card default.

Table 2.25
*Mediation Role of Intention to pay between Perceived Behavior Control with Behavior*

| Authors | Industry | Analysis Method | Scale | Respondent | Findings |
|---|---|---|---|---|---|
| Sommestad, Karlzen and Hallberg (2015)/Sweden | Information security policy | Regression | Seven point Likert | 303 at a research organization | Mediating not established |
| Ferdous and Polonsky (2013)/Bangladesh | Ethical sales | Structural Equation Model | Five point Likert | 209 salespeople | Mediating not established |
| King and Dennis (2006)/UK | Deshopping behavior | Regression | Structural interview | 535 female shoppers | Mediating not established |
| Xiao and Wu (2006)/USA | Credit counseling | Regression | Seven Point Likert | 326 consumers | Mediating not established |

## 2.14 The Evolution of the Theory of Planned Action (TRA)

To the best of the researcher's knowledge, only a few empirical research literature could be found on credit card default. Due to the lack of theoretical study on credit card default, the current research has turned to models that have been developed in other behavioral areas as the foundation for this research.

The Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1975) has been used extensively in social physiology researches. The theory was developed by Izek Ajzen and Martin Fishbein (1975). Fishbein and Ajzen (1975) emphasize that TRA consists of two independent (attitude and subjective norm), one mediating (behavior intention), and one dependent variables (behavior) (Figure 2.19).

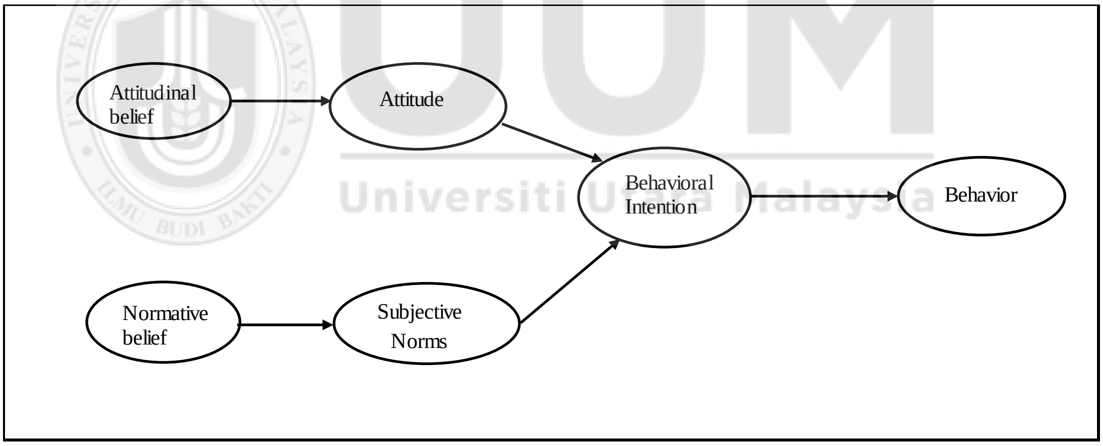


Figure 2.19
*Theory of Reasoned Action (Ajzen & Fishbein, 1975)*

The theory proposes that individual behavior is determined by the individual's intention to conduct the behavior. The behavior intention is determined by the individual's attitude and subjective norm concerning the behavior. According to Ajzen and Fishbein (1975), attitude is the positive or negative feeling of a person related to performing a particular behavior. Meanwhile, Alkafagi et al. (2015) defined subjective norm as “normative beliefs, and the person’s motivation to comply with different referents”.

TRA (Flashbein & Ajzen, 1975), for instance, has been widely used to explain and predict the intention of consumer behavior (Mukhtar & Butt, 2012; Lada, Takinjal & Amin, 2009; Chang, 1998). Over the years, TRA has been replicated and extended to have a better prediction of consumer behavior (Table 2.26).

Table 2.26
*Theory of Reasoned Action*

| Authors | Industry | Respondent | Analysis Method | Scale | Determinants |
|---|---|---|---|---|---|
| Mohammed, Karim and Hussein (2012)/Malaysia | Computer ethic | 550 academic staffs and students | Exploratory factor analysis, t-test. Hierarchical multiple regression | Seven point Likert | Gender<br>Level in organizational hierarchy<br>Islamic work ethics<br>Attitude |
| Mukhtar and Butt (2012)/Pakistan | Halal products | 150 consumers | Stepwise regression | Seven point Likert | Attitude<br>Subjective norm<br>Iner - p<br>Intra - p |
| Lada, Tanakinjal and Amin (2009)/Malaysia | Halal product | 485 consumers | Regression | Seven point Likert | Attitude<br>Subjective norm |
| Chang (1998)/Hong Kong | Unethical behavior | 181 students | Structural Equation Model | Seven Point Likert | Attitude<br>Subjective norm<br>Perceived behavior control |

After reviewing the past literature, the researcher found several other models that have emerged from TRA such as the Theory of Planned Behavior (TPB) (Ajzen, 1991) and the Decomposed Theory of Planned Behavior (DTPB) (Taylor & Todd, 1995). These models have been used extensively in consumer behavior studies.

## 2.15 Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) was extended by Ajzen (1991) to explain the behavior, which is a direct function of behavioral intention and perceived behavior control. This theory was developed due to the limitation of the TRA (Ajzen, 1985). An additional construct, perceived behavior control was added to the TPB model to account for situations where individuals lack complete control over their behavior (Ajzen, 1985, 1991). Effects of perceived behavior control on behavior can be direct or indirect (Figure 2.20).

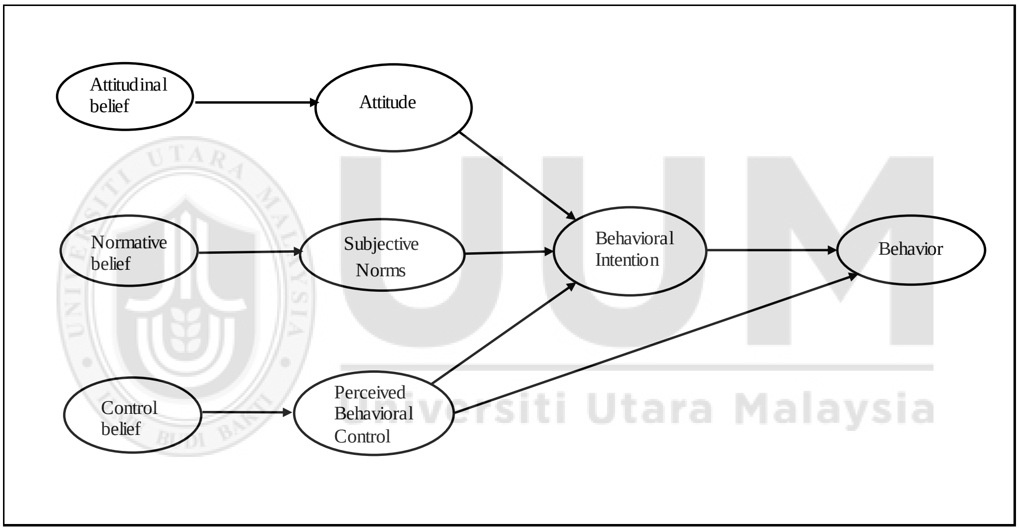

Attitudinal belief
Attitude
Normative belief
Subjective Norms
Behavioral Intention
Behavior
Control belief
Perceived Behavioral Control

Figure 2.20
*Theory of Planned Behavior*
Source: Ajzen (1991)

This theory has eight constructs, which are actual behavior, behavioral intention, attitude, subjective norm, perceived behavior control, attitudinal belief, normative belief, and control belief.

Table 2.27 listed some of previous studies that used The Theory of Planned Behavior as the underpinning theory.

Table 2.27
*Theory of Planned Behavior*

| Authors | Industry | Respondent | Analysis Method/Scale | Determinants |
|---|---|---|---|---|
| Ferdous and Polonsky (2013)/Bangladesh | Ethical sales | 209 salespeople | Structural Equation Model/Five Likert scale | Attitude<br>Subjective nor,<br>Perceived behavior control<br>Ethical selling intention |
| Mohammed, Karim and Hussein (2012)/Malaysia | Computer ethic | 550 academic staffs and students | Exploratory factor analysis, t-test. Hierarchical multiple regression | Gender<br>Level in organizational hierarchy<br>Islamic work ethics<br>Attitude |
| Jalilvand and Samiei (2012)/Iran | Tourism | 296 tourists | Structural Equation Model/Five Likert scale | Electronic word of mouth<br>Attitude<br>Subjective norm<br>Perceived behavior control |
| Riquelme, Abbas and Rios (2012)/Kuwait | Purchase Fake products | 401 households | Structural Equation Model/Five Likert scale | Value consciousness<br>Risk<br>Social norms<br>Ethical consciousness<br>Social status<br>Genuine store trustworthiness |
| Alam et. al (2012)/Malaysia | Home financing | 300 Muslim consumers | Regression/Six Likert scale | Attitude<br>Subjective norm<br>Perceived behavior control<br>Religiosity |
| Cestac, Delhomme and Paran (2011) | Speeding intention | 3,002 young drivers | Regression/Five Likert scale | Driving experience<br>Mileage<br>Attitude<br>Injunction subjective norm<br>Descriptive subjective norm<br>Perceived behavior control |

Table 2.27 (Continued)

| Authors | Industry | Respondent | Analysis Method/Scale | Determinants |
|---|---|---|---|---|
| | | | | Sensation seeking<br>Comparative judgement of speeding risk<br>Self description<br>Typical deviant description<br>Perceived similarity the typical deviant<br>Number of times ticketed last year<br>Past behavior |
| Alam and Sayuti (2011)/Malaysia | Halal products | 251 consumers | Regression/Six Likert scale | Attitude<br>Subjective norm<br>Perceived behavior control |
| Teo and Lee (2010)/Singapore | Technology usage | 157 student teachers | Structural Equation Model/Five point Likert | Attitude<br>Subjective norm<br>Perceived behavior control |
| Rutherford and DeVaney (2009)/USA | Credit card usage | 1350 households | Regression Binary | Attitude<br>High risk tolerence<br>Longer planning<br>Borrow for purchase<br>Older head of household<br>Family financial advise<br>Shop a great deal<br>No late payment history<br>Education<br>Income |
| Baker, Al-Gahtani and Hubona (2007)/Saudi Arabia | Technology implementation | 1088 knowledge workers | Structural Equation Model/Seven point Likert | Attitude<br>Subjective norm<br>Perceived behavior control |

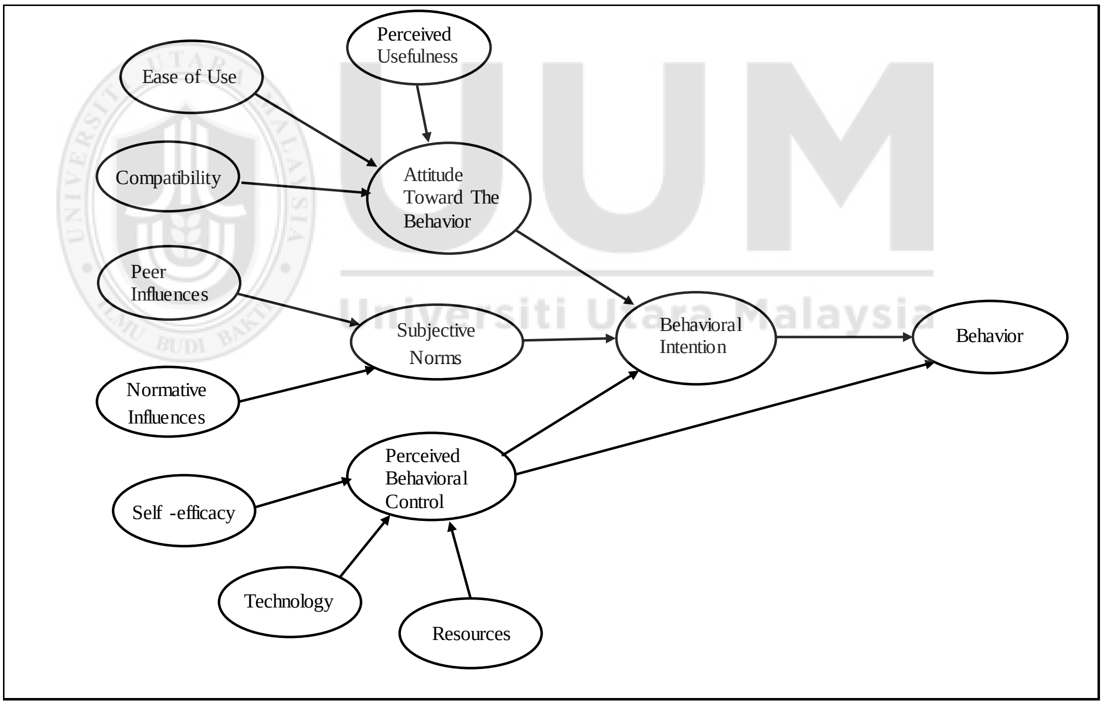
Table 2.27 (Continued)

| Authors | Industry | Respondent | Analysis Method/Scale | Determinants |
|---|---|---|---|---|
| King and Dennis (2006)/UK | Deshopping behavior | 535 female shoppers | Regression/Structural interview | Attitude<br>Subjective norm<br>Perceived behavior control<br>Actual control<br>Intention |
| Xiao and Wu (2006)/USA | Credit Counseling | Consumer | Bivariate Analysis/Seven point Likert | Attitude<br>Subjective norm<br>Satisfaction<br>Financial<br>Perceived behavior control<br>Intention |
| Chang (1998)/Hong Kong | Unethical behavior | 181 students | Structural Equation Model/Seven point Likert | Attitude<br>Subjective norm<br>Perceived behavior control |

## 2.16 Decomposed Theory of Planned Behavior (DTPB)

As an extension to TPB (Ajzen, 1991) which was a development of TRA, Taylor and Todd (1995) proposed decomposing the constructs of TPB into detailed components. DTPB expands TPB by counting the constructs from the DOI perspective (Rogers, 1983, 1995). This theory suggests that attitude, subjective norms, and perceived behavioral control would influence the behavior intention to use technology. Then, Taylor and Todd (1995) extended the TPB one step further. They decomposed the attitudinal belief, normative belief, and control beliefs into several dimensional constructs. This was done to provide higher descriptive power and to give more accurate understanding of the antecedents of behavior.

Taylor and Todd (1995) suggested a set of attitudinal beliefs, which were derived from the literature describing DOI (Rogers, 1983, 1995). This approach has been explicitly and implicitly used in previous studies of new technology adoptions. This theory found that five perceived characteristics of an innovation that influenced adoption are relative advantages, compatibility, complexity, trialability, and observability (Rogers, 1983). Three out of the five perceived characteristics were found to be consistently related to an adoption decision. In general, these are relative advantages, complexity, and compatibility (Moore & Benbasat, 1991) (Figure 2.21).


Perceived Usefulness
Ease of Use
Compatibility
Attitude Toward The Behavior
Peer Influences
Subjective Norms
Behavioral Intention
Behavior
Normative Influences
Perceived Behavioral Control
Self -efficacy
Technology
Resources

UUM
Universiti Utara Malaysia

Figure 2.21
*Decomposed Theory of Planned Behavior*
Source: Taylor and Todd (1995)

Table 2.28 listed some of previous researches that used Decomposed Theory of Planned Behavior as the underpinning theory.

Table 2.28
*Decomposed Theory of Planned Behavior*

| Authors | Industry | Respondent | Analysis Method | Scale | Determinants |
|---|---|---|---|---|---|
| Shih and Fang (2004)/Taiwan | Internet banking | 425 consumers | t-test | Seven Point Likert | Attitude<br>Perceived usefullness<br>Ease of use<br>Compatibility<br>Subjective norm<br>Peer influences<br>Normative influences<br>Perceived behavior control<br>Self efficacy<br>Technology<br>Resources<br>Intention |
| Fin and Kang (2011)/China | Shopping Behavior | 747 consumers | Structural Equation Model | Seven point Likert | Attitude<br>Face saving<br>Subjective norm<br>Group conformity<br>External perceived behavior control<br>Internal perceived behavior control |
| Husin and Rahman (2012)/Malaysia | Takaful participate | Consumers | Regression | Seven point Likert | Attitude<br>Risk protection<br>Saving<br>Investment<br>Subjective norm<br>Words of mouth referents<br>Media referents<br>Perceived behavior control<br>Self-efficacy<br>Resource facilitating condition |

## 2.17 Rational for Choosing the Theory of Planned Behavior

Credit card default is an area of moral behavior. The religion of Islam, for example, considers credit card default an unethical behavior. Easy availability of credit and compulsive buying has led to many adverse consequences such as addiction to shopping and excessive debt (Ahmed, Ismail, Sohail, Tabsh & Alias, 2010). Taking one step behind, the current research would like to examine the determinants of credit card default. Hence, using the TPB, as the underpinning theory, justifies the current research objective.

The Theory of Planned Behavior was chosen as the underpinning theory since, to the best of the researcher's knowledge, this theory is rarely used in studying credit card default. Riquelme, Abbas and Rios (2012) and King and Dennis (2006) focused their study on TPB for unethical behavior. In addition, the validity of the Theory of Planned Behavior in predicting unethical behavior has been proven by a previous study (Chang, 1998). The study results are consistent with most situations involving decisions of performing unethical behavior. None of these studies suggests TPB for credit card default, perhaps because credit card default is a relatively new topic in consumer behavior. Consequently, the current study will extend the TPB for credit card default and predict the determinants of credit card default in Malaysia.

TRA was not chosen since the TPB is the extension of the TRA. The Theory of Planned Behavior is used to explain the unethical behavior instead of the Theory of Reason Action because unethical behavior such as credit card default requires substantial resources and opportunities to perform successfully.

The addition of perceived behavioral controls is used to explain the behavioral intention. Perceived behavioral control reflects an individual's perception of ease or difficulty of performing a target behavior. This control belief has a strong influence on an individual's intention to perform or not to perform a certain behaviors. Chang (1998) applied the TRA and TPB to predict unethical behavior. The Theory of Planned

Behavior was found to be better than the TRA in predicting unethical behavior. Chang (1998) also recommended more research to be conducted to test the theory's validity.

Taking credit card default as an unethical behavior, and one that is likely to be influenced by people's attitudes, normative beliefs, as well as opportunities to engage in this behavior. Thus, it is appropriate that the current research extends the applicability of the TPB to understand this behavior.

TPB also allows adding new variables to the model (Bailey, 2006; Tonglet, 2002; Ajzen, 1991; Peace *et. al*., 2003). Therefore, religiosity has been added as a new variable. It is chosen because it is a factor that is likely to impact attitude and intention towards credit card default. The rest of the variables chosen for this study have been used in previous applications of TPB for different behaviors. Hence, the operationalization and measures have been adapted from these works.

## 2.18 Chapter Summary

Few empirical studies were found on credit card default. Hence, to commensurate the shortage of literature on credit card default, a study in other consumer behaviors such as credit card debt and consumer unethical behaviors were conducted. Attitude, subjective norm, perceived behavior control and religiosity are factors that are expected to have a significant influence on consumer behaviors. Attitude, subjective norm, perceived behavior control as well as religiosity had a significant relation with intention in previous consumer behavior studies. All the relationships shall be examined in this credit card default study using the Theory of Planned Behavior as the underpinning theory. In addition, the relation between religiosity and attitude would also be examined since previous studies had shown a significant relation in consumer studies. This research would also examine the mediating effect of attitude and intention.

# CHAPTER THREE
# METHODOLOGY

## 3.1 Chapter Overview

This chapter provides a detailed discussion about the research methodology, which includes research design, research framework, the hypothesis of the study, and the measurement of the variables. The questionnaire design development is discussed thoroughly followed by the sampling method and data collection. Finally, the method of analysis is discussed from the first step of analysis until the completion of the data analysis.

Research is defined as an organized, systematic, critical, or scientific investigation into a specific problem, undertaken with the objective of finding answers or solutions thereto (Sekaran, 2003). It is conducted to have a better understanding of any particular subject of interest. The research results can be used by interested parties to perform their duties more efficiently.

## 3.2 Research Design

This research is a quantitative research data. It is an empirical research designed by collecting primary data via a structured questionnaire. These steps are conducted to fulfill the research objectives. The data is collected using a structured questionnaire on Muslim credit card defaulters in Klang Valley. Then, the collected data is analyzed via the structural equation modelling method (SEM).

The current research is based on Ajzen's (1991) Theory of Planned Behavior as the underpinning theory in investigating the antecedents of credit card default. This research further examines the relation between the exogenous and endogenous variables. The exogenous variables consist of subjective norm, perceived behavior control, and religiosity while the endogenous variables are attitude, intention, and credit card default. This research advances further from the common researches by using the Theory of Planned Behavior in which it examines further the actual behavior rather than stop at intention itself. Moreover, religiosity is added to the underpinning theory to examine the influence of this variable on credit card default behavior.

## 3.3 Research Framework

This research proposes a theoretical model that is based on the literature review that was discussed in the previous chapter. Using the Theory of Planned Behavior (TPB) introduced by Ajzen (1991) as the underpinning theory, the proposed framework includes six variables as shown in Figure 3.1.The six variables are (1) intention, (2) perceived behavior control, (3) religiosity, (4) subjective norm, (5) attitude, and (6) credit card default (actual behavior).

Subjective norm, perceived behavior control, and religiosity are the exogenous variables. Attitude and intention are the mediators and credit card default is the endogenous variable. Since TPB also allows for additional variables in the model (Ajzen, 1991), in the current research, religiosity is added as a new variable. Religiosity is a new variable and a new contribution to this research.

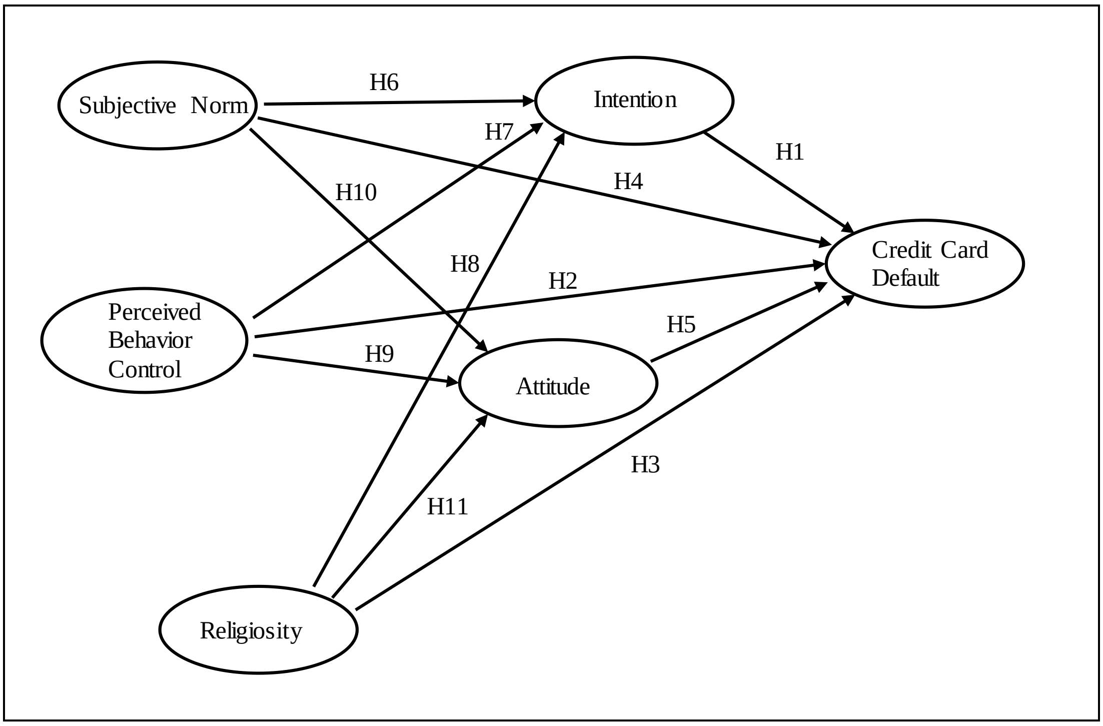

Subjective Norm
H6
Intention
H7
H1
H10
H4
Credit Card Default
H8
H2
Perceived Behavior Control
H5
H9
Attitude
H3
H11
Religiosity

Figure 3.1
*Research Framework Model*

The selection of these determinants is based on several factors. First, the variables are expected to have a relationship with credit card defaults but no previous empirical research conclusively supports this claim. Secondly, the variables are selected due to their significant relation with credit card debt and unethical consumer behaviors. Therefore, the chosen variables have great potential to be significant predictors of credit card default.

### 3.3.1 Selected direct determinants of credit card default

Five (5) direct determinants of credit card default are proposed for this study (intention, perceived behavior control, religiosity, subjective norm, and attitude). Intention has been successful in predicting consumer behavior in past studies by Ferdous and Polonsky (2013) in ethical sale, Xiao and Wu (2008) in credit counseling, and Shih and Fang (2004) in internet banking. Since intention was successful in predicting consumer behavior in previous studies, this variable will be tested to find out if it has a significant relation with credit card default. Perceived behavior control has been a significant determinant of consumer behavior in past studies (Rutherford & DeVaney, 2009) on credit card usage (Xiao & Wu, 2008) and credit counseling. Hence, perceived behavior control will be verified if it has a significant relation with credit card default in this study. In addition, religiosity has produced mix results as a determinant of unethical consumer behavior in past studies. The relationship is more skewed towards a significant relationship. Religiosity does not have a significant relationship with behavior in previous studies on ethical judgment (Bakar, Hisham & Lee, 2012), ethical belief (Vitell & Paolillo, 2003), and product decision (Razzaque & Chaudhry, 2012). In other studies, religiosity was found to have a significant relationship with behaviors such as ethical perception (Alleyne & Persaud, 2012), new product adaption (Rehman & Shabbir, 2010), brand decision (Razzaques & Chaudhry, 2012), employee performance (Gani, Hashim & Mohd, 2011), shopping orientation (Mokhlis, 2009), product involvement (Yousaf & Malik, 2013), sexual intercourse (Mueller, Bensyl, Vesely, Oman & Aspy, 2010), sexual intercourse (Fatusi & Blum, 2008), and consumer boycotts (Al-Hyari et al., 2011). Hence, religiosity is further verified in this study to confirm if it has a significant relation with credit card default.

Subjective norm is predicted to have a significant relation with credit card default. This variable is hypothesized to have a relation based on previous research in which subjective norm was shown to have a significant relationship with credit card default. Rutherford and DeVaney (2009), Alam, Mohd, and Hisham (2011), and Miller (1999) concluded in their studies that subjective norm had a significant relation with credit card default.

In previous studies, attitude and behavior had shown mixed results. The relationship was skewed more towards being significant. The relationship was shown as being insignificant in studies by Ahmed et al. (2010) on credit card debt. On the other hand, the relationship was significant in a study by Chein and Devaney (2001) on credit card debt, Rutherford and DeVaney (2001) on credit card usage, Abdul-Muhmin and Umar (2007) on credit card usage, Teoh, Chong and Yong (2012) on credit card usage, Pattarin and Cosma (2012) on credit use, and Teah and Lwin (2014) on donation. Since this variable had produced results showing a more significant relationship in previous studies hence, it needs further testing in this current research to verify its relation with credit card default.

### 3.3.2 Selected direct determinants of intention

The hypothesis framework predicts three direct antecedents to intention. They are subjective norm, perceived behavior control, and religiosity. In previous studies, subjective norm with intention produced more significant results. In a study by Ferdous and Polonsky (2013), subjective norm with intention produced a significant relationship in ethical sales. Amin (2012) found a significant relationship between subjective norm and intention in choosing an Islamic credit card. Since skewness is more significant in the relationship between subjective norm and intention, this current research intends to further validate the direct relation between subjective norms and intention in credit card default.

The relationship between perceived behavior control and intention was significant in previous consumer behavior studies. Perceived behavior control and intention had a significant relation in studies by Alam et al. (2012) on home financing and Husin and

Rahman (2012) on takaful participation. These studies were not based on credit card default; hence, this study intends to validate this relationship in credit card default.

Research suggests religiosity as an antecedent to intention. Religiosity is expected to have a significant relationship with intention. This is based on previous researches in which religiosity had successfully become a determinant of intention in consumer behavior studies such as in Mukhtar and Butt (2012) and Awan, Siddiquei and Haider (2014), both on Halal products. Hence, the influence of religiosity on intention will be tested in credit card default.

### 3.3.3 Selected direct determinants of attitude

The hypothesis framework predicts three direct antecedents to attitude. They are perceived behavior control, subjective norm, and religiosity. Perceived behavior control has a constant significant relationship with attitude. Naumann and A. Miles (2001) on a hospitality study and Ki and Hon (2011) on an organization membership study concluded that perceived behavior control had a significant relationship with attitude. This study will validate the relation on credit card behavior.

Subjective norm with attitude has produced a more significant relationship. The relation was found significant in studies by Riquelme, Abbas and Rios (2012) on purchasing fake products, Chang (1998) on unethical behavior and Ahmed et al. (2010) on credit card debt. The skewness results that leaned towards a significant relationship has motivated the current research to validate the direct relation between subjective norm and attitude in credit card default.

### 3.3.4 Selected mediating effect of attitude

In this research, attitude is predicted to have a mediating effect between exogenous and endogenous variables. Attitude was a mediating variable between subjective norm and unethical behavior in a study by Chang (1998). This study examined the mediating effect of attitude in the relation between subjective norm, perceived behavior control and religiosity with credit card default. This study fills the gap left by previous studies on credit card that did not examine the effect of attitude as the mediating variable in credit card default in Malaysia.

Reviewing past studies had indicated a lack in examining attitude as a mediator. Attitude was a moderator in the relation between religiosity and intention in a computer ethic study done by Hussein, Karim, and Mohamed (2002) and in a study on purchase of fake products by Abbas, Rios, and Riquelme (2012).

### 3.3.5 Selected mediating effect of intention to pay

The other mediating variable for this study is intention. This study examines the mediating effect of intention on subjective norm, perceived behavior control, and religiosity with credit card default. Intention had a mediating effect in the relation between attitude and credit card usage in a study done by Chen and Denavey (2001), and between perceived behavior controls and unethical behavior in a study done by Chang (1998). There was no previous mediating effect study on credit card default. Previous studies had failed to examine the mediating factor of intention. This study fills the gap left by previous studies especially on credit card and the effect of intention as the mediating variable in credit card default in Malaysia.

## 3.4 Research Hypotheses

Hypotheses development is the next step in this research. Hypothesis can be defined as a logically conjectured relationship between two or more variables expressed in the form of a testable statement (Sekaran, 2003). Hypotheses are predictions that a researcher thinks will be the outcome of a study after a thorough research on the topic. The prediction of the study results is called the hypotheses of the study. The hypotheses should be able to be tested during the research. The hypotheses are incorporated using all the variables (independent, mediator, and dependent) in the framework. The variables need to be measured. Current research contains 17 hypotheses that were developed from the research framework in Figure 3.1. The hypotheses are as follows:

The following hypotheses are proposed:

H1 Intention to pay has a significant relationship with credit card default.

H2 Perceived behavior control has a significant relationship with credit card default.

H3 Religiosity has a significant relationship with credit card default.

H4 Subjective norm has a significant relation with credit card default.

H5 Attitude has a significant relation with credit card default

H6 Subjective norm has a significant relation with intention to pay

H7 Perceived behavior control has a significant relation with intention to pay

H8 Religiosity has a significant relation with intention to pay

H9 Perceived behavior control has a significant relation with attitude

H10 Subjective norm has a significant relation with attitude

H11 Religiosity has a significant relation with attitude

H12 Attitude mediates the relationship between subjection norm and credit card default behavior

H13 Attitude mediates the relationship between perceived behavior control and credit card default behavior

H14 Attitude mediates the relationship between religiosity and credit card default behavior

H15 Intention to pay mediates the relationship between subjective norm and credit card default behavior.

H16 Intention to pay mediates the relationship between perceived behavior control and credit card default behavior.

H17 Intention to pay mediates the relationship between religiosity and credit card default behavior.

## 3.5 Operational Definitions of Key Variables

Operationally defining a concept to render it measurable is done by looking at the behavioral dimensions, facets, or properties denoted by the concept (Sekaran, 2003). The operational definitions of key variables in this research are described in Table 3.1.

Table 3.1

*Operational definition of key variables*

| Variables | Definition | Sources |
|---|---|---|
| Credit Card Default | The number of times in the past 6-months that the respondent has failed to make even the minimum payment on their credit card debt. | (Scott, 2005). |
| Attitude | is equated with the attitudinal belief that affecting a particular form of behavior leads to a particular outcome, weight by an evaluation of the desirability of the outcome | Shih and Fang (2004) |
| Subjective Norm | represents an individual's normative belief concerning a particular referent weighted by the motivation to comply with that referent | Shih and Fang (2004) |
| Perceived Behavior Control | refers to belief of the individual concerning control weight by the perceived facility that is of the efficacy of the control factor in either inhibiting or facilitating the behavior. | Shih and Fang (2004) |
| Intention to pay | The individual's observable response in a given situation with respect to a given target, behavior is a function of compatible intentions | Shih and Fang (2004) |
| Religiosity | is an intricate concept and a variegated human phenomenon, and seems to cover considerable ground such as behaviors, attitudes, beliefs, feelings and experiences | (Khraim, 2010). |

## 3.6 Questionnaire Design

### 3.6.1 Demographic Profile

Demographic profiling uses ratio and nominal scales. Ratio is used to measure income. The remaining eight questions use nominal scales to measure the demographic profiles (Appendix 1).

The first section of this questionnaire gathers information about respondent demographic. Nine questions are asked including whether respondents pay their credit cards on time, gender, religion, and highest academic qualification. The second section measures the antecedents of credit card default behavior. Statements for each construct and questionnaire on the demographic profile are shown in Tables 3.2.1 to 3.2.7

### 3.6.2 Measurement of Variables

This study consists of three exogenous variables (subjective norm, perceived behavior control, religiosity) and three endogenous variables, which consist of two mediating factors (attitude, intention) and a dependent variable (default behavior). The measurements of these factors are based on internal questions. The instruments are adapted from previous studies on consumer behaviors. These instruments are adapted to suit the current study on credit card and presented to credit card users to get their responses for the data analysis. Since, majority of these measurements have not been used in the credit card industry hence it is essential for the instruments to be modified and adapted to suit the credit card industry. All the instruments have been tested and resulted in high reliability (Cronbach's alpha) values of above 0.6 (Table 3.2).

This is in line with Nunnaly (1967) who claimed that the minimum required Cronbach's alpha of 0.6 is sufficient. However**,** Kerlinger and Lee (2000) indicated Cronbach's alpha coefficient of 0.5 or higher as acceptable. Thus, this research uses Cronbach's alpha coefficient of higher than 0.5 as acceptable. Therefore, all the measures are acceptable for this study. Table 3.2 tabulates the six latent constructs leveraged in this research (attitude, subjective norm, perceive behavior control, religiosity, intention, and default)

This study uses a structured questionnaire with closed responses. These questions use the seven-point Likert scales (1=strongly disagree to 7=strongly agree) (Alex and Raveendran, 2008; Bakar, Lee and Hashim, 2012; Mohammed, Karim and Hussein, 2012; Mukhtar and Butt, 2012; Baker, Al-Gahtani and Hubona, 2007; Xiao and Wu, 2006; Shih and Fang, 2004; Vitell and Paolillo, 2003; Chang, 1998). Most of the measurements utilized in this study are adapted from past established instruments. All measurement items of each construct are summarized in Table 3.2.

#### 3.6.2.1 Intention to pay

Measurement of intention was based on six items. All of the instruments were adapted from previous studies. Two items are adapted from Shin and Fang (2004). Two adapted from Husna (2009) and the last two are from Wu and Chen (2005), Cheng e*t al.* (2006) and Lai and Li (2005). All of the instruments have been tested in the banking industry in a study by Cheng e*t. al.* (2006), Lai and Li (2005), Wu and Chen (2005), Shin and Fang (2004) and zakat was tested in a study by Husna (2009). All of the industries are similar to the current research in dealing with financials. Moreover, in all the previous studies, the Cronbach's Alpha value was recorded at more than 0.8. Hence, the instruments are predicted to fit nicely in the current research (Table 3.2.1).

Table 3.2
*Measurement of Constructs*

| Measurement | Items | Adopted/Adapted | Reliability (Cronbach alpha) | Industry |
|---|---|---|---|---|
| Intention | 2 | Shin and Fang (2004)/Adapted | 0.88 | Internet Banking |
| | 2 | Husna (2009) | | |
| | 2 | Wu and Chen (2005), Cheng *et al.* (2006) and Lai and Li (2005) | 0.98 | E procurement |
| Perceived Behavior Control | 3 | Shin and Fang (2004)/Adapted | 0.86 | Internet Banking |
| | 2 | Cheng *et al.* (2006) and Lai and Li (2005) | 0.95 | E procurement |

Table 3.2 (Continued)

| Measurement | Items | Adopted/Adapted | Reliability (Cronbach alpha) | Industry |
|---|---|---|---|---|
| Religiosity | 19 | Khraim | 0.86 | Consumer |
| Subjective Norm | 4 | Shin and Fang (2004)/Adapted | 0.93 | Internet Banking |
|  | 3 | Chau and Hu (2002) and Wu and Chen (2005) | 0.91 | E procurement |
| Attitude | 3 | Shin and Fang (2004)/Adapted | 0.89 | Internet Banking |
|  | 2 | Husna (2009) | 0.90 | Zakat |
| Default | 6 | Scott (2005) |  | Credit card |
| Total | 48 |  |  |  |

### 3.6.2.2 Perceived Behavior Control

Perceived behavior control is measured using five instruments adapted from previous researches. Three of the instruments are adapted from a study by Shin and Fang (2004) and another two are from Cheng *et al.* (2006), and Lai and Li (2005). A reverse question is also included in this instrument. The instruments are expected to fit the current credit card study since all the researches recorded a Cronbach's Alpha value of more than 0.8 (Table 3.2.2).

Table 3.2.1
*Intention to pay (6 items)*

|  | STATEMENT | SOURCE |
|---|---|---|
| 1 | I plan to pay my credit card on time | Shin and Fang (2004) |
| 2 | I intend to pay my credit card on time |  |
| 3 | I will pay my credit card this month | Husna (2009) |
| 4 | I will continue paying my credit card bill in the future |  |
| 5 | Paying my credit card bill is something not important to me (-) | Wu and Chen (2005), Cheng *et al.* (2006) and Lai and Li (2005) |
| 6 | I would pay my credit card bill as my responsible |  |

Table 3.2.2
*Perceived Behavior Control (5 items)*

| | **STATEMENT** | **SOURCE** |
|---|---|---|
| 1 | I would be able to pay my credit card bill on time | Shin and Fang (2004) |
| 2 | I have the resource to pay my credit card bill on time | |
| 3 | I have the ability to pay my credit card bill on time | |
| 4 | Paying credit card in full would not be entirely within my control (-) | Cheng *et al.* (2006) and Lai and Li (2005) |
| 5 | I have the knowledge to pay my credit card bill | |

### 3.6.2.3 Religiosity

Religiosity is measured using 19 items from a previous study by Khraim (2010). The measurements were chosen because they represent important elements in gauging the individual religiosity level. The instruments are expected to portray high validity based on the previous study that recorded a Cronbach's alpha value of 0.86 when all the instruments were measured together. In addition, the previous study was conducted among Muslims hence it is similar to the current study in which only Muslim credit card holders are measured (Table 3.2.3).

Table 3.2.3
*Religiosity (19 items)*

| | STATEMENT | SOURCE |
|---|---|---|
| 1 | It is important for me to have Syariah Compliance credit card | Khraim (2010) |
| 2 | It is important to me to engage only on Islamic hire purchase financing | |
| 3 | It is important for me to purchase only a takaful family insurance | |
| 4 | It is important for me to purchase only a takaful educational insurance | |
| 5 | I enjoy attending religious talks at mosque | |
| 6 | I usually read religious books and magazines individually | |
| 7 | I always listening to the religious programs broadcasted by local radio station | |
| 8 | I sometimes join usrah groups | |
| 9 | I often watch religious programs on TV | |
| 10 | I always cautious on the validity of HALAL mark used by non-Muslim food operators | |

Table 3.2.3 (Continued)

| | STATEMENT | SOURCE |
|---|---|---|
| 11 | I always against cheating on weighing scales | |
| 12 | I support punishment on those who are eligible but reluctant to pay zakat | |
| 13 | I support the implementation of Syariah Law | |
| 14 | I support the plan to forbidd liquor sales | |
| 15 | I always suspicious on imported halal meat | |
| 16 | I always be careful with local canned/boxed food even though they have HALAL mark | |
| 17 | I only used toiletries(tooth paste/soap/hair shampoo) that produce by Muslim | |
| 18 | I am always cautious with mixed flour (for baking, bread, pastry, pudding) that are not produced by Muslim operator | |
| 19 | I prefer only perfume/deodorant that does not contain alcohol | |

### 3.6.2.4 Subjective Norm

Subjective norm is measured using seven items. These measurements are taken from a combination of various studies. Four items were adapted from Shin and Fang (2004). Another three items from Chau and Hu (2002) and Wu and Chen (2005). A reverse question is also included in this measurement. This is done to enhance the instrument validity. The seven chosen instruments are expected to have a high internal validity and reliability as they were tested in previous studies. The instruments were tested in the banking industry in a study by Cheng e*t. al.* (2006), Lai and Li (2005), Wu and Chen (2005), Shin and Fang (2004) and zakat was tested in a study by Husna (2009). In fact, in all these studies, the Cronbach's Alpha was recorded at above 0.7 (Table 3.2.4).

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Table 3.2.4
*Subjective Norm (7 items)*

| | STATEMENT | SOURCE |
|---|---|---|
| 1 | My family members would think that paying my credit card bill is a wise idea | Shin and Fang (2004) |
| 2 | My friends would think that paying my credit card bill is a wise idea | |
| 3 | My colleaques would think that paying my credit card bill is a wise idea | |
| 4 | My family members would think I should pay credit card bill on time | |
| 5 | People who are important to me would think that I should pay my credit card bill on time | Chau and Hu (2002) and Wu and Chen (2005) |
| 6 | People who are influential to me would think that I should pay my credit card bill on time | |
| 7 | People whose opinions are valued to me would prefer that I should not pay my credit card bill on time (-) | |

### 3.6.2.5 Attitude

Measurement of attitude is done using five items. These measurements were adapted from a combination of scales developed by two previous researchers. Two items were adapted from Shin and Fang (2004) and another two items were adapted from Husna (2004). In order to enhance the validity, a reverse question is included in this measurement. The measurements are expected to produce valid results since they had been tested in a study on *zakat* (Husna, 2004) and on banking by Shin and Fang (2004). Both studies were similar in nature to the present study because both involved financial issues hence the instruments are expected to have good validity in this current research (Table 3.2.5).

Table 3.2.5
*Attitude (5 items)*

| | STATEMENT | SOURCE |
|---|---|---|
| 1 | Paying my credit card bill is a wise idea. | Shin and Fang (2004) |
| 2 | Paying my credit card bill on time is a good idea. | |
| 3 | I like the idea of paying my credit card bill | |
| 4 | Paying credit card on time is my priority | Husna (2009) |
| 5 | I believe that paying credit card is not my responsibility (-) | |

### 3.6.2.6 Credit Card Default

Measurements of default were selected based on the research by Scott (2005). (Table 3.2.6)

Table 3.2.6

*Credit Card Default (6 items)*

| | STATEMENT | SOURCE |
|---|---|---|
| 1 | I sometimes unintentially default in my credit card payment | Scott (2006) |
| 2 | I sometimes did not pay even a minimum payment due on my credit card bill | |
| 3 | I sometimes forgot the payment due date for my credit card | |
| 4 | I sometimes forgot to pay my credit card | |
| 5 | In the past six months, I have not pay even the minimum amount due on my credit card | |
| 6 | I do not usually pay the full amount on my credit card debt | |

The 48 questions are measured through an interval scale of seven-point Likert scale with 1-strongly disagree, 2-disagree, 3-slightly disagree, 4-neutral, 5-slightly agree, 6-agree, 7-strongly agree.

## 3.7 Questionnaire Pre-test

The questionnaire used in this survey has undergone a pre-test to ensure its accuracy and consistency. Pretesting is the use of a questionnaire in a small pilot study to ascertain how well the questionnaire works (Hunt, Sparkman, & Wilcox, 1986). Moreover, any mistake in the questions can be detected before the questionnaire is used for data collection. Any problems that are identified during the pre-test are corrected before the actual data collection. Hence, a pre-test results in a more clarified questionnaire.

It is important to pretest the instruments to ensure that the questions are understood by respondents and that there are no problems with the wordings or measurements (Sekaran & Bougie, 2010). The importance of a pre-test was shared by other researchers who pointed out the importance of pretesting namely Backstrom and Hurch (1963):

“No amount of intellectual exercise can substitute for testing an instrument designed to communicate with ordinary people”.

The pre-test in this research was conducted by distributing the questionnaires to 10 credit card users and 3 marketing lecturers. From this pre-test exercise, the respondents confirmed that the questionnaire was relevant and clearly understood. Therefore, no changes were made to the questionnaire after the pre-test.

## 3.8 Pilot Study

This research had a pilot study as the final test before the actual data collection. The term ‘pilot study’ refers to a mini version of a full-scale study (also called a ‘feasibility’ study), as well as the specific pre-testing of a particular research instrument such as a questionnaire or interview schedule (Teijlingen & Hundley, 2001). It is important to proceed with the pilot test even after undergoing the pre-test. One of the advantages of conducting a pilot study is that it might give advance warning about where the main research project could fail, where research protocols may not be followed, or whether the proposed methods or instruments are inappropriate or too complicated (Teijlingen & Hundley, 2001).

The pilot study in this research was conducted on a sample size of 100 credit card users. The sample population consisted of credit card holders from a few banks in

Kuala Lumpur namely along Jalan Tuanku Abdul Rahman. The respondents were randomly selected from Maybank, CIMB, and Bank Islam branches near Jalan Tuanku Abdul Rahman. The data collection for the pilot test took the researcher more than one month to collect 100 respondents. The data collected from the pilot study was tested to find out the data reliability. Statistical Package for the Social Sciences (SPSS) software was used to analyze the data.

This is to obtain the reliability results and factor analysis (convergent validity). The Cronbach's Alpha value for each variable was above 0.7 (Table 3.3). Based on the pilot test outcome, all the 48 questions were retained. The questions are retained to measure the research variables (attitude, perceive behavior control, subjective norm, intention, religiosity, and credit card default).

Table 3.3
*Pilot study reliability coefficient*

| **Variable** | **Reliability Coefficient (α)** |
|---|---|
| Attitude | 0.718 |
| Subjective Norm | 0.837 |
| Perceive Behavior Control | 0.711 |
| Intention | 0.763 |
| Religiosity | 0.965 |
| Default | 0.891 |

## 3.9 Data collection

This research will use data collected via a questionnaire. This section provides information on the population, sample respondent, sample size, and the questionnaire distribution.

### 3.9.1 Population

Population is the total group of people that the researcher intends to investigate (Sekaran, 2003). The population in this research is all the Muslim credit card holders in Malaysia. The actual number of credit card holders was not known due to financial institutions' non-disclosure Act. However, based on the research by Ahmed *et al.*, (2010), the number of credit card holders had reached about three (3) million by the turn of the last century. The exact number of Muslim credit cardholders is not known. However, it can be estimated based on the total percentage of Muslims in Malaysia. Muslim consists of 61% of the Malaysian population. Hence, it can be estimated that approximately 1.83 million credit card holders in Malaysia are Muslims.

## 3.10 Sampling

### 3.10.1 Sampling Frame

It is important for the sampling to represent the whole population of the study so that the study result can be generalized to the total population. The population frame is where the researcher intends to select his sample (Sekaran, 2003). The sampling frame are Muslim credit card defaulters in Klang Valley (Kuala Lumpur, Putrajaya, and Selangor). Klang Valley is the highest density area in Malaysia. Currently, it is home to about 7.95 million people or more than 26% of Malaysia's total population (Table 3.4). In addition, this is the area where most business transactions occur in Malaysia.

Table 3.4
*Malaysian Population*

| State | Population (million) | Area (km) | Population Density (million/km) |
|---|---|---|---|
| Selangor | 6.14 | 7,964 | 0.000771 |
| Kuala Lumpur | 1.73 | 2 | 0.7119342 |

Table 3.4 (Continued)

| State | Population (million) | Area (km) | Population Density (million/km) |
|---|---|---|---|
| Putrajaya | 0.08 | 49 | 0.0016327 |
| Johor | 3.55 | 19,192 | 0.000185 |
| Melaka | 0.88 | 1,656 | 0.0005314 |
| Negeri Sembilan | 1.08 | 6,665 | 0.000162 |
| Perak | 2.46 | 20,904 | 0.0001177 |
| Pulau Pinang | 1.69 | 1,046 | 0.0016157 |
| Kedah | 2.09 | 9,486 | 0.0002203 |
| Perlis | 0.25 | 814 | 0.0003071 |
| Pahang | 1.6 | 35,946 | 4.451E-05 |
| Terengganu | 1.15 | 12,959 | 8.874E-05 |
| Kelantan | 1.75 | 15,028 | 0.0001164 |
| Sabah | 3.74 | 73,902 | 5.061E-05 |
| Sarawak | 2.71 | 124,450 | 2.178E-05 |
| Labuan | 0.09 | 92 | 0.0009783 |

Source: Department of Statistics Malaysia (2015)

### 3.10.2 Unit of Analysis

The respondents are Muslim credit card defaulters because the research instrument measuring religiosity is more reliable in measuring religiosity in Islam. Adjustment needs to be made if intending to measure another religion other than Islam. For example, in the question measuring religious education, the question on attending a religious talk in mosques and joining usrah are not suitable to other religions except for Muslims. Similarly, in the past, for example, Sood and Nasu (1995) used two different sets of religiosity instrument when conducting a cross cultural consumer behavior study in the United States of America as well as in Japan.

In addition, Bumiputera was the highest percentage of Malaysian labor forces (table 3.5). In Malaysia, majority of Bumiputera is Muslim. Since the highest number of labor force in Malaysia was Muslim has further justified to choose Muslim credit card defaulters as this research respondents.

Table 3.5
*Percentage distribution of labor force by ethics group, 2014, Malaysia*

| Year | Total | Malaysian Citizens | | | | | Non Malaysian |
|---|---|---|---|---|---|---|---|
| | | Total | Bumiputera | Chinese | Indians | Others | |
| 2014 | 100.0 | 87.0 | 57.7 | 22.2 | 6.5 | 0.6 | 13.0 |

Source: Labor Force Survey, Department of Statistic Malaysia

Since details on credit card holders are governed under the financial institution act, an intelligent estimation was done to get an estimated number of Muslim credit card defaulters in Klang Valley. As discussed earlier, 26% of Malaysia's total population live in Klang Valley. Hence, to estimate the number of Muslim credit card holders who live in Klang Valley, one would have to take 26% of 1.83 million (estimated Muslim credit card holders in Malaysia) which is equivalent to 475,800. Since less than 50% of Malaysians pay their credit card debts in full every month (Lee, 2012), then an estimated number of Muslim credit card defaulters in Malaysia would equal to 50% of 475,800. Thus, for the purpose of this research, the number of Muslim credit card defaulters in Klang Valley is approximately 237,900.

### 3.10.3 Sampling Size

This study's sample size is collected from Klang Valley (Selangor, Putrajaya, and Kuala Lumpur). Not only is this, the most dense area in Malaysia, but it is also where the majority of credit card issuers' head offices are located. This study selected 382 credit card consumers as a sample size. The sample size was based on an estimated 237,900 population of Muslim credit card defaulters in Malaysia. As suggested by Krecjie and Morgan (1970) for a population of more than 500,000 and less than 1 million, the sample size would be 382 (Table 3.6).

Table 3.6

*Sample Size for a Given Population Size*

| **Population ( N )** | **Sample size ( s )** |
|---|---|
| 10,000 | 370 |
| 15,000 | 375 |
| 20,000 | 377 |
| 30,000 | 379 |
| 40,000 | 380 |
| 50,000 | 381 |
| 75,000 | 382 |
| 1,000,000 | 384 |

Source: Krecjie and Morgan (1970)

The sample size was also in line with Roscoe's (1975) suggestion that sample sizes larger than 30 and less than 500 are appropriate for most researches. Tabachnick and Fidell (1996) also suggested that whether factor analysis is applied in an exploratory or confirmatory study, a minimum of 300 responses would be required.

Initially, this research planned to distribute 637 questionnaires to get an estimated 382 usable respondents. The initial number of intended questionnaires to be distributed is based on 60% response rate for self-administered questionnaires (Ahmed et al., 2010). However, the actual number of questionnaires distributed is 700 for buffer in case non-defaulters accidently answer the questionnaire.

### 3.10.4 Sampling Method

Bank intercept in Citibank, Maybank, CIMB, and Bank Islam Head Offices is applied to approach respondents. The systematic purposive sampling/stratified systematic random sampling was used in this research. Four (4) steps are applied in deciding the respondents. In the first step, the credit card issuers are identified to get respondents for the current research intent. The credit card issuers in Malaysia are stratified based on credit card receivables. They are ranked based on descending credit card receivable amount in year 2009 (RAM Ratings Banking Bulletin, 2010). The top three banks in terms of amount of credit cards receivables (RAM Ratings Banking Bulletin, 2010) are identified. They are Citibank, Maybank, and CIMB (refer Table 3.7). The respondents will be taken from these banks for the current research. In addition to these three credit card issuers, Bank Islam Malaysia Berhad (BIMB) is also added among the credit card issuers for the current research to get the respondents. BIMB is included because it is one of the local bank in Malaysia that provides all its financial products according to Islamic Syariah Laws.

Table 3.7
*Credit Card Receivables (RM mil)*

| Credit Card Issuer | Credit Card Receivables (RM mil) | Rank |
|---|---|---|
| | Sept 30, 09 | |
| Citibank | 4526 | 1 |
| Maybank | 3652 | 2 |
| CIMB Bank | 2753 | 3 |
| HSBC Bank | 2585 | 4 |
| RHB Bank | 2242 | 5 |
| Hong Leong Bank | 2066 | 6 |
| AmBank | 1817 | 7 |
| EON Bank | 1364 | 8 |
| Standard Chartered Bank | 1272 | 9 |
| Public Bank | 1112 | 10 |
| UOBM | 911 | 11 |
| Alliance Bank | 684 | 12 |
| OCBC Bank | 508 | 13 |
| MBF Cards (non-bank) | 424 | 14 |
| AEON Credit (non-bank) | 182 | 15 |
| Affin Bank | 97 | 16 |

Source: RAM Ratings' Banking Bulletin 2010

The second step is to identify the number of questionnaires that need to be distributed to each identified credit card issuers. All 700 questionnaires that need to be distributed are stratified systematically on each credit card issuer based on the credit card receivable amount. Total Citibank, Maybank, and CIMB credit card receivable for

Sept. 2009 is RM10, 931 million. For the purpose of determining BIMB's number of questionnaires for distribution, the fourth ranking credit card receivable amount which is RM2,585 is taken as BIMB's credit card receivable amount. Hence, total credit card receivable amount for all four banks is RM13,516. Based on the systematic stratification, 234 questionnaires are distributed at Citibank, 189 at Maybank, 143 at CIMB Bank, and 134 at BIMB (refer Table 3.8).

Table 3.8
*Number of Distributed Questionnaires*

| Credit Card Issuer | Credit Card Receivables (RM mil) | No of Questionnaire Distributed | % Questionnaire Distributed |
|---|---|---|---|
| Citibank Malaysia | 4,526 | 234 | 33.4% |
| Malayan Banking Berhad (Maybank) | 3,652 | 189 | 27.0% |
| CIMB Berhad | 2,753 | 143 | 20.4% |
| Bank Islam Malaysia Berhad | 2,585 | 134 | 19.1% |
| Total | 13,516 | 700 | 100% |

The third step focuses on the selection of Muslim credit card holders. Purposive sampling method was used in approaching the respondents. The bank intercept was used on every fifth Muslim customer who walked into the banks' head offices. During the interview, those who resemble bumiputeras are taken as Muslims. However, the religion question in the demographic profile would help the researcher to filter only Muslim credit cardholder respondents for further data analysis. Lastly, in the final step (fourth step), the defaulting respondents are segregated from the non-defaulters by using a screening question in the demographic section.

## 3.11 Data Collection Procedure

The researcher with the help of research assistants personally distributed 700 questionnaires at the four identified banks. The number of questionnaires allocated for each bank was based on the number of questionnaires that had been discussed earlier. All the questionnaires were distributed at the banks' head offices. All the banks' head offices are located in Kuala Lumpur (refer Table 3.9).

Table 3.9
*Credit Card Issuers Head Offices*

| Credit Card Issuer | Head Office |
|---|---|
| Citibank Malaysia | Jalan Ampang, Kuala Lumpur |
| Malayan Banking Berhad (Maybank) | Jalan Tun Perak, Kuala Lumpur |
| CIMB Berhad | Jalan Raja Laut, Kuala Lumpur |
| Bank Islam Malaysia Berhad | Jalan Perak, Kuala Lumpur |

The data collection exercise commenced with CitiBank Head Office at Jalan Ampang Kuala Lumpur. The researcher and research assistants spent three hours daily at each bank. The researcher and research assistants alternated each week's data collection among the four banks; four days a week from Monday to Thursday. To adhere to random sampling principle, every fifth Muslim customer that walks into the banks is approached and requested politely to answer the questionnaire. Respondents took on average 10 to 15 minutes to complete the questionnaires. Upon receiving the completed questionnaires, the researcher categorized them according to Muslim credit card user, non-Muslim credit card user, defaulter, and non-defaulter credit card users. Then, they were coded with a running number in an ascending manner. The data collection period ran through June 2015 to October 2015. The duration of the data collection was almost 150 days.

## 3.12 Data Analysis Methods

Two software programs were used to analyze the data. First, Statistical Package for the Social Sciences (SPSS) software was used followed by Analysis of a Moment Structures (AMOS) software.

### 3.12.1 Structural Equation Modelling (SEM)

Structural Equation Modelling is a technique to test the hypothesized models describing the relationships between various variables whereby it is a hybrid of two statistical analyses i.e. the Factor Analysis and the Simultaneous Equation Modelling (Bentler, 1995; Joreskog & Sorbom, 1993). It is also a method that encompasses the covariance structure analysis, latent variable analysis, confirmatory factor analysis, path analysis, and linear regression analysis by estimating multiple and interrelated relationship between variables and the ability of the SEM to account for error of measurement in the model (Hair et al., 1998).

The fitting of the model is done via the CFA of the measurement model of the individual latent variables. This process is performed until the goodness of fit indices is achieved. Thereafter, the second process is to fit the exogenous latent construct and the endogenous latent construct by observing the optimum acceptable value of the goodness of fit indices. In final process, the hypotheses measurement model is fitted accordingly and it produces the final generated model for hypotheses testing (Awang, 2013). All of the above processes are done by looking into the highest cross factor loading and covariance values in the MI of the items and deletion is done repeatedly until the fit generated model is produced.

### 3.12.2 Justification for using SEM

Current research is using SEM due to several advantageous that offers by SEM as compared to others data analysis technique. The first reason is, in this research, multiple latent variables are being used to investigate and understand the area of inquiry. SEM is able to analyze the multiple latent variables, indirect effect and path analysis while other basic statistical methods are unable to deal with multiple latent variables and the development of a complex model (Schumacker & Lomax, 2004). The use of an older generation of multivariate procedures is unable to examine a complex model (Schumacker & Lomax, 2004).

The second reason is that the SEM techniques can consider measurement error when statistically analyzing data on latent and observed variables while the older generation of multivariate procedures has become a major issue and treatment on the error has to be taken separately when analyzing the data (Schumacker & Lomax, 2004).

The third reason is that the SEM can analyze more advance theoretical models such as it can analyze group differences including gender, age, socioeconomic status as examples of external variables that may impact the exogenous latent variables by assessing multiple group SEM models (Byrne, 2001; Schumacker & Lomax, 2004). These SEM models and techniques have enabled many researchers to analyze complex observable facts that are not provided under the older generation of multivariate procedures (Schumacker & Lomax, 2004).

Fourthly, the SEM has the capability of alternative methods for modelling multivariate relations for estimating point or interval indirect effects that is an important feature available in the SEM methodology compared to the older version of multivariate procedures (Byrne, 2001).

Fifthly, the SEM also has the capability of incorporating both the unobserved (Latent variables) and observed variables (Endogenous variables) in the analyses while the older generation of multivariate analysis is only capable of measuring the observed variable (Byrne, 2001).

Sixthly, according to Kelloway (1998), the Structural Equation Modelling (SEM) is a powerful method to examine the structurally causal relationships among constructs or variables (Kelloway, 1998) and SEM is appropriate for simultaneous assessment of the relationships between multiple dependents, and independent latent constructs (Hair et. al., 1998).

Lastly, SEM allows not only for the specifications and testing of complex path models (Kelloway, 1998), but also for more flexible assumptions while allowing interpretations such as the problem on multicollinearity (Kline, 1998).

## 3.13 Analysis procedure for screening

The data was prepared and went through a series of processes before proceeding with the actual data analysis. The data screening was done to check for any mistakes during keying in of the data and that the distribution of variables to be used in this analysis is normal.

### 3.13.1 Missing Data

Data was prepared to ensure there was no missing data. A system is used to indicate the missing value.

### 3.13.2 Response Bias

Response bias is to ascertain if there are any changes to the responses due to different conditions during data collection such as the time frame. The response bias is conducted to identify if the sample data collected between these two groups of respondents indicate differences by conducting an independent sample t-test.

In this research, the data is split into two groups. The first 161 respondents are the first group while respondents 162 to 323 are the second group. The independent t-test was conducted on these two groups to identify any differences between them.

### 3.13.3 Outlier

The data is then tested to detect for any outliers. Outlier is an abnormal data. It has a huge value difference compared to the other data. The outlier analysis is done by conducting a Mahalanobis distance test to ensure that there are no multivariate outliers among the variables. The value should not be greater than or equal to the critical chi-square value of 13.8 at an alpha level of 0.001 (Coakes, Steed, & Dzidic, 2006).

### 3.13.4 Normality Assessment

For the normality test, the researcher used the statistics test for normality such as Kolmogorov-Smirnov statistics where the Lilliefors significant level must be greater than 0.05 for the data to be normal. The skewness and kurtosis is also tested for normality and the reading of the skewness must be ±2.00 to be acceptable and for the kurtosis with a critical value of ±1.96 for 95% confidence level (Hair, Black, Babin, & Anderson, 2010). In order to normalize a set of data, cumulative distribution function (cdfnorm) in the SPSS was used for the data transformation by labeling it with T in front of the data involved.

### 3.13.5 Test of AMOS Multicollinearity

The reading of all three independent and two mediating variables is below 0.8 from the model in order to identify any multicollinearity problem. This multicollinearity problem can be identified using the AMOS correlation. The treatment of multicollinearity must be done if the reading is higher than 0.8. This research data shows there is no significant violation to the non-multicollinearity assumptions. This indicates that the items hang together as a set in the model.

### 3.13.6 Confirmatory Factor Analysis (CFA) Measurement Model

Confirmatory factor analysis is used in this study as the researcher has some knowledge of the underlying factors and items of the instruments used to assess a certain construct based on the theory and from previous empirical studies (Byrne, 2001). The Structured Equation Modelling is used to confirm the confirmatory factor analysis.

### 3.13.7 Convergent Validity

Confirmatory factor analysis, the latent variables are assigned to specific factors that are the observed variables. Hair et al. (2006) indicated that high convergent validity and high factor loading represent factor convergent on some common points. In the condition that if the variables have a low factor loading, the respective factors are constrained to zero (Hair et. al., 1998). From a previous study done by Carmines and Zeller (1979), it was indicated that the acceptance threshold for factor loading should be at 0.7 and above. For any reading on variables below the threshold of 0.7, the value shall be constrained to zero.

With CFA, the *Variance Extracted* value is calculated based on the standardized factor loadings. This is computed on the basis of total of all squared standardized factor loading (squared multiple correlations) and divided by the number of items. The rule of thumb for variance extracted is 0.5 or higher and it indicates the items have adequate convergence (Hair et. al., 2006). The variance extracted can be derived as per the following equation:

$$\text{Variance Extracted} = \frac{\sum SMC}{\sum SMC + \sum Se}$$

The next item will be the reliability whereby construct reliability is measured using coefficient alpha and composite reliability. Reliability test is conducted to ensure all items in the variables are consistent. The construct reliability and composite reliability are conducted to make sure that there is internal consistency within the items (Ku, 2011) or reliability coefficients between the three independent variables i.e. subjective norm, perceived behavior control, religiosity and the mediating variables of intention as well as intention towards credit card default and the dependent variable i.e. credit card default by using the Cronbach's alpha reliability coefficients from the value of 0 to 1.

In general, reliabilities of less than 0.60 are considered to be poor; those in the 0.70 range are acceptable and those over 0.80 are considered good (Sekaran, 2003). Others indicate that reliability between 0.6 and 0.7 is acceptable if other indicators of a model's construct validity are good (Hair et. al., 2006). To indicate that the items in each factor hang together as a set in measuring the concept are much stronger, 0.70 and above shall be considered (Sekaran, 2003; Hair et. al., 2006). From the result of the testing, some items may be deleted to increase the alpha coefficient value. The composite reliability can be derived from the following equation:

$$\text{Composite Reliability (CR)} = \frac{(\sum fL)^2}{(\sum fL)^2 + \sum e}$$

### 3.13.8 Discriminant Validity (AVE)

Lastly, the discriminant validity is the measurement of which construct is totally distinct from other constructs. The high value of discriminant validity provides evidence that the construct is exclusive and captures some wonders which other measures do not display (Hair et. al., 2006). Discriminant validity can be measured using the Average Variance Extracted (AVE) against the correlation square. The absence of multicollinearity occurs when AVE values are greater than the correlation square (Fornell & Larcker, 1981; Hair et. al., 2006). However, it must be observed that when there is cross loading between items, it is an indication that there is a problem of discriminant validity (Hair et. al., 2006). Therefore, fitting the model can be done by modification indices in the CFA (Hair et. al., 2006).

The average variance extracted can be derived from the equation below:

Average Variance Extracted (AVE) = $\frac{\sum_{i=1}^{n} L_1^2}{n}$

### 3.13.9 Goodness of Fit Indices

In SEM, goodness of fit indices play an important role whereby these indices will confirm the model fit the data and it is based on three categories. The first category is the absolute fit with index such as chi square, root mean square error of approximation (RMSEA), goodness of fix index (GFI), and adjusted goodness of fit index (AGFI). The second category is the incremental fit, which consists of comparative fit index (CFI), Tucker Lewis index (TLI), and normed fit index (NFI). The last category is the parsimonious fit measured by Chi square/df. The goodness of fit indices acceptance level is demonstrated as per Table 3.10.

Table 3.10
*Goodness of Fit Indices' Acceptance Level*

| Category | Name of Index | Acceptance Level |
|---|---|---|
| Absolute Fit | Chi Square | >0.05 |
| | RMSEA | <0.08 |
| | GFI | >0.90 |
| | AGFI | >0.90 |
| Incremental Fit | CFI | >0.90 |
| | TLI | >0.90 |
| | NFI | >0.9 |
| Parsimonious Fit | Chi Square/df | <0.5 |

The goodness of fit indicates how well a data fits a model in a study and it reproduces the observed covariance matrix of the variables (Hair et. al., 2010). However, if the model does not produce the fit indices, steps need to be taken to fit the model using the confirmatory factor analysis. The confirmatory factor analysis is a multivariate technique to confirm a pre-specified relationship between the variables in the study (Hair et. al., 2010). The technique used to correct the fit indices is by Modification Indices (MI) where high values of cross loading of regression weight and covariance between items need to be deleted. For example, the goodness of fit as shown in table 3.11.

Table 3.11
*Goodness of Fit – Before*

| ITEM | GFI | CFI | TLI | RAMSEA | Chi Square | df | Chi Square/df | P value |
|---|---|---|---|---|---|---|---|---|
| TTSN6 | 0.87 | 0.936 | 0.928 | 0.062 | 737.047 | 310 | 2.378 | 0 |

During the process, identify the highest value of MI. For example in table 3.12, e5 and e9 are having the highest MI.

Table 3.12
*Modification Index Covariance*

| | | | M.I. | Par Change |
|---|---|---|---|---|
| e5 | <--> | e9 | 18.265 | -0.004 |
| e26 | <--> | e51 | 15.616 | -0.055 |
| e46 | <--> | e47 | 14.543 | 0.011 |
| e30 | <--> | e36 | 13.226 | 0.011 |
| e47 | <--> | SN | 12.921 | -0.01 |
| e7 | <--> | e23 | 12.684 | 0.694 |

The next step is to identify between e5 and e9 which is having the highest cross loading of regression weight. This is done by adding left and right of MI. In this example, e5 is found to have the highest cross loading of regression weight.

After deleting the e5 the goodness of fit data is improved as shown in table 3.13. This process will continue until the data is fit to the specified model in the study. The final fit model is called generated model (Table 3.14).

Table 3.13
*Calculation of Total MI*

| | | | | |
|---|---|---|---|---|
| Right | e5 | 0 | e9 | 23.366 |
| Left | e5 | 77.452 | e9 | 46.105 |
| | TOTAL | 77.452 | | 69.471 |

Table 3.14
*Goodness of Fit - After*

| ITEM | GFI | CFI | TLI | RAMSEA | Chi Square | df | Chi Square/df | P value |
|---|---|---|---|---|---|---|---|---|
| TTSN5 | 0.879 | 0.942 | 0.934 | 0.06 | 643.045 | 285 | 2.258 | 0 |

The absolute fit is the undeviating measure of how good the model specified reproduces the observed data by the researcher, by going further, how well the theory fits the sample data collected (Hair et. al., 2006). This is measured by the chi square statistics where it indicates a cross classification to examine the relationship that exits between two non-metric measures. The threshold for the chi square must be above 0.05 to be acceptable (Awang, 2013).

The RMSEA is the test of how good a model fits into the given population and it is not just sample estimation in a study. The acceptable value for RMSEA is below 0.08

(Awang, 2013; Hair et. al., 2006). The GFI in fact is the effort to produce a fit statistics based on the criteria of being less sensitive to a given sample size (Hair et al., 2006). For the GFI, the bench mark value should be above 0.90 indicating a good fit (Awang 2013; Hair et al., 2006). On the other hand, the AGFI takes into consideration the differing degrees of model complexity by adjusting the degree of freedom in the specified model against the total of the degree of freedom available. The AGFI threshold is above 0.90 indicating a good fit (Awang 2013; Hair et al., 2006).

The incremental fit indices are the assessment on how a specified model fits in comparison to an alternative model, which is usually referred to as the null model in the assumption that all the observed variables are uncorrelated (Hair et al., 2006). However, in this study, two indices will be observed that are the CFI and the TLI. The CFI is an incremental fit index that improvises the normed fit index which has desirable properties but not subtle to model complexity. The acceptable value of the CFI is above 0.9 to indicate model fit. The TLI is also a test of comparison between the theoretical measurement model and the base line model in a study. For a good fit model, the acceptable value should be more than 0.90 (Awang, 2013; Hair et al., 2006).

The last category of goodness of fit indices is the parsimony fit indices that focus on fitting of the model compared to the complexity of a model. Therefore, the indices provide information about the best competing model in a fitting process (Hair et al., 2006). The Chi square/df value is acceptable when it is below 5.0 for the model to be considered fit (Awang, 2013; Marsh & Hocevar, 1985).

### 3.13.10 Hypotheses Testing

Hypotheses testing is done through a generated model. This model is derived after the CFA is carried out. While the significance or non-significance of a hypothesis is based on where α and $p<0.05$ indicates the hypothesis is supported and rejects the null hypothesis, in this study, 95% confidence interval and error of 5% is taken into consideration.

During the analysis using SEM, the standard coefficients and unstandardized will appear in the output whereby the standardized estimate is produced by items of the exogenous variables to a common scale (Hair et al., 2010). It is preferable that the standardized coefficient is closed to 1 to show there is a strong relationship between the observed variables and latent variables (Hair et al., 2010). The researcher reports based on the standardized estimate value. Likewise, the unstandardized estimate is not considered in the common scale of the exogenous variables.

The critical ratio is also reported in this study. Critical ratio is the value taken from the unstandardized estimates where variance estimate is divided with the standard error producing the variance estimate. The standard error represents the expected range of the coefficient through manifold samples of the data. It is useful in a statistical test of significance to see whether the coefficient is significantly different from zero at a certain percentage of confident interval. For example, 95% confidence interval where the value should be <0.05 in order to support the hypotheses (Hair et. al., 2010, Sekaran, 2003).

### 3.13.11 Bootstrapping to test mediation

The mediating effect of an intervening variable is also examined in this study, whereby the SEM provides the platform for the analysis to be carried out. The mediating effect occurs when a third variable intervenes between two constructs. In this study, attitude and intention are the intervening variables and the variables are analyzed by the method of bootstrapping in the SEM. Studies have shown that the bootstrapping method is powerful in testing the mediation and it has the advantage to control the type 1 error (probability of rejection of the null hypothesis) (Hair et. al., 2010; Hayes, 2009). It is also a preferred method of mediating the test due to not taking the assumption of normality and distribution of sample in a study (Preacher & Hayes, 2008) compared to the mediation tests of Baron and Kenny (1986) and Sobel (1986) that needs the assumption of normality and sample distribution. Bootstrapping is a method of generating an empirical representation of the sampling distribution of the indirect effect by resampling the sample for k times at least 1,000 times and preferably 5,000 at the produced path coefficient of the indirect effect (Hayes, 2009; Preacher & Hayes, 2008).

## 3.14 Chapter Conclusion

This chapter explained the methodology of the research framework. The theoretical framework has three independent and two mediating variables, followed by the development of hypotheses based on the study. The measurements that were adapted from previous studies were discussed. Hence, pre-testing of the questionnaire and a pilot study were explained, followed by data collection of the population frame of the study. Further, it explained the sample size and sampling method. In addition, data collection procedures and techniques of data analysis were elaborated accordingly. Lastly, it discussed the purpose of using the SEM method in this study.

# CHAPTER FOUR
# FINDINGS

## 4.1 Chapter Overview

This chapter presents all the statistical findings of this research. It begins with an overall view of the response rate of the study, followed by a demographic analysis, screening data, and the data analysis.

## 4.2 Response Rate

Three screening questions were used in order to get the intended respondents. The three screening questions were question number S1: Are you a credit card consumer?, Question S8: Please state your religion, and Question S5: In the last six(6) months, how many times have you not paid at least the minimum payment due? A total of 432 completed questionnaires were collected from CitiBank, Maybank, CIMB, and Bank Islam head offices in Kuala Lumpur. From the total of collected questionnaires, seven (7) out of the 432 could not be used because four were filled up by non-Muslims, 35 were filled up by non-credit card holders, and another 70 were filled up by non-defaulters. Thus, the usable questionnaires were reduced to 323. (Table 4.1)

## 4.3 Data Screening Result

The respondents' data was further scrutinized before proceeding with further data analysis. This is called data screening. The data screening conducted are namely recoding, normality, and linearity. This is done in order to achieve optimum accuracy of the research results.

Table 4.1
*Summary of Collected Questionnaire*

| Response | Number | % |
|---|---|---|
| Collected Questionnaire | 432 | 100% |
| Non Muslim | 4 | 0.93% |
| Non credit card holder | 35 | 8.10% |
| Non defaulter | 70 | 16.20% |
| Useable Questionnaire | 323 | 74.77% |

### 4.3.1 Missing Data

There was no missing data identified from the responses. The researcher with the help of his research assistants personally guided the respondents in filling up the questionnaires. This self-administered process helps to reduce the possibility of missing data. Except for 109 responses that had been removed because they were filled up by respondents who did not meet the research criteria, all others responses were used for the analysis.

### 4.3.2 Response Bias

The researcher divided the respondents into two groups in order to identify any response bias. Group 1 is for respondents' number 1 through 161, whereas Group 2 is for respondents number 162 through 323. Then, the independent sample *t* test was conducted to determine the existence of differences between groups 1 and 2. All the variables show *t* value of less than 1.96 and *p* value of more than 0.05. Therefore, there are no differences between the two groups. Hence, it can be concluded that data in this research does not show any response bias (Refer Table 4.2).

Table 4.2
*Response Bias*

| **Variable** | **df** | **t value** | **p value** | **Mean**<br>**Group 1/Group 2** | **Std Deviation**<br>**Group 1/Group 2** | **Result** |
|---|---|---|---|---|---|---|
| MATT | 323 | .873 | .158 | 5.3458/5.2258 | 1.35034/1.23472 | Not Sig |
| MSN | 323 | .141 | .562 | 5.0266/5.0072 | 1.32186/1.26954 | Not Sig |
| MPER | 323 | -.351 | .217 | 4.9469/4.9899 | 1.20967/1.09900 | Not Sig |
| MINT | 323 | .075 | .329 | 5.2863/5.2762 | 1.31557/1.19885 | Not Sig |
| MREL | 323 | .232 | .787 | 5.4850/5.4592 | 1.08296/1.00743 | Not Sig |
| MDEF | 323 | -.933 | .465 | 3.0574/3.2097 | 1.48200/1.59005 | Not Sig |

### 4.3.3 Outlier

This research has 48 observed variables. Referring to the chi-square table (Appendix 3), the recommended chi-square threshold is 84.03(p = 0.001). Therefore, any Mahalanobis Distance value with more than 84.03 has to be deleted. In this current research, there is no outlier since all Mahalanobis Distance values are less than the recommended chi-square threshold. The highest Mahalanobis Distance value for this research is 47.829 at respondent no. 89 (Table 4.3); $\chi 2 = 84.03$. Since $D2 < \chi 2$ i.e. $47.829 < 84.03$, therefore, there are no outliers. Hence, none of the questionnaire was deleted. All of the values for each respondent is presented in Appendix 3.

Table 4.3
*Summary of $\chi 2$ square*

| | Minimum | Maximum | Mean | Std. Deviation | N |
|---|---|---|---|---|---|
| Predicted Value | 1.8825 | 4.7101 | 3.1383 | .50057 | 323 |
| Std. Predicted Value | -2.509 | 3.140 | .000 | 1.000 | 323 |
| Standard Error of Predicted Value | .085 | .577 | .189 | .073 | 323 |
| Adjusted Predicted Value | 1.8619 | 4.7379 | 3.1433 | .50442 | 323 |
| Residual | -3.28455 | 4.81337 | .00000 | 1.47058 | 323 |
| Std. Residual | -2.216 | 3.248 | .000 | .992 | 323 |
| Stud. Residual | -2.264 | 3.277 | -.002 | 1.004 | 323 |
| Deleted Residual | -3.42956 | 4.90229 | -.00502 | 1.50524 | 323 |
| Stud. Deleted Residual | -2.279 | 3.329 | -.001 | 1.006 | 323 |
| Mahal. Distance | .070 | 47.829 | 4.985 | 5.842 | 323 |
| Cook's Distance | .000 | .061 | .004 | .008 | 323 |
| Centered Leverage Value | .000 | .149 | .015 | .018 | 323 |

### 4.3.4 Normality assessment

The normality test was done via the cumulative distribution function (cdfnorm). Any cr value skewness of ±2 is considered non-normal data. The transformation process was done three times. Some items did not satisfy the intended critical value of ±2 after the first and second transformation.

Hence, a third transformation was required. In order to differentiate among the first, second and third transformations, the "T" label was used. For first time transformation, it was label with "T" and for the second transformation "TT" label was used. After the second transformation, six items still did not meet the intended critical value. They are TTINT6, TTREL2, TTREL14, TTREL16, TTREL17 and TTDEF5 (refer Appendix

4). However based on the sample size of more than 200, non-normal data will have a negligible impact (Hair et al., 2010). Moreover, the SEM technique can consider measurement error when statistically analyzing data on latent and observed variables (Schumacker & Lomax, 2004). Hence, this study included TTINT6, TTREL2, TTREL14, TTREL16, TTREL17 and TTDEF5 in the data analysis. In Appendix 4, comparison of normality indices for before and after transformation is attached.

## 4.4 Demographic analysis

This section shares characteristics of Malaysian Muslim credit card holders who had responded to the distributed questionnaires. The demographic of the respondents was tabulated in Table 4.4. The table indicates that 323 (100%) respondents are credit card holders. Majority of the respondents have Maybank credit cards, 90 (27.9%), followed by Bank Islam Berhad, 72 (22.3%), other banks, 60 (18.6%), CitiBank credit card, 55 (17%), and CIMB Berhad, 46 (14.2%), The respondents with Master Card, 185 (57.3%) is the majority, followed by Visa, 134 (41.5%), Dynasty, 2 (0.6%), and other cards, 2 (0.6%).

Respondents were asked how long they had been credit card consumers. They were grouped into four intervals. A majority of the respondents have been credit card holders for more than four year which is 133 (41.2%), two to three years, 96 (29.7%), three to four years, 57 (17.6%), and finally less than one year is 37 (11.5%). All the respondents are defaulters with a majority with a one-time default, 117 (36.2%), two-time default, 115 (35.6%), three-time default, 57 (17.6%), and more than three-time, 34 (10.5%).

The highest number of respondents in this survey is male which is 179 (55.4%) and female is 144 (44.6%). Then, the respondents were requested to declare their age. They were grouped into five intervals. The majority of respondents are in the age range of 25 to 34 years, which is 123 (38.1%), followed by age group of 35 to 44 years, which is 121 (37.5%), followed by 45 to 54 years, which is 52 (16.1%), followed by the age range of less than 24 years, which is 15 (4.6%), and finally, more than 55 years, which is 12 (3.7%). All the respondents are Muslim credit card holders, which is 323 (100%).

This is in line with the current research methodology in which the intended respondents should be only Muslim credit card holders. The smallest group of respondents who had other qualifications, which is 2 (0.6%), followed by Phd/Doctoral Degree qualification, 13 (4.0%), followed by Master qualification, 24 (7.4%), followed by education up to secondary school, which is 50 (15.5%), followed by Degree holders, which is 115 (35.6%), and the majority of the respondents are Diploma holders, which is 119 (36.8%). The highest number of respondents earns more than RM 4,500 per month, at 113 (36.8%) respondents. This is followed by the group between RM2,500 and RM3,499 per month at 89 (27.6%) and respondents; then, the group between RM1,500 and RM2,499 per month at 69 (21.4%) respondents and finally the group between RM3,500 and RM4,499 per month at 52 (16.1%).

Table 4.4
*Demographic structure of respondents*

| Variables | Frequency | Percentage |
|---|---|---|
| Credit card consumer | | |
| Yes | 323 | 100 |
| No | 0 | 0 |

Table 4.4 (Continued)

| Variables | Frequency | Percentage |
|---|---|---|
| Credit card bank | | |
| Maybank Berhad | 90 | 27.9 |
| Bank Islam | 72 | 22.3 |
| Others | 60 | 18.6 |
| Citibank | 55 | 17.0 |
| CIMB Bank Berhad | 46 | 14.2 |
| Credit card brand | | |
| Master card | 185 | 57.3 |
| Visa | 134 | 41.5 |
| Others | 2 | 0.6 |
| Dynasty | 2 | 0.6 |
| Duration as credit card consumer | | |
| Less than one(1) year | 37 | 11.5 |
| Two to three years | 96 | 29.7 |
| Three to four years | 57 | 17.6 |
| More than four years | 133 | 41.2 |
| Default | | |
| None | 0 | 0 |
| 1 time | 117 | 36.2 |
| 2 times | 115 | 35.6 |
| 3 times | 57 | 17.6 |
| More than 3 times | 34 | 10.5 |
| Gender | | |
| Male | 179 | 55.4 |
| Female | 144 | 44.6 |
| Age | | |
| Less than 24 | 15 | 4.6 |
| 25 - 34 | 123 | 38.1 |
| 35 - 44 | 121 | 37.5 |
| 45 - 54 | 52 | 16.1 |
| More than 55 | 12 | 3.7 |

Table 4.4 (Continued)

| Variables | Frequency | Percentage |
|---|---|---|
| Religion | | |
| Muslim | 323 | 100 |
| Christianity | 0 | 0 |
| Hindu | 0 | 0 |
| Buddha | 0 | 0 |
| Others | 0 | 0 |
| | | |
| Educational | | |
| Primary school | 0 | 0 |
| Secondary school | 50 | 15.5 |
| Diploma school | 119 | 36.8 |
| Bachelor degree | 115 | 35.6 |
| Master degree | 24 | 7.4 |
| Phd/Doctoral Degree | 13 | 4.0 |
| Others | 2 | 0.6 |
| | | |
| Income | | |
| Less than RM1,500 | 0 | 0.0 |
| RM1,500 - RM2,499 | 69 | 21.4 |
| RM2,500 - RM3,499 | 89 | 27.6 |
| RM3,500 - RM4,499 | 52 | 16.1 |
| More than RM4,500 | 113 | 35.0 |

## 4.5 Descriptive Results of Latent Variables

### 4.5.1 Descriptive results of overall latent variables (N=323)

Table 4.5 indicates the descriptive results of each variable. Among the six variables, religiosity recorded the highest mean (M=5.499, SD=1.043). In the descending order of recorded mean, next is attitude (M=5.357 and SD=1.281), and subjective norm (M=5.080, SD=1.284). The mean readings are not very different among the four highest mean. They are still within the range of five to five point five, whereas another three variables, intention, perceived behavior control and default, recorded a lower mean compared to the earlier four variables. Intention recorded a mean of M=5.039, SD=1.082, perceived behavior control recorded a mean of M=5.039, SD=1.126, and lastly, default has a mean of M=3.138, SD=1.553.

Table 4.5
*Descriptive statistics for overall latent variables (n=323)*

| **Variables** | **Coding** | **Number of items** | **Minimum** | **Maximum** | **Mean** | **Std. Deviation** |
|---|---|---|---|---|---|---|
| Attitude | ATT | 5 | 1.00 | 7.00 | 5.357 | 1.281 |
| Subjective Norm | SN | 7 | 1.00 | 7.00 | 5.080 | 1.284 |
| Perceived Behavior Co | PER | 5 | 1.00 | 7.00 | 5.039 | 1.126 |
| Intention | INT | 6 | 1.00 | 7.00 | 5.039 | 1.082 |
| Religiosity | REL | 19 | 1.00 | 7.00 | 5.499 | 1.043 |
| Default | DEF | 6 | 1.00 | 7.00 | 3.138 | 1.553 |

## 4.6 Convergent Validity

### 4.6.1 Cronbach Alpha Reliability and Composite Reliability

The accepted value for Cronbach’s alpha and composite reliability for each construct should be more than 0.7 (Hair et al., 2007; Sekaran, 2003). The Cronbach’s alpha of above 0.7 indicates good convergent validity. The reliability test conducted in this study gave acceptable values for all construct. All the Cronbach’s alpha recorded above 0.7 with perceived behavior control recording the lowest at 0.788 (refer Table 4.6). In addition, composite reliability also recorded above 0.7 for all constructs. The lowest is also subjective norm at 0.973 (refer Table 4.6).

Table 4.6
*Reliability*

| **Variable** | **Reliability Coefficient (α)** | **Composite Reliability** |
|---|---|---|
| Attitude | 0.837 | 0.982 |
| Subjective Norm | 0.893 | 0.973 |
| Perceived Behavior Control | 0.788 | 0.985 |
| Intention | 0.850 | 0.989 |
| Religiosity | 0.946 | 0.992 |
| Default | 0.883 | 0.991 |

### 4.6.2 Discriminant Validity

Average variance extracted (AVE) is presented in Table 4.7. At the same time, Table 4.8 presents the correlation squared values. Comparing the AVE values versus the correlation squared values, it is obvious that the AVE values are greater than the correlation squared values. Therefore, it can be concluded that the discriminant validity is confirmed. Hence, the confirmation of the discriminant validity directly confirms the absence of multi-collinearity.

Table 4.7

*Average variance extracted (AVE)*

| Variable name | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Attitude (1) | 1.000 | | | | | |
| Subjective Norm (2) | 0.960 | 1.000 | | | | |
| Perceive Behavior Control (3) | 0.994 | 0.961 | 1.000 | | | |
| Intention (4) | 0.994 | 0.961 | 0.995 | 1.000 | | |
| Religiosity (5) | 0.986 | 0.953 | 0.987 | 0.987 | 1.000 | |
| Default (6) | 0.922 | 0.889 | 0.924 | 0.923 | 0.915 | 1.000 |

Table 4.8

*Correlation and correlation squared*

| Variable name | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Attitude (1) | 1 | 0.554 | 0.533 | 0.576 | 0.178 | 0.088 |
| Subjective Norm (2) | 0.744*** | 1 | 0.510 | 0.596 | 0.091 | 0.053 |
| Perceived Behavior Control (3) | 0.730*** | 0.714*** | 1 | 0.817 | 0.137 | 0.093 |
| Intention (4) | 0.759*** | 0.772*** | 0.904*** | 1 | 0.210 | 0.104 |
| Religiosity (5) | 0.422** | 0.302* | 0.37* | 0.458** | 1 | 0.004 |
| Default (6) | -0.297* | -0.231 | -0.305* | -0.322* | -0.066 | 1 |

Significant Level ***=0.001, Significant Level **=0.01, Significant Level *=0.05

Note: Values below the diagonal are correlation estimates among constructs; diagonal elements are construct variances; and value above the diagonal are squared correlation. Since all correlations are significant, mediation is plausible.

### 4.6.3 CFA of Individual Construct

Table 4.9 presents the factor loading of the initial and fit model of measurement models for individual construct based on the confirmatory factor analysis (CFA). (Table 4.10

presents the goodness of fit for the measurement models). Figures and indices, comparing the initial and fit measurement models are listed in Appendix 5. Out of 48 items, only 4 items of factor loading are less than 0.5. The items with less than 0.5 factor loading during the initial stage are TRATT5, RSN7, TRPER4, and TTRINT5. Another 44 items in the factor loading are above 0.5, supporting the convergent validity. After the confirmatory factor analysis (CFA), a total of 22 items are deleted. All the individual constructs meet the fit value after the CFA. The overall indices for individual constructs fulfilled the fit values. All the constructs have a *p* value of above 0.05. In addition, each of the constructs also meet the recommended value of the RMSEA for reliability, which must be lower than 0.08.

Table 4.9
*Factor loadings of measurement model (before and after fit)-CFA*

| **Variable name** | **Item** | **Code** | **Statement** | **Factor loading before fit** | **Factor loading after fit** |
|---|---|---|---|---|---|
| Attitude | Attitude | TTATT1 | Paying my credit card bill is a wise idea. | 0.841 | 0.799 |
| | | TTATT2 | Paying my credit card bill on time is a good idea. | 0.905 | 0.965 |
| | | TTATT3 | I like the idea of paying my credit card bill | 0.699 | |
| | | TTATT4 | Paying credit card on time is my priority | 0.802 | 0.767 |
| | | TTRATT5 | I believe that paying credit card is not my responsibility (-) | 0.418 | 0.434 |
| Subjective Norm | Subjective Norm | TTSN1 | My family members would think that paying my credit card bill is a wise idea | 0.817 | |
| | | TSN2 | My friends would think that paying my credit card bill is a wise idea | 0.847 | |
| | | TSN3 | My colleaques would think that paying my credit card bill is a wise idea | 0.826 | |
| | | TTSN4 | My family members would think I should pay credit card bill on time | 0.849 | 0.857 |
| | | TTSN5 | People who are important to me would think that I should pay my credit card bill on time | 0.912 | 0.973 |
| | | TTSN6 | People who are influence me would think that I should pay my credit card bill on time | 0.900 | 0.900 |
| | | RSN7 | People whose opinions are valued would prefer that I should not pay my credit card bill on time (-) | 0.098 | 0.075 |

Table 4.9 (Continued)

| **Variable name** | **Item** | **Code** | **Statement** | **Factor loading before fit** | **Factor loading after fit** |
|---|---|---|---|---|---|
| Perceive Behavior Control | Perceived Behavior Control | TTPER1 | I would be able to pay my credit card bill on time | 0.908 | |
| | | TTPER2 | I have the resource to pay my credit card bill on time | 0.920 | 0.920 |
| | | TTPER3 | I have the ability to pay my credit card bill on time | 0.944 | 0.953 |
| | | TRPER4 | Paying credit card in full would not be entirely within my control (-) | -0.134 | -0.155 |
| | | TPER5 | I have the knowledge to pay my credit card bill | 0.827 | 0.839 |
| Intention | Intention | TTINT1 | I plan to pay my credit card on time | 0.914 | 0.914 |
| | | TTINT2 | I intend to pay my credit card on time | 0.959 | 0.960 |
| | | TTINT3 | I will pay credit card this month | 0.914 | 0.913 |
| | | TTINT4 | I will pay credit card in future | 0.643 | 0.646 |
| | | TTRINT5 | Paying my credit card bill is something not important to me (-) | 0.352 | |
| | | TTINT6 | I would pay my credit card bill as my responsible | 0.731 | 0.730 |
| Religiosity | Religiosity | TTREL1 | It is important for me to have only an Islamic credit card | 0.766 | 0.697 |
| | | TTREL2 | It is important to me to engage only Islamic hire purchase financing | 0.742 | |
| | | TTREL3 | It is important for me to purchase only a family takaful insurance | 0.650 | |
| | | TREL4 | It is important for me to purchase only an educational takaful insurance | 0.535 | |
| | | TREL5 | I enjoys attending religious talk at mosque | 0.767 | |
| | | TREL6 | I usually read religious books and magazines individually | 0.748 | |
| | | TREL7 | I always listening to the religious programs broadcasted by local radio station | 0.723 | |
| | | REL8 | I sometimes join usrah groups | 0.587 | |
| | | TREL9 | I often watching religious programs on TV | 0.737 | |
| | | TTREL10 | I always cautious on the validity of HALAL mark used by non-Muslim food operators | 0.753 | 0.819 |

Table 4.9 (Continued)

| Variable name | Item | Code | Statement | Factor loading before fit | Factor loading after fit |
|---|---|---|---|---|---|
| | | TREL11 | I always against cheating on the weighing scales | 0.594 | |
| | | TTREL12 | I support punishment on those who are eligible but reluctant to pay zakat | 0.670 | 0.690 |
| | | TTREL13 | I support the implementation of Syariah Law | 0.604 | |
| | | TTREL14 | I support the plan to forbidd liquor sales | 0.612 | |
| | | TTREL15 | I always suspicious on imported halal meat | 0.689 | |
| | | TTREL16 | I always be careful with local canned/boxed food even though they have HALAL mark | 0.733 | 0.801 |
| | | TTREL17 | I only used toiletries(tooth paste/soap/hair shampoo) that produce by muslim | 0.649 | |
| | | TTREL18 | I am always coutious with mixed flour (for baking, bread, pastry, pudding) that not produce by muslim operator | 0.690 | |
| | | TTREL19 | I prefer only perfume/deodorant that did not contain alcohol | 0.753 | 0.752 |
| Default | Default | DEF1 | I sometime unintentially default in my credit card payment | 0.765 | 0.757 |
| | | TTDEF2 | I sometimes did not paid even a minimum payment due on my credit card bill | 0.826 | 0.840 |
| | | DEF3 | I sometimes forgot the payment due date for my credit card | 0.764 | |
| | | TTDEF4 | I sometimes forgot to pay my credit card | 0.875 | 0.865 |
| | | TTDEF5 | In the past six months, I have not paid even the minimum amount due on my credit card | 0.730 | |
| | | DEF6 | I do not usually pay the full amount on my credit card debt | 0.501 | 0.488 |

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Table 4.10

*Goodness of fit indices for measurement model (individual constructs)*

| Variable Name | X | DF | RATIO | GFI | CFI | TLI | RMSEA | P |
|---|---|---|---|---|---|---|---|---|
| Attitude | 4.586 | 2 | 4.586 | 0.996 | 0.993 | 0.987 | 0.063 | 0.101 |
| Subjective Norm | 1.157 | 2 | 0.579 | 0.998 | 1.000 | 1.003 | 0.000 | 0.561 |
| Perceive Behavior Control | 2.853 | 2 | 1.427 | 0.996 | 0.999 | 0.997 | 0.036 | 0.240 |
| Intention | 1.925 | 5 | 0.385 | 0.998 | 1.000 | 1.005 | 0.000 | 0.859 |
| Religiosity | 7.316 | 5 | 1.463 | 0.991 | 0.997 | 0.993 | 0.038 | 0.198 |
| Default | 2.496 | 2 | 1.248 | 0.996 | 0.999 | 0.997 | 0.028 | 0.287 |

### 4.6.4 CFA (confirmative factor analysis) of exogenous model

Table 4.11 presents the before fit indications and the after confirmatory factor analysis (CFA) fit indications. During the initial stage, the values are GFI (0.630), CFI (0.760), TLI (0.741), RMSEA (0.119), and P value (0.000). All the values did not meet the minimum requirement for fit indices. The model managed to fit after conducting the CFA by deleting 22 items. After fit indices, the values are GFI (0.974), CFI (0.992), TLI (0.989), RMSEA (0.036), and P value (0.0.059). The initial and fit models are presented in Appendix 6.

Table 4.11
*Goodness of fit for all exogenous models*

| Variable name | X | DF | RATIO | GFI | CFI | TLI | RMSEA | P |
|---|---|---|---|---|---|---|---|---|
| Initial | 2393.15 | 431 | 5.553 | 0.630 | 0.760 | 0.741 | 0.119 | 0 |
| Fit | 45.390 | 32 | 1.418 | 0.974 | 0.992 | 0.989 | 0.036 | 0.059 |

### 4.6.5 CFA (confirmative factor analysis) of endogenous model

Table 4.12 presents the before fit indications and the after CFA fit indications. Before conducting the CFA, the values are GFI (0.851), CFI (0.889), TLI (0.870), RMSEA (0.106), and P value (0.000), which did not meet the minimum requirement for fit indices. The model managed to fit after conducting the CFA by deleting 7 items. After the fit indices, the values are GFI (0.972), CFI (0.994), TLI (0.991), RMSEA (0.035), and P value (0.064). The initial and fit models are presented in Appendix 7.

Table 4.12
*Goodness of fit for endogenous model*

| Variable name | X | DF | RATIO | GFI | CFI | TLI | RMSEA | P |
|---|---|---|---|---|---|---|---|---|
| Initial | 539.247 | 116 | 4.649 | 0.851 | 0.889 | 0.870 | 0.106 | 0 |
| Fit | 44.921 | 32 | 1.404 | 0.972 | 0.994 | 0.991 | 0.035 | 0.064 |

## 4.7 Structural model

Figure 4.1 shows the hypothesized structural model. This model's indices, GFI, CFI, TLI, RMSEA, and P values, did not meet the recommended value. However, the generated model managed to produce a fit value after the confirmatory factor analysis (CFA). The confirmatory factor analysis is done by following the modification indices principles. 35 predictors were deleted during the process. (Please refer to Appendix 8 for all the deleted predictors.) Figure 4.2 shows the generated structural model. The indices of the initial and generated model are shown in Table 4.13

### Generated model

Table 4.13
*Goodness of fit for structural model*

| Variable name | X | DF | RATIO | GFI | CFI | TLI | RMSEA | P |
|---|---|---|---|---|---|---|---|---|
| Hypothesis | 4546.03 | 1066 | 4.265 | 0.616 | 0.761 | 0.747 | 0.096 | 0 |
| Generated | 96.311 | 76 | 1.267 | 0.965 | 0.993 | 0.991 | 0.027 | 0.058 |

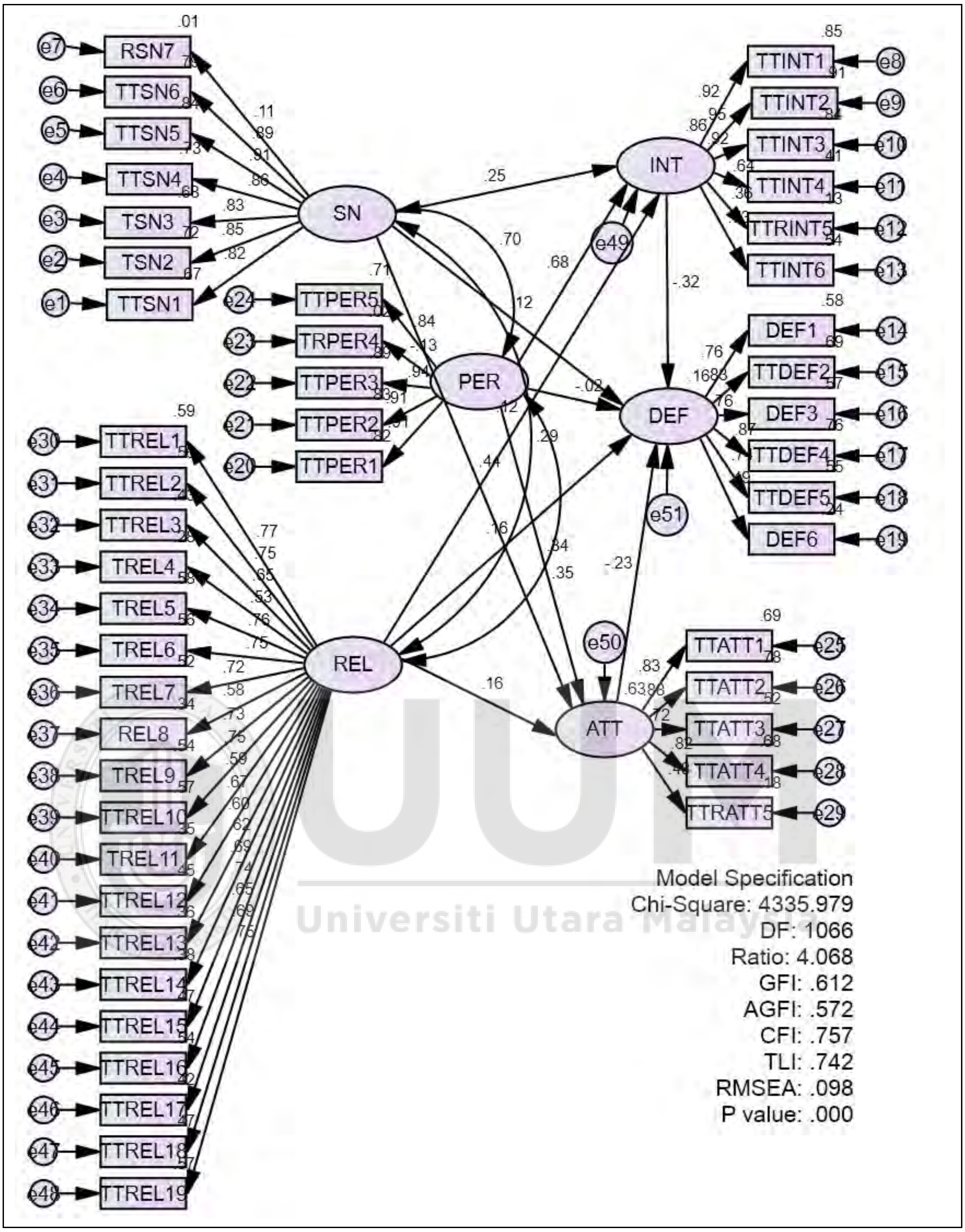
SN
PER
REL
INT
DEF
ATT
e49
e50
e51
RSN7
TTSN6
TTSN5
TTSN4
TSN3
TSN2
TTSN1
TTPER5
TRPER4
TTPER3
TTPER2
TTPER1
TTREL1
TTREL2
TTREL3
TREL4
TREL5
TREL6
TREL7
REL8
TREL9
TTREL10
TREL11
TTREL12
TTREL13
TTREL14
TTREL15
TTREL16
TTREL17
TTREL18
TTREL19
TTINT1
TTINT2
TTINT3
TTINT4
TTRINT5
TTINT6
DEF1
TTDEF2
DEF3
TTDEF4
TTDEF5
DEF6
TTATT1
TTATT2
TTATT3
TTATT4
TTRATT5
.25
.70
.68
.12
-.32
-.02
.44
.16
.29
.34
.35
-.23
.16
Model Specification
Chi-Square: 4335.979
DF: 1066
Ratio: 4.068
GFI: .612
AGFI: .572
CFI: .757
TLI: .742
RMSEA: .098
P value: .000

Figure 4.1
*Hypothesized structure model (Before fit)*

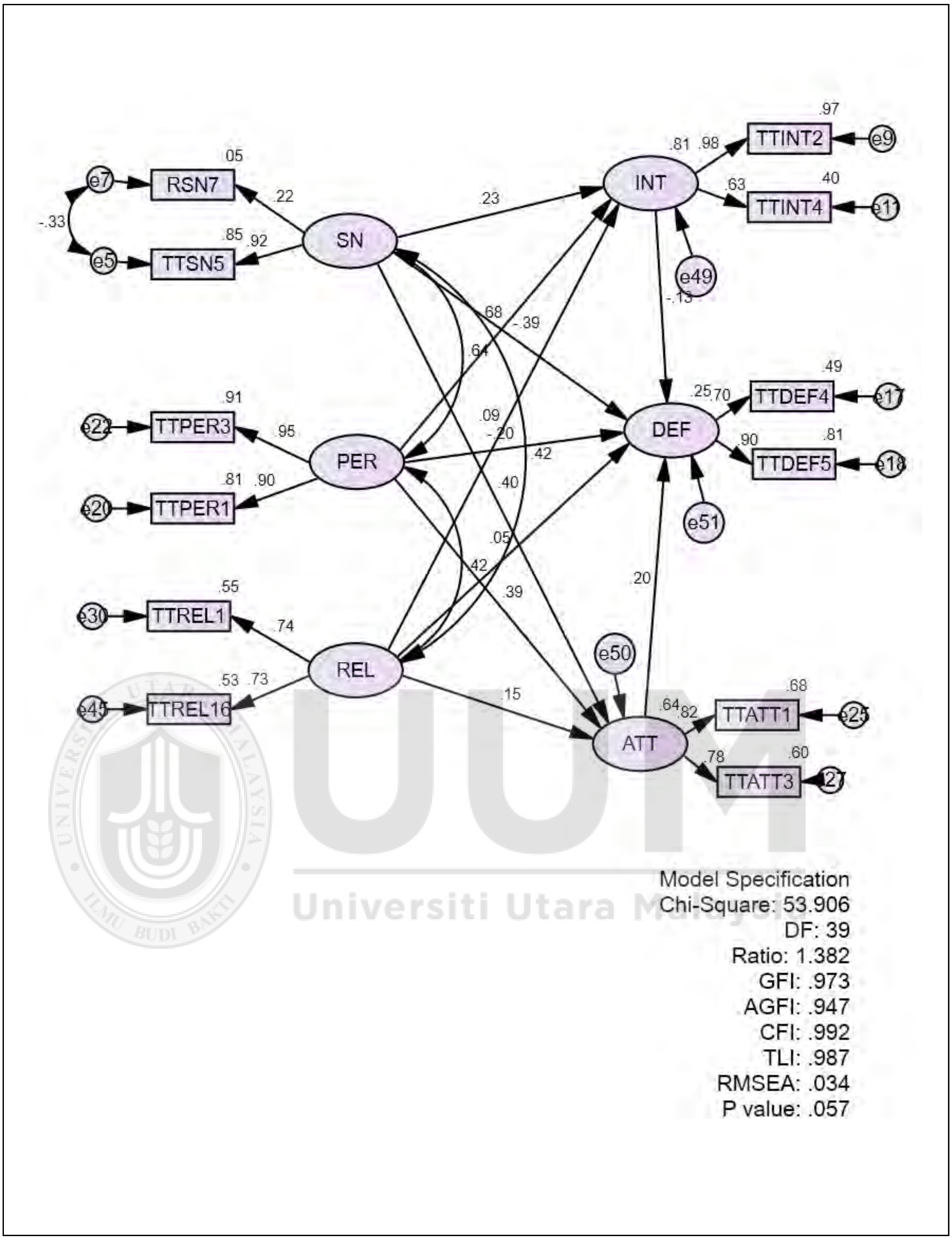
.97
.81 .98
TTINT2
e9
.05
e7
RSN7
.22
.23
INT
.63
40
TTINT4
e11
-.33
.85 .92
SN
e5
TTSN5
e49
-.13
.68
-.39
.64
.49
.25 .70
TTDEF4
e17
.91
.09
e22
TTPER3
.95
-.20
DEF
.42
.81
.90
TTDEF5
e18
PER
.81 .90
.40
e20
TTPER1
e51
.05
.42
.20
.39
.55
e30
TTREL1
.74
e50
REL
.53 .73
.15
.68
e45
TTREL16
.64 .82
TTATT1
e25
ATT
.78
.60
TTATT3
e27
Model Specification
Chi-Square: 53.906
DF: 39
Ratio: 1.382
GFI: .973
AGFI: .947
CFI: .992
TLI: .987
RMSEA: .034
P value: .057

Figure 4.2
*Generated model of credit card default (After fit)*

## 4.8 Hypotheses testing

Hypothesis testing is conducted based on a generated model. There are two segments of hypothesis testing conducted in this study. The first is the direct effect followed by the indirect effect. This research has seventeen (17) hypotheses. Eleven (11) hypotheses measure the direct effect and the other six (6) hypotheses measure the indirect effects.

### 4.8.1 Direct effect

**Significant direct results**

Hypotheses one to eleven (1-11) measure the direct relationships (refer Table 4.14). The results indicate that six out of eleven hypotheses are significant. Hypothesis 6 (H6), hypothesis 7 (H7), hypothesis 8 (H8), hypothesis 9 (H9), hypothesis 10 (H10) and hypothesis 11(H11) are significant. Hence, this study concludes that subjective norm has a significant relationship with intention ($\beta=0.234$, CR=2.018, $p=0.044$), perceived behavior control has a significant relationship with intention ($\beta=0.685$, CR=9.041, $p=0.001$), religiosity has a significant relationship with intention ($\beta=0.095$, CR=1.962, $p=0.05$), perceived behavior control has a significant relationship with attitude ($\beta=0.393$, CR=3.060, $p=0.002$), subjective norm has a significant relationship with attitude ($\beta=0.400$, CR=2.030, $p=0.047$) and religiosity has a significant relationship with attitude ($\beta=0.148$, CR=1.987, $p=0.047$).

Table 4.14

*Direct Effect*

| **Hypothesis** | **Construct relationship** | **Standard regression** | **Critical ratio** | **P value** | **Verdict** |
|---|---|---|---|---|---|
| **H1** | Default ← Intention | -0.134 | -0.710 | 0.478 | Not sig |
| **H2** | Default ← Perceived Behaviour Control | -0.204 | -1.359 | 0.174 | Not sig |
| **H3** | Default ← Religiosity | 0.051 | 0.607 | 0.544 | Not sig |
| **H4** | Default ← Subjective Norm | -0.395 | -1.438 | 0.150 | Not sig |
| **H5** | Default ← Attitude | 0.200 | 1.173 | 0.241 | Not sig |
| **H6** | Intention ← Subjective Norm | 0.234 | 2.018 | 0.044 | Sig |
| **H7** | Intention ← Perceived Behaviour Control | 0.685 | 9.041 | 0.001 | Sig |
| **H8** | Intention ← Religiosity | 0.095 | 1.962 | 0.050 | Sig |
| **H9** | Attitude ← Perceived Behaviour Control | 0.393 | 3.060 | 0.002 | Sig |
| **H10** | Attitude ← Subjective Norm | 0.400 | 2.030 | 0.042 | Sig |
| **H11** | Attitude ← Religiosity | 0.148 | 1.987 | 0.047 | Sig |

***$p < 0.001$, **$p < 0.01$, *$p < 0.05$

### Insignificant direct results

Hypotheses 1 to 11 measure the direct relationship (refer Table 4.14). The results indicate 5 out of 11 hypotheses are not significant. Hypothesis 1 (H1), hypothesis 2 (H2), hypothesis 3 (H3), hypothesis 4 (H4), and hypothesis 5 (H5) are not significant. Hence, this study concludes that intention (β=-0.134, CR=-0.710, P=0.478), perceived behavior control (β=-0.204, CR=-1.359, P=0.174), religiosity (β=0.051, CR=0.607, P=0.544), subjective norm (β=-0.395, CR=-1.438, P=0.150) and attitude (β=0.200, CR=1.173, P=0.241) do not have a significant relationship with credit card default.

### 4.8.2 Indirect effect (Attitude as mediator)

The mediator test results inclusive of bias corrected were conducted through the bootstrapping method as shown in Table 4.15. The results reveal that attitude is a significant mediator between perceived behavior control with credit card default. Alternatively attitude is not a significant mediator for subjective norm with credit card default and religiosity with credit card default.

Table 4.15
*Indirect Effect – Attitude*

| | | **Bootstrapping** | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Point Estimate** | **Product of coefficients** | | **Percentile 95% CI** | | **BC 95% CI** | | **Verdict** |
| | | **SE** | **Z** | **Lower** | **Upper** | **Lower** | **Upper** | |
| Subjective Norm | 0.119 | 0.164 | 0.726 | -0.016 | -0.016 | -0.007 | 0.603 | Mediation Not Supported |
| Perceived Behavior Control | 0.089 | 0.066 | 1.348 | -0.025 | -0.025 | 0.000 | 0.280 | Mediating Supported |
| Religiosity | 0.040 | 0.045 | 0.889 | -0.02 | -0.020 | -0.008 | 0.176 | Mediating Not Supported |

### 4.8.3 Indirect effect (Intention to pay as mediator)

Intention is also not a mediator between subjective norm with credit card default, perceived behavior control with credit card default and religiosity with credit card default. This is because the lower and upper bound values are sprawled beyond zero in between (Table 4.16).

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Table 4.16
*Indirect Effect – Intention*

| | | **Bootstrapping** | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Point Estimate** | **Product of coefficients** | | **Percentile 95% CI** | | **BC 95% CI** | | **Verdict** |
| | | **SE** | **Z** | **Lower** | **Upper** | **Lower** | **Upper** | |
| Subjective Norm | -0.031 | 0.053 | -0.585 | -0.126 | 0.049 | -0.193 | -0.152 | Mediating Not Supported |
| Perceived Behavior Control | -0.158 | 0.135 | -1.170 | -0.434 | 0.104 | -0.526 | -0.526 | Mediating Not Supported |
| Religiosity | -0.029 | 0.030 | -0.967 | -0.079 | 0.015 | -0.152 | -0.193 | Mediating Not Supported |

### 4.8.3 Squared Multiple Correlations (for Endogenous Variables) of Generated Final Model

The coefficient of multiple determination ($R^2$) or Square Multiple Correlations (SMC) is the values representing the extent to which a measured variable's variance is explained by a latent factor (Hair et. al., 2010). This statistic is quite useful for comparison between equations with different numbers of independent variables, differing sample sizes, or both (Hair et. al., 2010).

The coefficient of multiple determination ($R^2$) or Square Multiple Correlations (SMC) for credit card default was 26.5 percent (Table 4.17). This indicates that about 26.5 percent of total variation in credit card default can be explained by the five independent variables.

Table 4.17
*Squared Multiple Correlations*

| **Variables** | **Coding** | **Squarred Multiple Correlations** |
|---|---|---|
| Intention | INT | 83% |
| Attitude | ATT | 69.70% |
| Default | DEF | 26.50% |

## 4.9 Summary

This chapter presented the research findings after analyzing the data using the structural equation modelling (SEM). Before starting the data analysis, the structural model was put through a confirmatory factor analysis to ensure acceptable goodness of fit. This model is referred to as the revised model. Table 4.9 presents the factor loading of the remaining items. All the five items that initially have factor loadings lower than 0.5 are treated. One Three of them are factored out while the remaining three, TRATT5, RSN7, TRPER4, and TTRINT5 improve their factor loading from 0.375, 0.060, -0.144, and 0.298 to 0.391, 0.056, -0.167, and 0.302, respectively. From the data analysis six (6) out of eleven (11) direct hypotheses are supported. As per the indirect relationship (mediator), there are six hypotheses. One (1) is supported - attitude is the mediator in the perceived behavior control and default relationship whereas attitude is not a mediator in the relationship of subjective norm, religiosity, and default. Similarly, intention is not a mediator in the relationship of subjective norms, perceived behavior control, religiosity, and default.

| Objective Number | Research Objective | Hypothesis | | Verdict |
|---|---|---|---|---|
| 1 | To examine to what extend intention, perceived behavior control, religiosity, subjective norm and attitude influence credit card default among credit card defaulters in Malaysia. | **H1** | Intention will have a significant relationship with credit card default | Not supported |
| | | **H2** | Perceived behavior control will have a significant relationship with credit card default. | Not supported |
| | | **H3** | Religiosity will have a significant relationship with credit card default. | Not supported |
| | | **H4** | Subjective norm will have a significant relation with credit card default. | Not supported |
| | | **H5** | Attitude will have a significant relation with credit card default | Not Supported |
| 2 | To examine to what extend subjective norm, perceived behavior control and religiosity influence intention to pay credit card among credit card defaulters in Malaysia. | **H6** | Subjective norm will have a significant relation with intention | Supported |
| | | **H7** | Perceive behavior control will have a significant relation with intention | Supported |
| | | **H8** | Religiosity will have a significant relation with intention | Supported |
| 3 | To examine to what extend perceived behavior control, subjective norm and religiosity influences attitude among credit card defaulters in Malaysia. | **H9** | Perceive behavior control will have a significant relation with attitude | Supported |
| | | **H10** | Subjective norm will have a significant relation with attitude | Supported |
| | | **H11** | Religiosity will have a significant relation with attitude | Supported |

| Objective Number | Research Objective | Hypothesis | Verdict |
|---|---|---|---|
| 4 | To investigate the mediating effect of attitude on the relationship between subjective norms, perceived behavior control and religiosity with credit card default. | **H12** Attitude mediates the relationship between subjection norm and credit card default behavior | Not supported |
| | | **H13** Attitude mediates the relationship between perceive behavior control and credit card default behavior | Supported |
| | | **H14** Attitude mediates the relationship between religiosity and credit card default behavior | Not supported |
| 5 | To investigate the mediating effect of intention on the relationship between subjective norms, perceived behavior control and religiosity with credit card default. | **H15** Intention mediates the relationship between subjective norm and credit card default behavior. | Not supported |
| | | **H16** Intention mediates the relationship between perceive behavior control and credit card default behavior. | Not supported |
| | | **H17** Intention mediates the relationship between religiosity and credit card defaults behavior. | Not supported |

# CHAPTER FIVE
# DISCUSSION AND CONCLUSION

## 5.1 Chapter Overview

This chapter discusses the research findings by cross referencing the research objectives and previous literature review. In the first section, it discusses the research findings and cross references them to the outcome of previous studies and the literature reviews. In the second section, it discusses the implication of the research findings including implications to the academicians, practitioners, and the nation. After that, the research discusses this study's limitation and finally concludes the research with suggestions and recommendation for future research.

## 5.2 Deliberation on Research Findings

Six out of 17 hypotheses of this study are supported with one has a significant mediation effect. Relationships subjective norm with intention to pay, perceived behavior control with intention to pay, religiosity with intention to pay, perceived behavior control with attitude, subjective norm with attitude and religiosity with attitude are found to be significant predictors. In addition, attitude is also found to mediate between perceived behavior control with credit card default. The overall research findings will be discussed in the following by referring to the research objectives discussed at the beginning of the research.

## 5.3 Significant Results

### 5.3.1 Objective Two

This research concludes that subjective norm, perceived behavior control, and religiosity have a significant relation with intention to pay credit card. Subjective norm represents an individual’s normative belief concerning a particular reference weighted by the motivation to comply with that referent (Shih and Fang, 2004); perceived behavior control refers to the belief of an individual concerning control of a behavior (Shih and Fang, 2004); and religiosity is an intricate concept and a variegated human phenomenon (Khraim, 2010). Shih and Fang (2004) defined behavioral intention as the individual’s observable response in a given situation with respect to a given target.

### 5.3.1.1 Subjective Norm and Intention to pay

Subjective norm has a significant and positive relation with intention to pay credit card ($\beta=0.234$, $p=0.044$). Hence, research results suggest that the more those who are important in an individual’s life think positively towards credit card payment, the more likely credit card consumers intend to pay their credit card. Consumers tend to imitate positive behaviors those whom they admired. This finding reaffirms the role of subjective norm in determining intentional behavior especially in ethical related behaviors such as unethical behaviors (King & Dennis, 2006), ethical sales (Ferdous & Polonsky, 2013), and informal payment (Vian & Burak, 2006). In addition, study by Bashir and Madhavaiah (2015) concluded social factor has significant relation with behavioral intention in internet banking adoption.

Other possible reason could be credit card consumers are being influence by positive surrounding information such as from mass media advertisements thus enabling consumers to have intention to pay credit card on time. Hence, credit card issuers should take in account the important of subjective norm in influencing intention to pay credit card. This research result further affirms the importance of having an ethical environment that provides norms where ethical behavior is supported and expected. In the case of credit card default, government needs to produce more advertisements, newsletters, notice boards, and any other types of public information to communicate the importance of having ethical norms and value to credit card holders. Credit card issuers can also play their role by taking similar steps in spreading ethical habits. Credit card issuers are encouraged to emphasis more on creating awareness among their customers on the ethical behavior of credit card user. It includes educating their customers on why credit card default is unethical and how it can affect the society. These activities are aimed at giving financial education to the public. Customers who clearly understand the information shall improve their knowledge. They might also share the information with others. The word of mouth promotion could become credit card issuers' powerful promoting tool.

The research outcome that subjective norm is significant in the intention to pay behavior indicates that social influences have a significant relation with intention to pay. Subjective norm with intention to pay is significant in this study probably because people whom we consider important in our lives such as parents have a significant role in shaping consumers' credit behavior. This is supported by a study by McNeill and Turner (2013) which concluded that parents were able to exert a huge amount of influence over the financial behavior of their children. This is done through the informal teaching of financial lessons.

In the Muslim community, especially in the Eastern culture, people value belonging to a group more than personal goals. Hence, this has encouraged customers to seek advice and opinion from others in their financial decisions. Due to this, subjective norm is found to have a significant relation with intention to pay.  This study result lends support to a previous study by Amin (2011), which concluded that financial recommendation is found to have a significant determining factor in the intention to use an Islamic credit card. In addition, the influences of subjective norm on behavioral intention are stronger in cultures that value a social bond such as in Malaysia. In Malaysia, for example, referring to the family for any decision shows the importance of family influences. Hence, one has different views and intentions towards the studied behavior with the presence of social influences.

Previous studies on other general consumer behavior areas further confirm the importance of subjective norm in influencing behaviors such as technology implementation (Baker, Al-Gahtani & Hubona, 2007), Halal products (Mukhtar & Butt, 2012; Lada, Tanakinjal, & Amin, 2009), and shopping behavior (Fin & Fi, 2011).

### 5.3.1.2 Perceived Behavior Control and Intention to pay

Perceived behavior control is found to have a positive and significant relation with intention to pay ($\beta=0.685$, $p=0.001$). This result is consistent with previously studies (King and Dennis, 2006; Vian & Burak, 2006) in which perceived behavior control is found to have a significant role in determining unethical behaviors. For example, in determining deshopping behavior by King and Dennis (2006) perceived behavior control is concluded as a significant predictor of deshopping behavior. Similarly in an informal payment study by Vian & Burak (2006), perceived behavior control is also found significant in predicting informal payment. In addition, Farah (2017) study in factors that influence switching bank intention among consumers with related to bank mergers and acquisitions revealed perceived behavior control has significant inverse relation with the intentional behavior in his study.

This study result demonstrations that perceived behavior control is the most important determinant in influencing intention to pay. The study results conclude that the more consumers think credit card payment is within their control to perform, the more likely they might perform credit card payment this behavior. This result further reconfirms the significance of perceived behavior control in determining behavior. Likewise, the study by Chang (1998) which concluded that perceived behavior control is the most important predictor of intention to use illegal software copies. In addition, Ajzen (1991) made similar conclusion that adding perceived behavior control to the original theory of reasoned action will improved the prediction of intentional behavior tremendously.

Similar result is recorded in ethical sale by Ferdous and Polonsky, (2013). In addition, perceived behavior control has shown its importance in banking related behaviors such as credit counseling (Xiao & Wu, 2006) and internet banking (Shih & Fang, 2004). The role of perceived behavior control in determining behavior is further emphasized by its significant role in predicting other general behaviors such as in technology implementation (Baker, Al-Gahtani, & Hubona, 2007), Halal Products (Awan, Siddiquei, & Haider, 2014), shopping behavior (Fin & Fi, 2011), and home financing (Alam et. al, 2012).

An increasing effort and control in achieving the desire goal could directly affect the intentional behavior. Various alternatives method in making credit card payments has help consumers to have more control in making credit card payment. Besides conventional way to make payment by having to go to bank counter, consumer can choose to pay by mail for those paying by check. Automatic teller machine (ATM) is also available at convenience location for consumers to make payment. Lately, with the introduction of internet banking, this method has helped consumer to pay their credit card bill at their convenience time without having to leave their home.   It is all within the credit cardholders' control. Hence, Credit card providers' must continue providing convenience facilities to made credit card payment.

### 5.3.1.3 Religiosity and Intention to pay

Religiosity is an intricate concept and a variegated human phenomenon (Khraim, 2010). Yousaf and Malik (2012) and Mukhtar (2012) define religiosity as one's religious beliefs. In this study religiosity is found to have a positive and significant relation with intention to pay (β=0.095, p=0.050). This result demonstrates that the more religious consumers are, their intention to pay their credit cards shall increase. This result is expected because the Malaysian society is expected to uphold ethics and religious values (Tamuri et.al, 2013).

This research result further supports a previous study in which religiosity has a significant relation towards intentional behavior which is related to Islam such as intention to use an Islamic credit card (Jamshidi and Hussin, 2016), choosing Halal product (Awan, Siddiquei & Haider, 2014; Mukhtar & Butt, 2011). In the study by Awan, Siddiquei and Haider (2014), religiosity is the least significant factor that influence halal purchase intention. The relation between the two factors is significant. This might be due to in Islam looking for Halal and Toyyiban food is compulsory (wajib) according to the Quran phrase, Surah Al Baqarah: 168:

*O you People! Eat of what is on earth, Halal and pure, and do not follow the footsteps of the Satan; Indeed for he is to you an open enemy*

(Quran 2:168)

*O you who believe! Eat of the good things that We have provided for you and be grateful to Allah, if it is Him that you worship*

(Quran 2***: 172)***

Likewise, Tabassi, Esmaeilzadeh, and Sambasivan (2012) conducted a study on purchase intention toward European products. In their study, the consumers' behavior preference is affected by religion. The European purchase intention is mixed with the European sentiment on Islam. If European and Islam's relationship is not harmonize, then it would decrease purchasing of European products. In another studies, religiosity has an important role in affecting the intention to undertake an Islamic home financing (Alam, Janor, Zanariah, Che Wei, & Ahsan, 2012). Similarly, in the case of choosing Islamic credit cards (Amin; 2012), Muslims prefer to use Islamic credit cards as the card is in consonance with Islamic teaching.

This study result further emphasizes the role of religiosity in determining intentional behavior. This significant relationship might be due to in Islam motive (intention) is the creation of value for every act. In Arabic, intention is called niyyah.

*It is narrated on the authority of Amirul Mu'minin, Abu Hafs 'Umar bin al-Khattab (ra) who said: I heard the Messenger of Allah (ﷺ) say: "Actions are judged by motives (niyyah), so each man will have what he intended. Thus, he whose migration (hijrah) was to Allah and His Messenger, his migration is to Allah and his Messenger; but he* *whose migration was for some worldly thing he might gain, or for a wife he might marry, his migration is to that for which he migrated"(Bukhari & Muslim).*

Hadith 1 (40 Hadith Nawawi 1)

In Islam, even the first obligatory act in prayer is niyyah. If the niyyah is none "in the way of Allah" (fi sabilillah), the prayer does not have any value. Thus, this shows how intention, motive or objective gives importance to Muslims' actions. In fact, the phrase "in the way of Allah" (fi sabilillah) is used seventy times in the Quran. This is to remind and warn people to ensure that their actions and intentions are due to Allah. Islam even looks at intention as a pillar of worship and the foundation of action. Even prayers can be spoiled because of the mixed intention behind them while the simplest act can gain in value if the act has pure good intention behind it. Intention is the prerequisite for the acceptance of a deed. Imam as-Sadiq quotes a statement of Allah:

*"I do not accept anyone except the one who is sincere to Me".*

Looking at the importance of Islam with intention, it is not surprising to learn that in this research, religiosity has a significant relationship with intention to pay. Prophet Muhammad (peace and blessings of Allah be upon him) in his Hadith said to Abu Dharr:

*"Resolve to perform noble deeds. Even if you fail in doing so, at least you will not be included among the negligent".*

Moreover, Iman as-Sadiq said*, "A good deed will be recorded in favor of anyone who decides to do something good but fails to do so".*

Further, it is clearly emphasized from the last two wisdoms that Islam always emphasizes on doing good deeds and having good intentions. With the good intention, one is rewarded even if he fails to do so. Therefore, the religion of Islam emphasizes to its believers the importance of intention. Hence, it is confirmed by this research that religion has a significant relationship with intention to pay credit card.

It can be concluded that for credit card holders in Malaysia, subjective norm, perceived behavior control, and religiosity influence the intention to pay credit card.

### 5.3.2 Research Objective Three

Research objective three hypothesizes the direct effect of perceived behavior control, subjective norm and religiosity towards attitude. The findings conclude that all three hypothesis are supported. This study confirms the significant role of perceived behavior control in influencing attitude (β=0.393 p=0.002). Attitude is equated with the attitudinal belief that affecting a particular form of behavior leads to a particular outcome (Shih and Fang, 2004). This means that the more consumers perceive that they have control over their behavior, the more likely they will have a positive attitude towards credit card payment. This result supports previous studies done in an Islamic credit card adoption (Jamshidi and Hussin ,2016), in internet banking (Bashir and Madhavaiah, 2015; Sharma and Gonindaluri, 2015), in hospitality industry (Naumann & A.Miles, 2011) and in association membership (Ki & Hon, 2011).

#### 5.3.2.1 Perceived Behavior Control and Attitude

Perceived behavior control has the tendency to enhance fairness and satisfaction perception on service given (Naumann & A.Miles, 2011). Fairness and satisfaction are important before consumers can have a positive attitude on behavior. In addition, the researcher suggests that the ease in paying credit card has enabled credit card holders to have positive attitude in carrying out credit card payment.

Similarly, consumers are more likely to make credit card payment if they perceived convenience to perform credit card payment. Therefore, in order to continue having positive attitude in credit card payment and to prevent credit card default from occurring, credit card issuers not only should continue to upgrade their facilities to pay credit card but also should portray convenience to make credit card payment. An advertisement and information such as via brochure and pamphlet can be used to influence the consumers' attitude. Hence, if only consumers are convinced it is convenience to make credit card payment might result in prompt payment from credit card holders.

Subjective norm in this study has shown a significant relation with attitude to credit card payment (β=0.400 p=0.042). This result is consistent with previous researches done on non-credit card such as in online shopping Hamari (2015) and Zendehdel & Paim (2015), in purchasing fake products (Riquelme, Abbas, & Rios, 2012) and in copying illegally software (Chang, 1998). Current study conclude, social influence on credit card customers plays an important role toward positive attitude in credit card payment. The fact that subjective norm has is significant relation with attitude indicates that social influence plays a vital role in determining one's attitudes in credit card payment. The relation suggests the attitude formation, either favorable or not favorable toward the behavioral, is affected by how others consider the performance of the behavior. Subjective norm has an important influence on attitude of credit card payment probably because those people around credit card users especially those whom they feel are important in their life play an important role in influencing credit card users' attitude. Parents, peers and, colleagues may affect the ethical behavior of an individual within their circle of responsibility greatly. This is because the more respondents listen to their family members, friends, colleagues and other influencing people in their life talking about the positive attitude of paying credit card promptly, they would develop a positive attitude toward credit card payment. They interpret what they hear and develop a positive attitude toward credit card payment. Attitude creates belief and in the end, results in behavior.

Therefore, it is important to create a positive ethical atmosphere if we want to create ethical acts such as paying credit card on time among people in our circle of responsibility. Hence, in order to capitalize this significant influence of social factor credit card issuers might use public figures or icons in society to create awareness on benefit of paying credit card on time. This might include the effect of not paying credit card to the credit card holder as well as to another stakeholders. This awareness campaign can be broadcast on social media, for example, YouTube and Instagram because advertisement on social media is among the fastest growing medium in the cyber world.

### 5.3.2.2 Subjective Norm and Attitude

Subjective norm with attitude relation has also been posited as significant in a previous study on illegal copying of software (Chang, 1998). Likewise, previous study on unethical behavior confirms a significant relationship between subjective norms and attitude such as in purchasing counterfeit products (Riquelme *et. al*., 2012). In another previous study by Mukhtar and Butt (2012) further emphasizes the role of Muslim societies in influencing attitudes. Their study shows subjective norm influences attitude in choosing Halal food in Muslim dominant state. Social factors and bond are still strong in Muslim dominant states.

In addition, in order not to fall into the credit card default trap, consumers should discipline themselves to use the credit card wisely. Besides paying on time, another social influence factors such as life style needs to be developed to hinder from not paying credit card. They should develop a lifestyle based on their necessity and only live within their mean. The importance of lifestyle in influencing behavior was confirmed in a study by Ahmed *et. al.* (2010) on credit card debt in which lifestyle was found to have a significant relation with attitude.

### 5.3.2.3 Religiosity and Attitude

This study conclude religiosity has a significant influence on attitude. Similarly, religiosity and attitude were proven to have a significant relationship in a number of previous studies. The findings of this study confirm earlier studies by Charsetad (2015) in blood donation behavior among undergraduate students in Iran. Similarly Abou-Youssef, Kortam, Abou-Aish, & El-Bassiouny (2015) did a study on banking. Religiosity positively influence the attitude to choose Islamic banking financing among bank consumers in Egypt. Likewise the significant relation is further confirmed by Mohamed, Karim and Hussein (2012) in a study on the relationship between religiosity and attitude toward computer ethics. In a more general attitude, Rahman, Asrarhaghigni and Rahman (2015) investigated the impact of religiosity on consumers' attitude toward Halal cosmetic products. Their study concluded that there was a significant relationship between religiosity and attitude in choosing Halal cosmetics. In addition, Farrag and Hassan (2015) examined the influence of religiosity on Egyptian Muslim youth's attitude towards fashion and concluded that religiosity had a significant influence on attitude.

Similarly, this study suggests that those with high value in religion have different in terms of attitude towards credit card payment compared to those with no religion value. This indicates that those who have a high value in religion have positive attitude toward credit card payment differently compared to those who have a low value in religion. They are more likely to pay their credit card on time.

The researcher suggests that religiosity is significant in influencing attitude probably because respondents do perceive Islam as a complete way of life. Religiosity's mean score was 5.499, which is agreed with taking part in religious activities. Religiosity is an important indication of attitude towards credit card default probably because the respondents do adhere to religiosity completely and as such religiosity does influence their attitude.

### 5.3.3 Research Objective Four

#### 5.3.3.1 Mediating Effect of Attitude

Research objective four is on the mediating effect of attitude in the credit card industry in Klang Valley. This is done by examining whether attitude plays a vital role in mediating the relationship between the exogenous with endogenous variables. From the three exogenous variables examined in this study, perceived behavior control is mediated by attitude towards credit card default.

Perceived behavior control and credit card default did not portray significant relationship. Nevertheless, there is mediation effect observed with the present of attitude. Hence, attitude is found as a mediator of perceived behavior control towards credit card default in Klang Valley. This result support previous study by Bashir & Madhavaiah (2015) in banking. Another previous studies in credit card and in banking, the mediation test of attitude between perceived behavior control and consumer behaviors was not establish (Jamshidi and Hussin, 2016; Sharma and Gonindaluri, 2015).

This attitude mediating effect is one of the new contribution for this study. Therefore, this study managed to close the gap on the non-mediation test hence it should enhance the theory especially the TPB model. This test might also motivate future research especially that pertaining to the mediation effect of attitude towards credit card industry in Malaysia.

From this research, attitude is found to have significant roles as a prevailing variable between perceived behavior control toward credit card default. Hence, credit card service providers should study to provide services that impetus the positive attitudinal belief that encourage consumers to pay credit card on time.  In addition, the mediating effect of attitude between perceived behavior control towards credit card default is established empirically in this study. Thus, this study has managed to extend the usage of TPB in area of credit card default. Many previous studies did not establish the mediating effect of attitude.

## 5.4 Not Significant Results

Eleven hypotheses of this study are not supported. Direct relationships intention to pay with credit card default, perceived behavior control with credit card default, religiosity with credit card default, subjective norm with credit card default and attitude with credit card default are not significant. Likewise, for indirect relationship, attitude is not a mediator between subjective norm with credit card default and religiosity with credit card default. In addition, intention to pay is also not mediating between subjective norm with credit card default, perceived behavior control with credit card default and religiosity with credit card default.

### 5.4.1 Research Objective One

#### 5.4.1.1 Intention to pay and Credit Card Default

Intention to pay has a negative influence with credit card default however the relationship is not significant ($\beta$=-0.134, p=0.478). The result contradicts previous studies done by Ferdous and Polonsky (2013) on ethical sales, Xiao and Wu (2006) on credit counseling and Shih and Fang (2004) on internet banking. In this study, even intention to pay does not play an important role towards credit card default, however, both of the factors have an inverse relationship. The relation between intention to pay and credit card default is not significant probably due to the credit card default behavior is not an intentional behavior. Credit card users have intention to pay their credit cards. This is supported by Lyons & Fisher (2006) which concluded in their study that every cardholder has intention to repay his/her debt.  Rather credit card default occurs when consumers are not able to control other factors. Some of the unforeseen factors such as lack of cash due to overspending may cause credit card users unable to pay the minimum monthly payment. This finally may result in credit card default. Therefore, educating credit card holders to use their credit card wisely can be important to avoid credit card default.

### 5.4.1.2 Perceived Behavior Control and Credit Card Default

This study also reveals that perceived behavior control has an inverse relation with credit card default but the relationship is not significant (β=-0.204, p=0.174). This study's results are consistent with the research done by Bashir and Madhavaiah (2015) in India in which perceived ease of use did not have significant relation with internet banking adoption. Similarly, study by Ferdous and Polonsky (2013) in Bangladesh derived to similar conclusion. Their research shows perceived behavior control does not support salespersons' ethical sale. However, previous studies on other behaviors support that perceived behavior control is a predictor of consumer behavior (Fathima & Muthumani, 2015; Mamat, Yusoff, Abdullah & Razak, 2015; Rutherford & DeVaney, 2009; Xiao & Wu, 2006).

This study conclude that credit card default is not effected with one belief either he/she can control or not the behavior. This implying that credit card consumers did not care about the effort required to become credit card defaulter.

### 5.4.1.3 Religiosity and Credit Card Default

Religiosity has a positive relation but does not has a significant influence on credit card default in this study (β=0.051, p=0.544). This result supports previous research on ethical judgment by Bakar, Lee, and Hisham (2012). Likewise, it supports another study done by Vitell and Paolillo (2003) in the USA. Their study concluded that religiosity does not have a significant relationship with ethical belief. Similarly, in another behavior study, religiosity was also found not a significant determination in product decision (Razzaque & Chaudhry, 2012).

The study result however contradicted with previous studies by Islam and Chandrasekaran (2015) in ecologically conscious consumption behavior (ECCB), Hage and Posner (2015) in leadership, Alleyne & Persaud (2012) on ethical perception, Rehman and Shabbir (2010) on new product adaption, Ghani , Hashim & Ismail (2012) on employee performance, Mokhlis (2009) on shopping orientation, Yousaf and Malik (2012) on product involvement, Al-Hyari, Alnsour and Al-Weshah (2012) on boycotts, in early sex intercourse by Mueller, Bensyl, Vesely, Oman and Aspy (2010) and Fatusi and Blum (2008).

There is no significant relation concluded between religiosity with credit card default for this study despite Islam emphasizing on paying debt on time. The absence of a significant relation between these two variables might be due to a lack of religiosity practice among credit card holders. This is shown by mean of religiosity at 5.499. This mean is only slightly agreed on taking part in religious activities. This is probably due to respondents consists of those who do not adhere to religiosity completely. Hence, they might not be applying Islamic practices completely.

This study suggests there is tendency those with high value in religiosity have credit card default similar to those who do not have a high value in religiosity. This shows that those with high religiosity do not have a significantly different perception on credit card default as compared to those with less religiosity value. These individuals not only do not have a negative perception on credit card default but are also likely to commit such behavior similar to those with a low value of religiosity. As mentioned in a previous study (Tamuri et al., 2013), quite a number of students learn Islamic education to only pass the examination hence they do not really apply the knowledge that they acquire.

Non-believers, who do not completely adhere to instructions, put aside the regulations and follow their own will. This behavior continues among human kind despite being reminded and warned by Allah. Phrases in the Quran point out human’s failure in following Allah’s instructions.

وَكَذَّبُواْ وَٱتَّبَعُوٓاْ أَهۡوَآءَهُمۡۚ وَكُلُّ أَمۡرٖ مُّسۡتَقِرّٞ ٣

*They reject (the warning) and follow their (own) lusts but every matter has its appointed time.*

Al-Quran 54:3

Those who are not strong believers will continue rejecting the truth whether they are given warning or otherwise. For them, all is the same. Previous reminders, which have been given, would also not make them change their behavior. They only follow their own desires. In this research, despite knowing the danger of default, it does not prohibit credit card holders from becoming defaulters.

In addition, human beings need to be constantly reminded about Allah’s punishment and warning so that they become more obedient. Hence, Allah keeps on repeating in the Quran reminding human beings about His punishment and warning especially to those who do not adhere to Islamic practices.

فَكَيۡفَ كَانَ عَذَابِى وَنُذُرِ ﴿١٦﴾

*But how (terrible) was My Penalty and My Warning?*

Al-Quran 54:16

Allah further emphasizes in the next phrase that He has given the Quran as guidance to human kind.

وَلَقَدۡ يَسَّرۡنَا ٱلۡقُرۡءَانَ لِلذِّكۡرِ فَهَلۡ مِن مُّدَّكِرٖ ﴿١٧﴾

*And We have indeed made the Qur'an easy to understand and remember: then is there any that will receive admonition?*

Al-Quran 54:17

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Despite all the warning and guidance given by Allah via the Quran, there is still non-obedience in this world. This is proven in this research especially when people's actions are strongly influenced by other factors surrounding them. In addition, knowledge alone does not determine one's action. Similarly, knowledge in Islam does not determine a Muslim's behavior. Instead, Muslims should practice Islamic teaching to strengthen their faith in Islam. Hence, from this research, to become more obedient to Islam Muslims need to practice Islam holistically such as looking at defaulting seriously.

### 5.4.1.4 Subjective Norm and Credit Card Default

Subjective norm in this study has an inverse but not a significant relation with credit card default ($\beta$=-0.395, p=1.50). This result contradicts previous studies done by Alkafagi *et al.* (2015) and Bashir and Madhavaiah (2015) in internet banking and also

Rutherford and DeVaney (2009) on credit card usage in the USA. The relationship is further proven significant in an unethical behavior study by Miller (1999) on buying illicit goods and another behavioral study by  Alam, Hisham, and Mohd (2011) on purchasing.

Despite the numerous previous studies on behavior that concluded the significance of subjective norm in influencing behavior, this study has failed to establish the significant relationship between subjective norm and credit card default. Subjective norm is not an important indication of credit card default probably because credit card default is usually a personal behavior that consumers would like to keep to themselves. Moreover, credit card default is not a behavior that most likely consumers imitate in order to impress, or to keep up with their peer group.

In addition, consumers might make individual credit decisions. The researcher suggests credit card consumers are given education how to handle pressure from spending more than they can afford. Usually, consumers are pressured to spend more in order to keep up with their reference groups. Moreover, advertisements by banks should create awareness on using credit cards wisely and on paying the credit card debts on time. The advertisements should highlight various situations in which happiness could also be achieved without has to over spending.

### 5.4.1.5 Attitude and Credit Card Default

This research concludes that attitude has positive but not a significant relation with credit card default ($\beta$=0.200, p=0.241). The finding is not consistent with a previous study by Alkafagi *et al.* (2015) and Bashir and Madhavaiah (2015) in internet banking and also (Chien & Devaney, 2001) in credit card debt. In both studies, attitude has significant role in determining behaviors. Likewise, another study also confirms a significant influence of attitude on consumer behavior in using credit card (Rutherford & DeVaney, 2009). Similarly, not significant relation between attitude with credit card default in this study is not consistent with previous studies in consumer behavior (Teah & Lwin, 2014; Pattarin & Cosma, 2012; Teoh, Chong, & Yong, 2012; Abdul-Mukmin & Umar, 2007).

Marketing department should cooperative with credit control department so that credit card defaulters do not turn into non-performing loans. Respondents for this research majority are having income less than RM5, 000 per month. Those who are staying in Klang Valley with this level of income less than RM5,000 might always experience budget constraint. Hence they might use credit card to cover for daily expenses. Therefore, there should also have effort to study how to guide credit card holders to use their cards wisely so that credit card holders does not become defaulters and moreover, credit card issuers can still enjoy profits from their credit card services.

From the results, it can be seen that there are no significant relationships between the five variables tested with credit card default. Therefore, H1, H2, H3, H4 and H5 were not supported. A possible explanation for this might be that the behavioral factors choose for this study were less significant comparing to another factors in predicting credit card default. This is concluded from low reading of the coefficient of multiple determination (R square). The reading only 0.253 in which indicates only 25.3 percent of the total variation in credit card default can be explained by the five variables. Hence this has given an opportunity to conduct further study to identify another factors which are more important in determining credit card default among Muslim in Klang

Valley. Further research may be undertaken in the future to study the underlying process.

### 5.4.2 Research Objective Four

#### 5.4.2.1 Mediating Effect of Attitude

The research objective four on this current research examine the mediating effect of attitude toward credit card default. From the three exogenous variables examined in this study, attitude is concluded as a non-mediator for relationships between subjective norm towards credit card default and religiosity towards credit card default.

The non-mediating effect of attitude to the relationship between subjective norm with credit card default indicates that attitude formation did not plays a vital role in determining social influence on credit card default behavior. Likewise, this results was supported by study by Bashir & Madhaviah (2015) which concluded that attitude is not a mediator for subjective norm with online banking. The outcome, however, contradicted with previous study by Chang (1998) on illegal copying of software. Studies by Hamari (2015) and Riquelme, Abbas and Rios (2012), however, did not test the mediation of attitude between subjective norm with consumer behavior.

Hence, this study conclude that subjective norm is not an important factor in influencing credit card default in Klang Valley. Therefore, credit card service provider should pay less emphasize on subjective norm in order to reduce credit card default. Subjective norm is viewed as insignificant might be due to credit card default is a very personal and people discuss the topic with another person. Thus credit card providers should look at another factors that have significant relation with credit card default.

On contrary, this study should close the gap of mixed results on previous studies pertaining to attitude mediating role between subjective norm towards consumer behavior.

Similarly, attitude fail to mediate through religiosity towards credit card default. This result contradicted with previous study by Souiden and Rani (2013) in banking. On contrary studies by Jamshidi and Hussin (2016) and Mohammed, Karim and Hussein (2012) have suggested attitude as a mediator for religiosity towards consumer behaviors in credit card and computer ethic but researchers did not conduct mediation test.

The final analysis suggests that religiosity influence on credit card default did not depends on either favorable or not favorable towards credit card default. The credit card default is also not based on direct relationship of this construct. Thus, it is necessary for credit card providers to identify more significant factor in influencing credit card default.

### 5.4.3 Research Objective Five

#### 5.4.3.2 Mediating Effect of Intention

Research objective five is on the mediating effect of intention in the credit card industry in Malaysia. This is done by examining whether intention plays a vital role in mediating the relationship between the exogenous with endogenous variables. From the three exogenous variables examined in this study, none is found to be mediated by intention. Intention is not a mediator for the relationships between subjective norm with credit card default, perceived behavior control with credit card default, and religiosity with credit card default.

A few previous studies have suggested intention as the intervening factor on subjective norm with behaviors. However, the studies in consumer behaviors has failed to conduct a mediation test between subjective norm with consumer behaviors in area information security policy (Sommestad, Karlzen and Hallberg, 2015), ethical sales (Ferdous and Polonsky, 2013), deshopping behavior (King and Dennis, 2006), credit counseling (Xiao and Wu, 2006) and internet banking (Shih and Fang, 2004).

The credit card researches may benefit from this research since it has attempted a mediation test on intention between subjective norm with credit card default. This proactive action is done and later confirm empirically the absence of intention mediating effect between subjective norm with credit card default.

Likewise, previous studies in consumer behaviors has failed to conduct a mediation test between perceived behavior control with consumer behaviors in area information security policy (Sommestad, Karlzen and Hallberg, 2015), ethical sales (Ferdous and Polonsky, 2013), deshopping behavior (King and Dennis, 2006), credit counseling (Xiao and Wu, 2006) and internet banking (Shih and Fang, 2004).

The credit card researches may benefit from this research since it has attempted a mediation test on intention between perceived behavior control with credit card default. This proactive action is done and later confirm empirically the absence of intention mediating effect between perceived behavior control with credit card default.

## 5.5 Theoretical implication

First, this research results contribute to the current knowledge on credit card study in the Klang Valley in context on intention, perceived behavior control, religiosity, subjective norm, and attitude to credit card default. Attitude and intention not only studied as direct determinants but also as mediators of perceived behavior control, subjective norm and religiosity towards credit card default. Attitude conclude as a mediator between perceived behavior control and credit card default. Most of the previous studies did not conduct a mediation test even though the researchers used the TPB framework, which suggests that intention is a mediator. This study contributes to the body of knowledge by studying intention and attitude as mediators.

Second, this research also aids in the further development of the TPB by adding an additional variable (religiosity) and new linkages. Another point to note is that religiosity, which is a new variable, added to the original framework of TPB, and did not have a direct significant relationship towards credit card default. Instead, religiosity has a significant effect through intention to pay. In addition, religiosity also has a significant relation with attitude. Hence, it is important for the credit card issuers in Klang Valley to review their marketing plan based on these findings by considering influence of religiosity in their marketing plan.

This research concentrates on the actual behavior of credit card default. Subjective norm, perceived behavior control, religiosity, intention and attitude are hypothesize to have direct and indirect effect on credit card default in Klang Valley. None of these factors are identified to have a direct significant relationship with credit card default. Hence then future research can be carried out to identify another behavioral factors that influence credit card default. On contrary, subjective norm, perceived behavior control and religiosity have a significant relationship with intention to pay credit card. This confirms that teachings of Islam will improve behavior in reducing credit card default. A high practice of Islam would help to increase credit card payment and reduce the credit card default. Perceived behavior control has a significant relation with intention to pay and supports the theory that our intention and behavior are influenced by whether we think we can or cannot control our behavior. Hence, credit card issuers shall portray the convenience of making credit card payment in order to reduce credit card default. Further, it must be emphasized that subjective norm, perceived behavior control and religiosity also affects our attitude. Therefore, these three factors need to be considered when attitude is concern.

The research results provide a clearer picture the determinants as well as the mediating factors causing credit card default. Hence, this study adds to the collection of literature available pertaining to credit card default in this region especially in Klang Valley.

## 5.6 Practitioners’ Implication

The usage of TPB as the underpinning theory in this research is to understand the credit card industry in Klang Valley. The study outcomes are beneficial to the credit card industry. For example, understanding the behavioral aspects of credit card consumers via this framework could help the credit card providers to develop their marketing plans. In addition, appropriate business strategy and competitive advantage can be developed. Furthermore, banks can understand their customers’ behavior in terms of credit card default. This can be achieved by identifying the significant factors contributing to credit card default. Finally, this information can be used to avoid credit card default and maximize profit from their credit card services.

### 5.6.1 Solicitations for Credit Card Providers' Managers

Credit card providers should recognize the importance of perceived behavior control, subjective norm and religiosity in influencing credit card holders' attitude and intention to pay. Therefore, credit card issuers' marketing plan should ensure that their prospects' perceived behavior control, subjective norm and religiosity are major factors to impact in order to recruit or to segmentation prospects and existing customers. Similarly, the existing customers' perceived behavior control, subjective norm and religiosity need to be influenced so the credit card issuers can retain them as non-defaulter credit card holders.

Credit card providers can segregate their customers into high risk defaulters and non-defaulters by studying the demographic profiling elements such as age, gender, educational level, and income group. Having identified where most likely high risk defaulters belong to, credit card providers can strategize their marketing plan according to these target groups. The bank managers can propose to their management to collaborate with credit control department in developing their marketing plan. The methodology towards the high risky group is more skewed towards benefits of purchasing using credit if consumers pay credit card bills on time whereas the benefits of purchasing by credit card is the approach used for the non-defaulter group. The marketing effort should not stop once credit card issuers have managed to recruit their customers. Instead, it should continue such as by inserting leaflets and brochures in their monthly statement as a guidance and as a reminder to credit card users to pay their credit cards on time.

The leaflets can be a useful reference for credit card holders to pay their credit cards on time. The content can include the appreciation for choosing their credit card. It should emphasize the importance of paying the credit card on time. On the contrary, it should emphasize the effect on themselves and the society if they do not pay their credit card on time.

The leaflets should also highlight and create awareness that paying credit card is convenient. Mechanisms to pay credit card such as by going to the counter, by mail, auto teller machine or internet banking should be explained step by step on how to use the multiple payment mechanisms. In addition, payment mechanism locations should also be listed in the leaflet.

The leaflets should also contain some tips on how to avoid credit card default. Credit card issuers should educate users on how to spend wisely using credit cards. This continuous effort is essential to form the attitudinal belief that paying by using credit card has an advantage. In addition, they would also develop a positive attitude toward paying credit card on time.

Credit card issuers' managers should review their campaigns to continuously attract users to pay credit cards on time. This campaign should include benefits for users who constantly pay their credit card on time. The bank may give some discounts on charges that they impose on the users who have a good track record in payment. For example, the average profit charge for credit card's outstanding balance is 18% per year. Based on a good track record payment term over the past six months, banks may impose only 16% charge per year. If the credit card holders still manage to pay the credit card on time for the next 12 months, the bank can further reduce the imposed profit to 15% per year. In addition, banks may consider increasing the credit limit for credit card holders, who continue to portray good payment track record.

Finally, it is very important for the credit card issuers' marketing managers and credit control to understand and acknowledge the fact that they need to know factors that influence customers' attitude and intention to pay credit card. In addition, other factors such as attitude, intention, perceived behavior control, subjective norm, and religiosity are also important to understand their impact towards credit card default. Having understood all these factors would help marketers to design strategy and marketing plans to cater for prospects and credit card customers. At the end, credit card providers can enjoy maximized profit from credit card business without having a heavy bad debt.

### 5.6.2 Solicitations for Government and Bank Negara Malaysia

This study's outcomes point out the importance of perceived behavior control, subjective norm and religiosity in shaping consumer attitude and behavior intention. Consumers' attitude and behavior intention are influenced by belief that they can or cannot control their behavior and social factors. In addition, it also shows the importance of religiosity in shaping consumer attitude and behavior intention.

Hence in order to identify potential consumers with reduced risk of default, credit card issuers need to identify consumers with a high practice of religion especially Islam as well as those who are responsible in their actions and in their lives.

*Verily never will Allah change the condition of a people until they change it themselves.*

Quran Ar-Ra'd 13:11

The results of the research could help credit card providers to determine their target credit card holders who would be more disciplined in making constant repayment. In attempting to understand the knowledge gap on credit card default between credit card consumers and industry practitioners, credit card consumers could assist practitioners to come up with credit services that would mitigate credit card defaulters. The information on causes of credit card default can be gathered from existing consumers via feedback and suggestion program. By implementing this exercise, in the long run, it would result in reducing customer default and improve credit card collection.

## 5.7 Limitations of the Study

There are a few limitations in this study. The first limitation, this study only investigates the roles of Islam. Future researches should study the impact of other religious beliefs other than Islam towards credit card default. Future research needs to cater to followers of other religions beside Islam as the respondents. The influence of another religion may produce different or similar results.

The second limitation is on the chosen population frame. In this study, the respondents were Muslim credit card holders in Klang Valley. The actual credit card default behavior may differ if the respondents were taken from various cities in Malaysia hence may lead to different results in this study.

The third limitation is on the measurement of credit card default. In the initial planning, the researcher planned to use data from banks' database. However, due to Acts such as the Personal Data Protection Act 2013 (PDPA 2013), that protects customers from sharing of data by financial institutions, then this research simply based on the credit cardholders' feedback on their number of default payment for the last six months. The number of default in the past six months is based on credit card holders' memories and honesty in answering the credit card default question. The actual credit card defaults as well as the research results might differ if the default information is from the banks' database.

## 5.8 Recommendations for Future Study

This study has provided a comprehensive study of credit card default in Klang Valley. However, the scope of this study can be expanded further. Future researches may explore several areas as follows:

This study focused on investigating the determinants of credit card defaulters. However, the determinants found might not be the same if the study was done in another form of bad debt. Therefore, future study can make a comparison between the determinants of credit card default with the determinants of another bad debt. Hence, the comparison of determinants of credit card default with determinants of another bad debt may reflect the most dominant antecedents that might influence both types of bad debts.

The chosen respondents have influence on the final results of this research. The study concentrated on the respondents in the area of Klang Valley and this could not be generalized to the actual behavior of Malaysian credit card holders. Therefore, future researches should get respondents from other cities in Malaysia as well for generalization purpose.

## 5.9 Conclusion

This is among the first theoretical model of credit card default in Malaysia that has adopted the TPB with the additional predictors of religiosity. In addition, intention as well as attitude act as the mediator between subjective norms, perceived behavior control, religiosity with credit card default. However, none of the studied factors has a direct significant relationship with credit card default. Nevertheless, subjective norms, perceived behavior control and religiosity have a direct significant relation with attitude and intention to pay. In addition, attitude has a mediating effect on perceived behavior control with credit card default.

This research's findings are important for credit card marketers as well as credit control in Malaysia to understand and to fully utilize the results before finalizing their credit card marketing plan. This study's results might help the BNM to come up with new guidelines in credit card with the intention to control credit card defaulters. Lastly, this research is important for academicians, as it would enrich the body of knowledge especially on credit card study.

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## Appendix 1: Non Credit Card Default Models

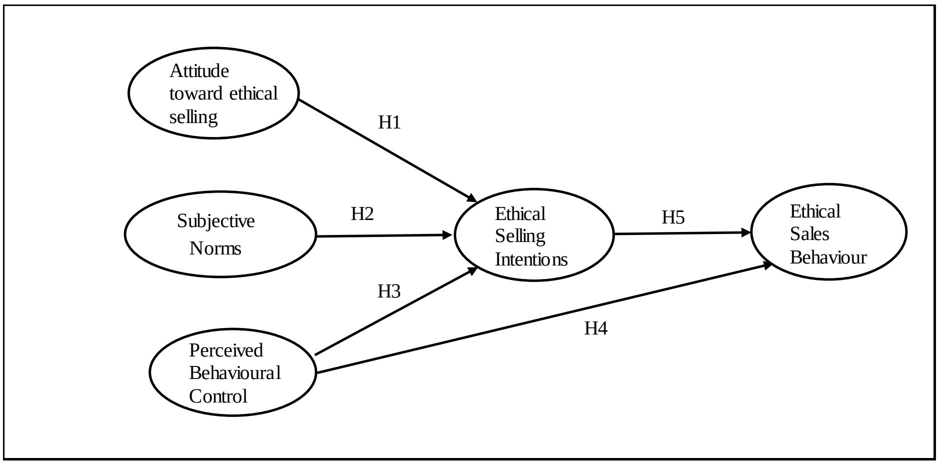
Attitude toward ethical selling
H1
Subjective Norms
H2
Ethical Selling Intentions
H5
Ethical Sales Behaviour
H3
H4
Perceived Behavioural Control

Figure 2.11
*Non Credit Card Default Model 1: "Predicting Bangladeshi financial salespeople's ethical intentions and behaviour using the theory of planned behaviour: Implications for developing countries"*
Source: Ferdous and Polonsky (2013), Asia Pacific Journal of Marketing and Logistics

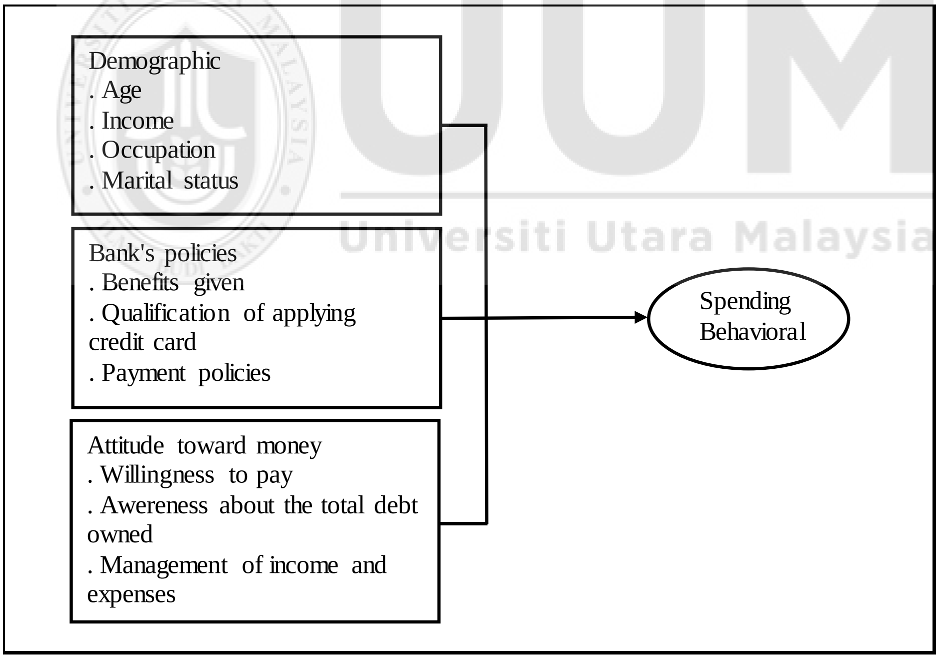
Demographic
. Age
. Income
. Occupation
. Marital status
Bank's policies
. Benefits given
. Qualification of applying credit card
. Payment policies
Attitude toward money
. Willingness to pay
. Awereness about the total debt owned
. Management of income and expenses
Spending Behavioral

Figure 2.12
*Non Credit Card Default Model 2: "Exploring the factors influencing credit card spending behavior among Malaysians"*
Source: Teoh, Chong and Yong (2013)

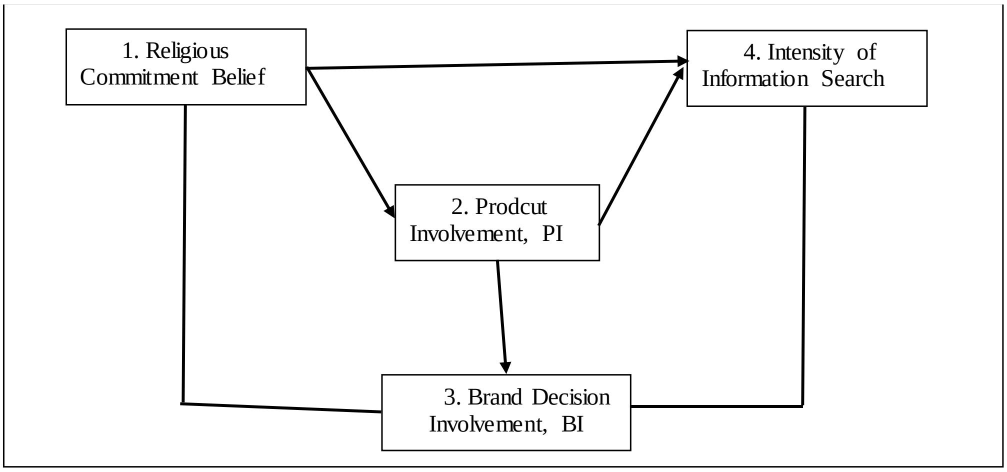
1. Religious Commitment Belief
4. Intensity of Information Search
2. Prodcut Involvement, PI
3. Brand Decision Involvement, BI

Figure 2.13

*Non Credit Card Default Model 3: "Religiosity and Muslim consumers' decision-making process in a non-Muslim society"*

Source: Razzaque and Chaudhry (2012)

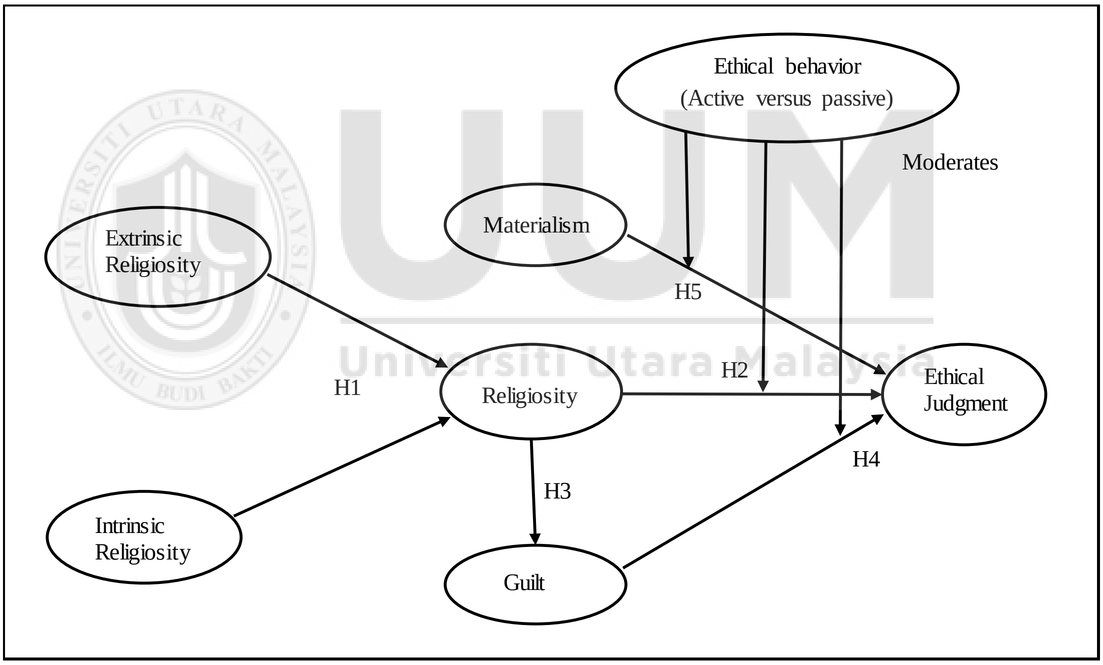
Ethical behavior
(Active versus passive)
Moderates
Materialism
H5
Extrinsic Religiosity
H1
Religiosity
H2
Ethical Judgment
H4
H3
Intrinsic Religiosity
Guilt

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Figure 2.14

*Non Credit Card Default Model 4: "Parsing religiosity, guilt and materialism on consumer ethics"*

Source: Bakar, Lee and Hashim (2012)

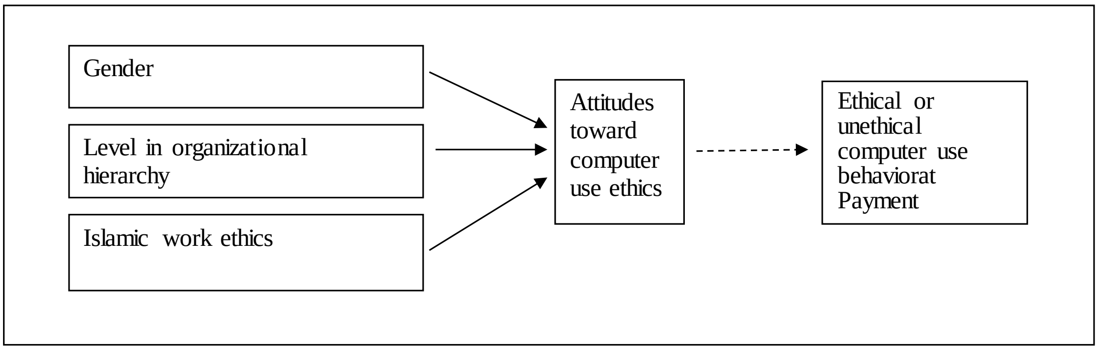
Gender
Level in organizational hierarchy
Islamic work ethics
Attitudes toward computer use ethics
Ethical or unethical computer use behaviorat Payment

Figure 2.15

*Non Credit Card Default Model 5: “Computer use ethics among university students and staffs: The influence of gender, religious work value and organizational level.”*

Source: Mohamed, Karim and Hussein (2012), Campus-Wide Information Systems.

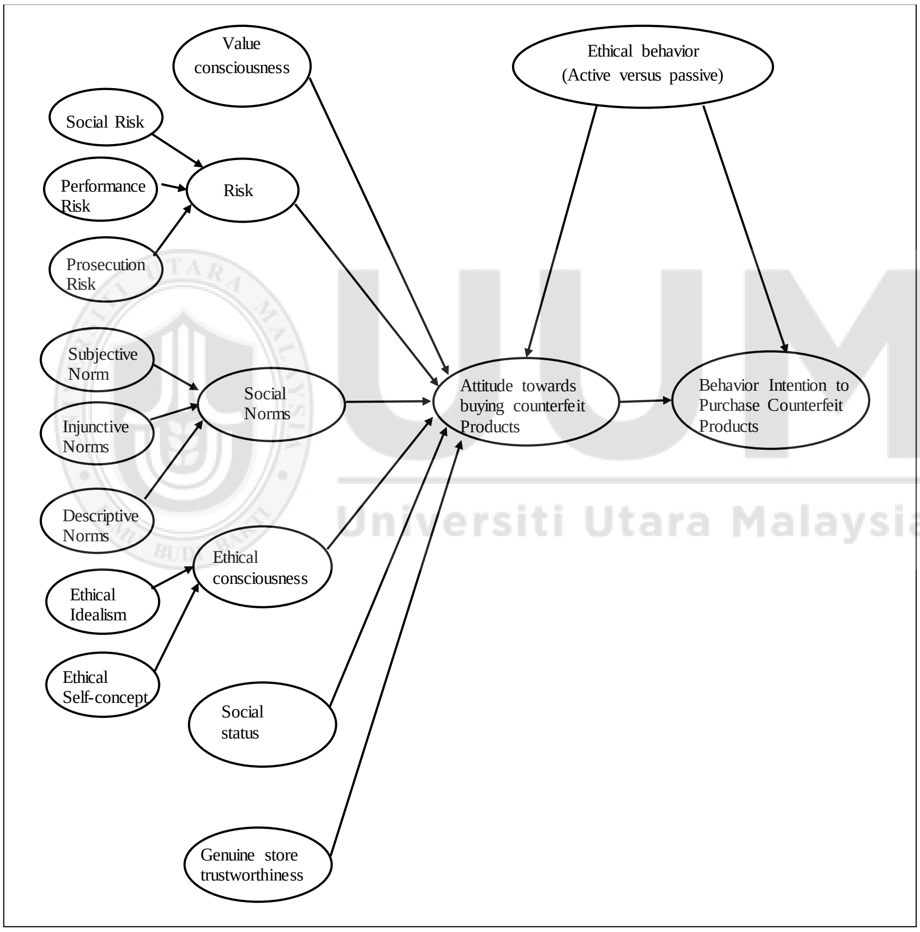
Value consciousness
Ethical behavior (Active versus passive)
Social Risk
Performance Risk
Risk
Prosecution Risk
Subjective Norm
Injunctive Norms
Social Norms
Attitude towards buying counterfeit Products
Behavior Intention to Purchase Counterfeit Products
Descriptive Norms
Ethical consciousness
Ethical Idealism
Ethical Self-concept
Social status
Genuine store trustworthiness

Figure 2.16

*Non Credit Card Default Model 6: “Intention to Purchase Fake Products in an Islamic country.”*

Source: Riquelme, Abbas and Rios (2012), Education, Business and Society: Contemporary, Middle Eastern Issues

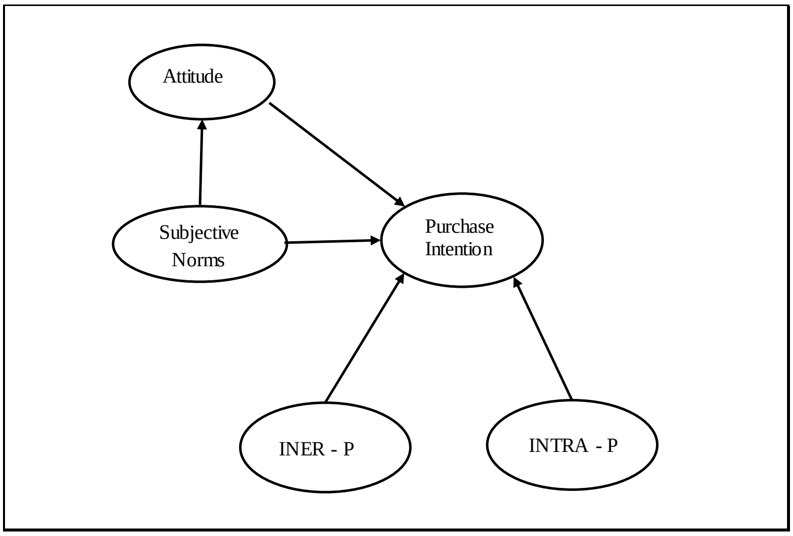
Attitude
Subjective Norms
Purchase Intention
INER - P
INTRA - P

Figure 2.17
*Non Credit Card Default Model 7: “Intention to choose Halal products: the role of religiosity”*
Source: Mukhtar and Butt (2012), Journal of Islamic Marketing

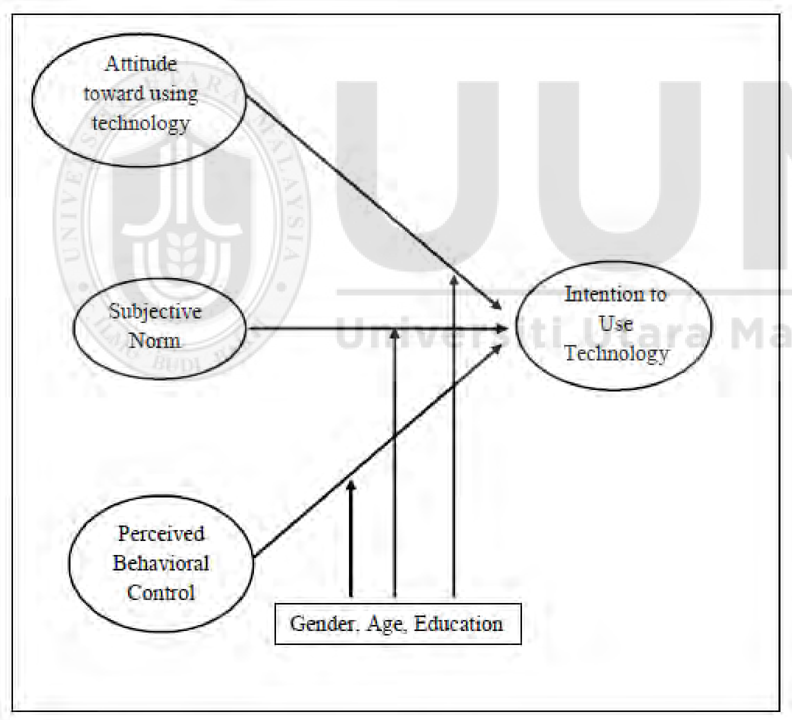
Attitude toward using technology
Subjective Norm
Perceived Behavioral Control
Intention to Use Technology
Gender, Age, Education

Figure 2.18
*Non Credit Card Default Model 8: “The effects of gender and age on new technology implementation in a developing country: Testing the theory of planned behavior (TPB)”*
Source: Baker, Al-Gahtani and S.Hubona (2007)

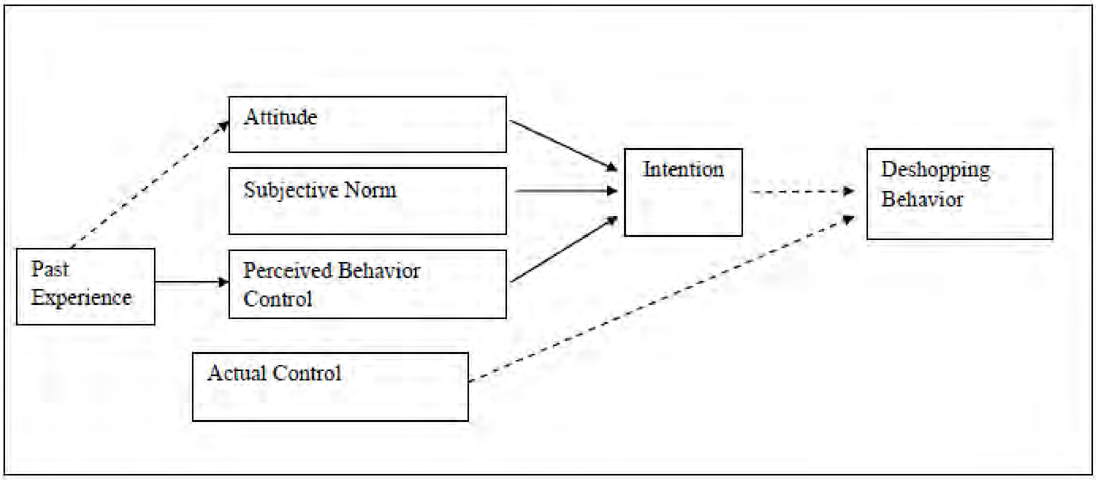
Attitude
Subjective Norm
Perceived Behavior Control
Past Experience
Intention
Deshopping Behavior
Actual Control

Figure 2.19
*Non Credit Card Default Model 9: "Unethical consumers: Deshopping behaviour using the qualitative analysis of theory of planned behaviour and accompanied (de)shopping."*
Source: King and Dennis (2006), An International Journal.

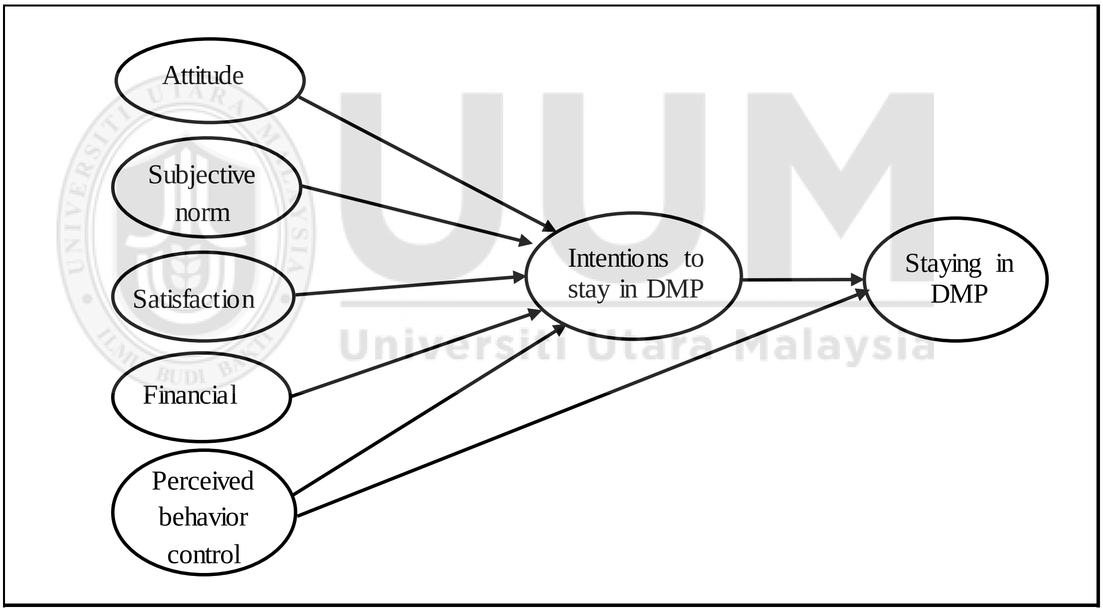
Attitude
Subjective norm
Satisfaction
Financial
Perceived behavior control
Intentions to stay in DMP
Staying in DMP

Figure 2.20
*Non Credit Card Default Model 10: "Applying the Theory of Planned Behavior to Retain Credit Counseling Clients"*
Source: Xiao and Wu (2006), University of Arizona

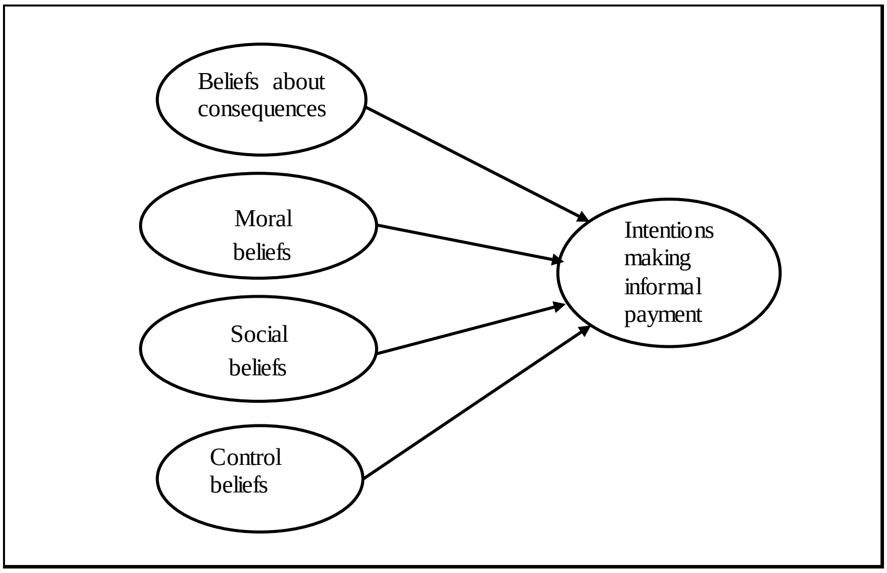
Beliefs about consequences
Moral beliefs
Social beliefs
Control beliefs
Intentions making informal payment

Figure 2.21
*Non Credit Card Default Model 11: "Beliefs about informal payments in Albania"*
Source: Vian and Burak (2013), Oxford Univesrsity Press

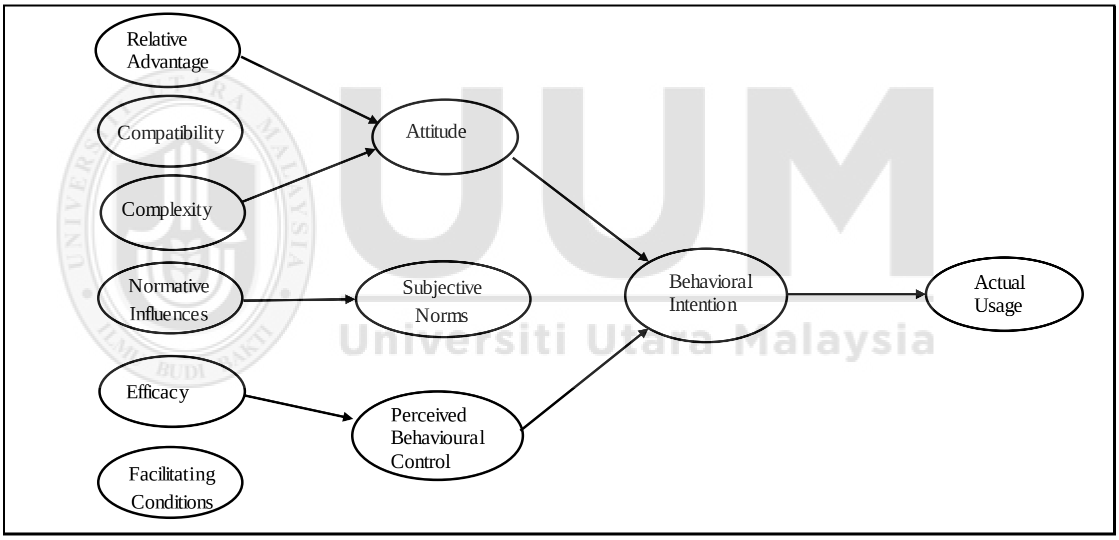
Relative Advantage
Compatibility
Complexity
Normative Influences
Efficacy
Facilitating Conditions
Attitude
Subjective Norms
Perceived Behavioural Control
Behavioral Intention
Actual Usage

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Figure 2.22
*Non Credit Card Default Model 12: "The use of a decomposed theory of planned behavior to study Internet banking in Taiwan"*
Source: Shih and Fang (2004), Emerald Group Publishing Limited

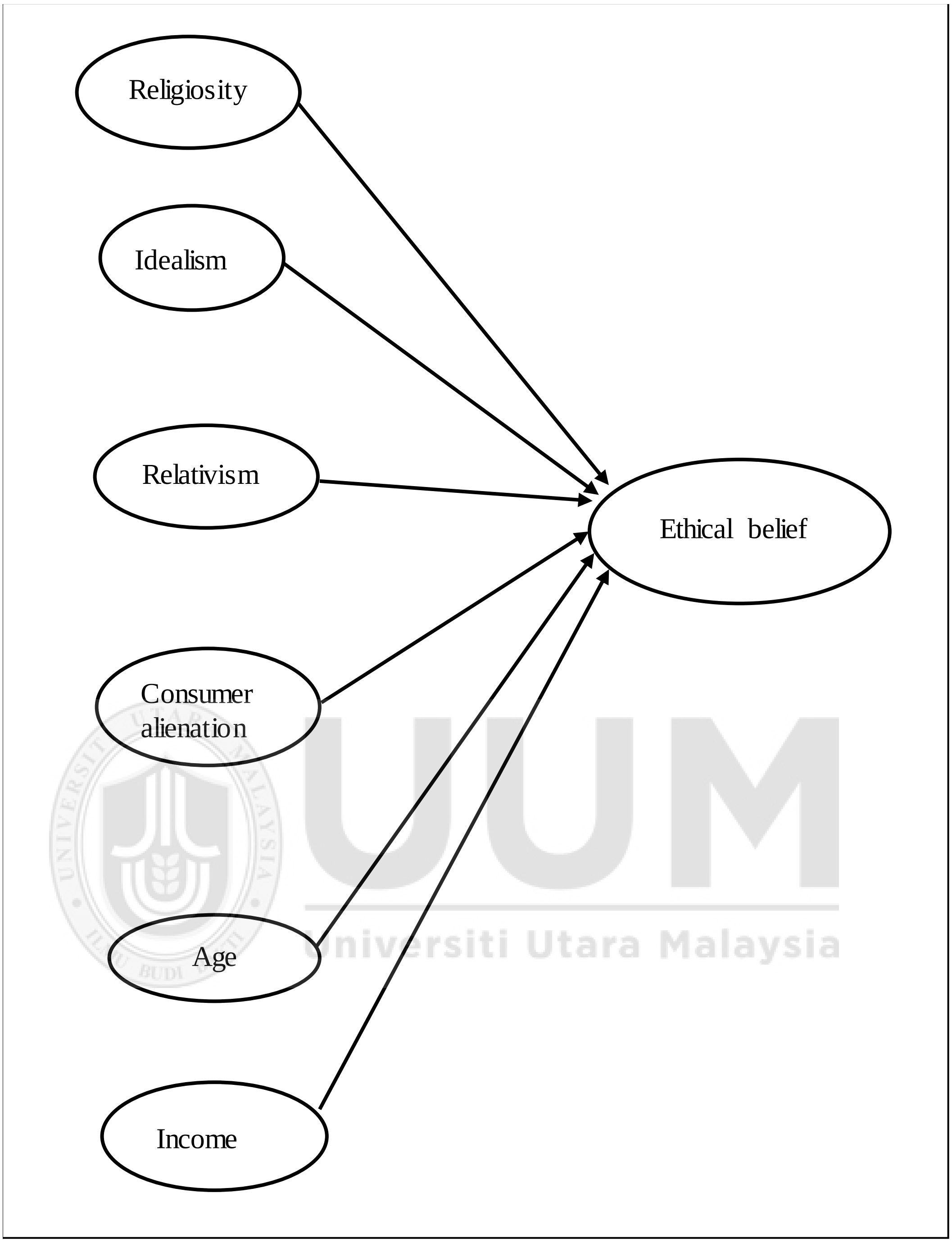
Religiosity
Idealism
Relativism
Consumer alienation
Age
Income
Ethical belief

Figure 2.23
*Non Credit Card Default Model 13: "Consumer Ethics: The Role of Religiosity."*
Source: Vitell and Paolillo (2003), Journal of Business Ethics

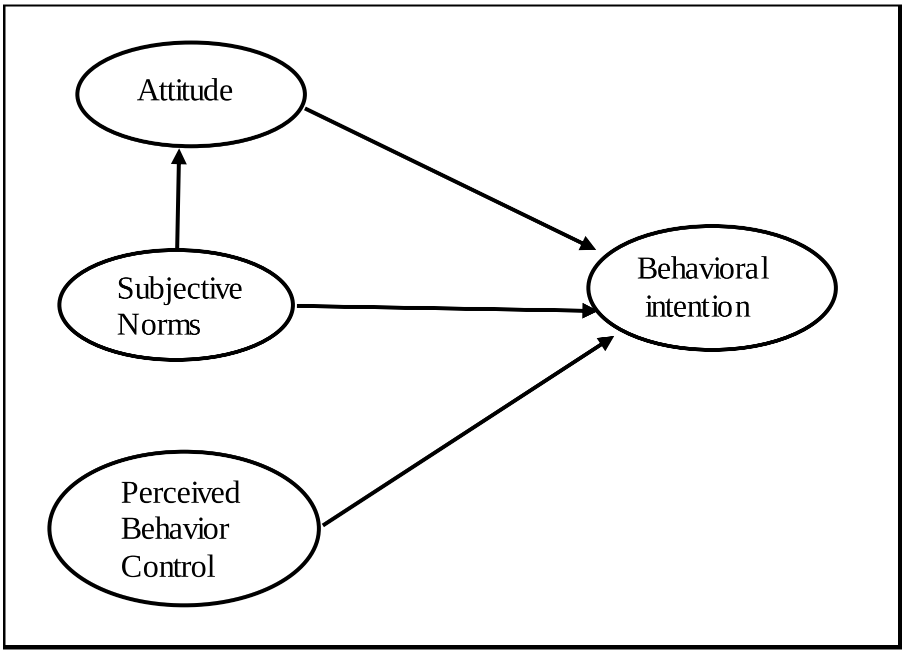
Attitude
Subjective Norms
Perceived Behavior Control
Behavioral intention

Figure 2.24
*Non Credit Card Default Model 14: "Predicting Unethical Consumers: A Comparison of the Theory of Reasoned Action and the Theory of Planned Behavior".*
Source: Chang (1998), Journal of Business Ethics

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## APPENDIX 2: Questionnaire

## QUESTIONNAIRE

Dear Valued Respondents,

I am a doctoral candidate of Business Administration at Universiti Utara Malaysia, Sintok, Kedah. I am collecting final data for my thesis entitled “The Influence of Behavioral Factors on Credit Card Default Among Muslim in Klang Valley”.

The purpose of this study is to investigate factors that may influence credit card default among Muslim credit cardholders in Klang Valley. The results from this study are important and could assist commercial banks and banking industry particularly in Malaysia to strategize their credit card services as one of the most important alternate of credit facilities.

It is much appreciated if you could spare your time and thought in about 15 minutes to complete this questionnaire based on your opinions on factors that may influence credit card default among Muslim in Klang Valley. All information provided by you shall be kept in strictest confidence and shall be used for the purpose of academic research only. There are no right and wrong answers of your responses.

This questionnaire booklet consists of two main sections. Section one will be your background information and section two will be your perceptions on factors that may contribute towards credit card default.

Lastly, thank you very much for your participation in this important study.

Yours sincerely,

Rozaimi bin An
Doctoral Candidate
Othman Yeop Abdullah
Graduate School of Business
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman, Malaysia
HP: +6 0122823012
E-mail: rozaimi2012@gmail.com

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APPENDIX 2: Questionnaire

*Responden Yang Dihargai,*

*Saya merupakan seorang calon ijazah kedoktoran dalam bidang Pentadbiran Perniagaan di Universiti Utara Malaysia, Sintok, Kedah. Saya sedang mengumpul data terakhir bagi tesis yang bertajuk "Faktor Perilaku Yang Mempengaruhi Kad Kredit Tertunggak dalam Kalangan Penganut Agama Islam di Lembah Klang".*

*Tujuan kajian ini adalah untuk menyiasat faktor-faktor yang boleh menyumbang kepada bayaran kad kredit tertunggak dalam kalangan penganut agama Islam di Lembah Klang. Hasil kajian ini penting dan boleh membantu pihak bank perdagangan serta industri perbankan terutamanya di Malaysia bagi menyusun strategi kemudahan pembiayaan kad kredit mereka sebagai salah satu perkhidmatan kewangan yang paling penting dalam perbankan.*

*Saya sangat menghargai jika anda boleh meluangkan masa kira-kira 15 minit untuk melengkapkan soal selidik ini berdasarkan pendapat anda tentang faktor-faktor yang boleh mempengaruhi tunggakan kad kredit dalam kalangan penganut agama Islam di Lembah Klang. Semua maklumat yang diberikan oleh anda akan dirahsiakan dan hanya untuk tujuan penyelidikan akademik sahaja. Tiada jawapan yang betul dan salah untuk jawapan anda.*

*Borang soal selidik ini terdiri daripada dua bahagian utama. Bahagian satu merupakan soalan yang berkaitan maklumat latar belakang anda dan bahagian dua pula berkaitan persepsi anda terhadap faktor-faktor yang boleh menyumbang ke arah pembayaran kad kredit tertunggak.*

*Akhir sekali, terima kasih saya ucapkan di atas penyertaan anda dalam kajian yang penting ini.*

*Yang ikhlas,*

________________________

*Rozaimi bin An*
*Doctoral Candidate*
*Othman Yeop Abdullah*
*Graduate School of Business*
*Universiti Utara Malaysia*
*06010 UUM Sintok*
*Kedah Darul Aman, Malaysia*
*HP: +6 0122823012*
*E-mail: rozaimi2012@gmail.com*

APPENDIX 2: Questionnaire

## SECTION 1

Please complete Part A. Tick (✔) in the appropriate boxes and fill in the blanks for written answers.
*Sila lengkapkan Bahagian A dengan meletakkan tanda (✔) dalam kotak berkenaan dan mengisi ruang kosong bagi jawapan bertulis*

### Part A: Background
***Maklumat Latar belakang***

The purpose of this section is to gather some information about your credit card account(s) and also to collect some basic information about your background.
*Tujuan bahagian ini adalah untuk mengumpul beberapa maklumat asas mengenai latar belakang dan mengumpul beberapa maklumat mengenai akaun kad kredit anda.*

| Code | Statement |
|---|---|
| **S1** | Are you a credit card user?<br>*Adakah anda pengguna kad kredit?*<br>☐ 1.Yes / *Ya*<br>☐ 2. No / *Tidak*<br>**Important Note:**<br>[If you are a credit card user, please proceed to answer all the questions]<br>***Nota Penting:***<br>*[Jika anda adalah pengguna kad kredit, sila jawab soalan berikutnya]* |
| **S2** | Please indicates the bank(s) that you have credit card with:<br>*Sila tandakan bank kad kredit anda:*<br>☐ 1. Citibank<br>☐ 2. Maybank Berhad<br>☐ 3. CIMB Bank Berhad<br>☐ 4. Bank Islam<br>☐ 5. Others/ *Lain-lain*. Please specify / *Sila nyatakan*…………….. |

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APPENDIX 2: Questionnaire

| Code | Statement |
|---|---|
| **S3** | Tick your credit card brand<br>*Sila tandakan jenis kad kredit anda*<br>☐ 1.Master Card<br>☐ 2.Visa<br>☐ 3.Dynasty<br>☐ 4.Others/*Lain-lain*. Please specify/*Sila nyatakan*……………………. |
| **S4** | How long have you been a credit card user?<br>*Berapa lama anda telah menjadi pengguna kad kredit?*<br>☐ 1.Less than one (1) year /*kurang satu tahun*<br>☐ 2.Two to three years/ *dua hingga tiga tahun*<br>☐ 3.Three to four years / *tiga hingga empat tahun*<br>☐ 4.More than four years / *lebih daripada empat tahun* |
| **S5** | For the last six (6) months how many times you did not pay at least the minimum payment due?<br>*Untuk enam (6) bulan yang lepas, berapa kali anda tidak membayar walaupun bayaran minima?*<br>☐ 1. None / *Tidak*<br>☐ 2. 1 time / *Sekali*<br>☐ 3. 2 times /*Dua kali*<br>☐ 4. 3 times / *Tiga kali*<br>☐ 5. More than 3 times / *Lebih daripada tiga kali* |
| **S6** | Please state your gender.<br>*Sila nyatakan jantina anda.*<br>☐ 1. Male/ *Lelaki*<br>☐ 2. Female/ *Perempuan* |
| **S7** | Please state your age.<br>*Sila nyatakan umur anda.*<br>☐ 1. Less than 24 / *kurang daripada 24 tahun* |

APPENDIX 2: Questionnaire

| | |
|---|---|
| | ☐ 2. 25 to 34 / *25 hingga 34 tahun tahun*<br>☐ 3. 35 to 44 / *35 hingga 44 tahun*<br>☐ 4. 45 till 54 / *45 hingga 54 tahun*<br>☐ 5. More than 55 / *lebih daripada 55 tahun* |
| **S8** | Please state your religion.<br>*Sila nyatakan agama anda.*<br>☐ 1. Muslim / *Islam*<br>☐ 2. Christianity / *Kristian*<br>☐ 3. Hindu / *Hindu*<br>☐ 4. Buddha / *Buddha*<br>☐ 5. Others/ *Lain-lain* (Please specify/ *sila nyatakan*)__________________ |
| **S9** | Please state your education level.<br>*Sila nyatakan tahap pendidikan anda.*<br>☐ 1. Primary School / *Sekolah Rendah*<br>☐ 2. Secondary School/SPM/STPM /*Sekolah Menengah*<br>☐ 3. Diploma<br>☐ 4. First (Bachelor's) degree / *Ijazah Sarjana Muda*<br>☐ 5. Masters degree / *Ijazah Sarjana*<br>☐ 6. Phd/DBA/Doctoral Degree / *Kedoktoran*<br>☐ 7. Others / Lain-lain (Please specify/Sila nyatakan) ________________ |
| **S10** | Please state your monthly income (in RM).<br>*Sila nyatakan pendapatan bulanan anda (dalam RM).*<br>☐ 1. Less than RM1,500 / *kurang daripada RM1,500*<br>☐ 2. RM1,500 to RM2,499 / *RM1,500 hingga RM2,499*<br>☐ 3. RM2,500 to RM3,499 / *RM2,500 hingga RM3,499*<br>☐ 4. RM3,500 to RM4,499 / *RM3,500 hingga RM4,499*<br>☐ 5. More than RM4,500 / *lebih daripada RM4,500* |

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APPENDIX 2: Questionnaire

## SECTION 2

Please complete Part B to G.  Tick (✔) in the appropriate boxes and fill in the blanks for written answers.
*Sila lengkapkan Bahagian B hingga G dengan meletakkan tanda (✔) dalam kotak yang sesuai dan mengisi tempat kosong bagi jawapan bertulis.*

### Part B: Credit Card Default
### *Kad Kredit Tertunggak*

The purpose of this Part B is to determine your credit card default by using a 7 point scale.
*Tujuan Bahagian B ini adalah untuk menentukan tahap kad kredit tertunggak dengan menggunakan skala 7 tahap.*

Legend:

1= Strongly disagree/*Sangat Tidak Bersetuju*
2= Disagree/*Tidak Bersetuju*
3= Slightly Disagree/*Agak Tidak Bersetuju*
4= Neutral
5= Slightly Agree/*Agak Bersetuju*
6= Agree/*Setuju*
7= Strongly Agree/*Sangat Bersetuju*

| **Code** | **Statement** | **Level** | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DEF1 | I sometimes unintentionally default my credit card bill payment.<br>*Saya kadangkala secara tidak sengaja tertunggak membuat bayaran kad kredit.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| DEF2 | I sometimes do not pay even the minimum payment due for my credit card bill.<br>*Saya kadangkala tidak membayar walaupun bayaran minima bil kad kredit.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| DEF3 | I sometimes forget the payment due date on my credit card bill.     .<br>*Saya kadangkala terlupa tarikh matang pembayaran kad kredit.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| DEF4 | I sometimes forget to pay my credit card bill.<br>*Saya kadangkala terlupa membayar bil kad kredit.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DEF5 | In the past six months, I did not pay even the minimum amount due on my credit card bill,<br>*Dalam enam bulan yang lepas, saya tidak membayar walaupun bayaran minima bil kad kredit.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DEF6 | I do not usually pay the full amount on my credit card bill.<br>*Saya selalunya tidak membayar penuh hutang kad kredit saya.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

**Part C: Attitude on Credit Card Default.**
***Sikap Terhadap Kad Kredit Tertunggak***

The purpose of this Part C is to determine your attitude on the credit card default by using a 7 point scale.
*Tujuan Bahagian C ini adalah untuk menentukan sikap anda terhadap kad kredit tertunggak dengan menggunakan skala 7 tahap.*

Legend:

1= Strongly disagree/*Sangat Tidak Bersetuju*
2= Disagree/*Tidak Bersetuju*
3= Slightly Disagree/*Agak Tidak Bersetuju*
4= Neutral
5= Slightly Agree/*Agak Bersetuju*
6= Agree/*Setuju*
7= Strongly Agree/*Sangat Bersetuju*

| Code | Statement | Level | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ATT1 | Paying my credit card bill is a wise idea.<br>*Membayar bil kad kredit adalah idea yang bijak.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| ATT2 | Paying my credit card bill on time is a good idea.<br>*Membayar kad kredit tepat pada waktunya adalah idea yang bagus.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| ATT3 | I like the idea of paying my credit card bill.<br>*Saya menyukai idea membayar bil kad kredit.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| ATT4 | Paying credit card bill on time is my priority.<br>*Membayar bil kad kredit tepat pada masanya adalah keutamaan saya.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| ATT5 | I believe that paying credit card bill is not my responsibility (-)<br>*Saya percaya membayar kad kredit bukan merupakan tanggungjawab saya.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

## Part D: Subjective Norm on Credit Card Default.
## *Norm Subjektif TerhadapKad Kredit Tertunggak*

The purpose of this Part D is to determine the influence of your family, friends, colleague etc. on credit card default by using a 7 point scale.
*Tujuan Bahagian D ini adalah untuk menentukan pengaruh keluarga anda, kawan-kawan, rakan sekerja dan lain-lain terhadap kad kredit tertunggak dengan menggunakan skala 7 tahap.*

Legend:

1= Strongly disagree/*Sangat Tidak Bersetuju*
2= Disagree/*Tidak Bersetuju*
3= Slightly Disagree/*Agak Tidak Bersetuju*
4= Neutral
5= Slightly Agree/*Agak Bersetuju*
6= Agree/*Setuju*
7= Strongly Agree/*Sangat Bersetuju*

| **Code** | **Statement** | **Level** | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SN1 | My family members would think that paying my credit card bill is a wise idea.<br>*Ahli keluarga saya berpendapat membayar bil kad kredit adalah tindakan yang bijak.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| SN2 | My friends would think that paying my credit card bill is a wise idea.<br>*Rakan-rakan saya berpendapat membayar bil kad kredit adalah tindakan yang bijak.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| SN3 | My colleagues would think that paying my credit card bill is a wise idea.<br>*Rakan sekerja saya berpendapat membayar bil kad kredit adalah tindakan yang bijak.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| SN4 | My family members would think I should pay my credit card bill on time.<br>*Ahli keluarga saya berpendapat saya harus membayar bil kad kredit tepat pada masanya.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SN5 | People who are important to me would think that I should pay my credit card bill on time.<br>*Mereka yang penting dalam hidup saya berpendapat saya seharusnya membayar bil kad kredit tepat pada masanya.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| SN6 | People who are influential to me would think I should pay my credit card bill on time.<br>*Mereka yang berpengaruh kepada saya berpendapat saya seharusnya membayar bil kad kredit tepat pada masanya.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| SN7 | People whose opinions are valued to me would prefer that I should not pay my credit card bill on time (-).<br>*Mereka yang pendapatnya berharga kepada saya akan berpendapat saya tidak seharusnya membayar kad kredit tepat pada masanya (-).* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

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## Part E: Perceived Behavior Control on Credit Card Default.
### *Persepsi Kawalan Perilaku Terhadap Kad Kredit Tertunggak*

The purpose of this Part E is to determine your Perceived Behavior Control on the Credit Card Default by using a 7 point scale.
*Tujuan Bahagian E ini adalah untuk menentukan persepsi kawalan perilaku anda terhadap kad kredit tertunggak dengan menggunakan skala 7 tahap.*

Legend:

1= Strongly disagree/*Sangat Tidak Bersetuju*
2= Disagree/*Tidak Bersetuju*
3= Slightly Disagree/*Agak Tidak Bersetuju*
4= Neutral
5= Slightly Agree/*Agak Bersetuju*
6= Agree/*Setuju*
7= Strongly Agree/*Sangat Bersetuju*

| **Code** | **Statement** | **Level** | | | | | | |
|---|---|---|---|---|---|---|---|---|
| PER1 | I would be able to pay my credit card bill on time.<br>*Saya berasa yakin untuk membayar kad kredit tepat pada masanya.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| PER2 | I have the resource to pay my credit card bill on time.<br>*Saya mempunyai keupayaan untuk membayar kad kredit tepat pada masanya.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| PER3 | I have the ability to pay my credit card bill on time.<br>*Saya mempunyai kemampuan untuk membayar kad kredit tepat pada masanya.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| PER4 | Paying credit card bill in full would not be entirely within my control (-)<br>*Membayar kad kredit secara penuh bukan keseluruhannya di dalam kawalan saya (-).* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| PER5 | I have the knowledge to pay my credit card bill.<br>*Saya mempunyai pengetahuan untuk membayar kad kredit saya.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

**Part F: Intention on Credit Card Default.**
***HasratTerhadap Kad Kredit Tertunggak.***

The purpose of this Part F is to determine the intention on credit card default by using a 7 point scale.
*Tujuan Bahagian F ini adalah untuk menentukan hasrat anda terhadap kad kredit tertunggak dengan menggunakan skala 7 tahap.*

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Legend:

1= Strongly disagree/*Sangat Tidak Bersetuju*
2= Disagree/*Tidak Bersetuju*
3= Slightly Disagree/*Agak Tidak Bersetuju*
4= Neutral
5= Slightly Agree/*Agak Bersetuju*
6= Agree/*Setuju*
7= Strongly Agree/*Sangat Bersetuju*

| **Code** | **Statement** | **Level** | | | | | | |
|---|---|---|---|---|---|---|---|---|
| INT1 | I plan to pay my credit card bill on time.<br>*Saya bercadang membayar kad kredit saya tepat pada masanya.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| INT2 | I intend to pay my credit card bill on time.<br>*Saya berhasrat membayar kad kredit saya tepat pada masanya.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| INT3 | I will pay my credit card bill this month.<br>*Saya akan membayar kad kredit saya bulan ini.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| INT4 | I will continue paying my credit card bill in the future. | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | *Saya akan berterusan membayar kad kredit saya pada masa hadapan.* | | | | | | | |
| INT5 | Paying my credit card bill is something not important to me (-).<br>*Membayar kad kredit bukanlah sesuatu yang penting kepada saya(-).* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| INT6 | I would pay my credit card bill as my responsibility.<br>*Saya membayar kad kredit sebagai tanggungjawab.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

## Part G: Religiosity towards Credit Card Default.
## *Ketaatan Agama Terhadap Kad Kredit Tertunggak*

The purpose of this Part G is to determine your religiosity towards credit card default by using a 7 point scale.
*Tujuan Bahagian G ini adalah untuk menentukan ketaatan agama anda terhadap kad kredit tertunggak dengan menggunakan skala 7 tahap.*

Legend:

1= Strongly disagree/*Sangat Tidak Bersetuju*
2= Disagree/*Tidak Bersetuju*
3= Slightly Disagree/*Agak Tidak Bersetuju*
4= Neutral
5= Slightly Agree/*Agak Bersetuju*
6= Agree/*Setuju*
7= Strongly Agree/*Sangat Bersetuju*

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| **Code** | **Statement** | **Level** | | | | | | |
|---|---|---|---|---|---|---|---|---|
| REL1 | It is important for me to have only syariah compliance credit card<br>*Penting untuk saya untuk hanya memiliki kad kredit yang memenuhi syariah.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL2 | It is important for me to engage only on Islamic hire purchase financing.<br>*Penting untuk saya hanya menggunakan kaedah sewa beli secara Islam.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL3 | It is important for me to purchase only a takaful family insurance.<br>*Penting untuk saya hanya membeli insuran takaful keluarga.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL4 | It is important for me to purchase only a takaful educational insurance.<br>*Penting untuk saya hanya membeli insuran takaful pelajaran.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| REL5 | I enjoy attending religious talks at mosque.<br>*Saya gemar menghadiri ceramah agama di masjid.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL6 | I usually read religious books and magazines individually.<br>*Saya suka membaca buku serta majalah agama atas usaha sendiri.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL7 | I always listen to religious programs broadcasted by local radio station.<br>*Saya kerap mendengar program agama melalui siaran radio.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL8 | I sometimes join usrah groups.<br>*Kadangkala saya menyertai kumpulan usrah.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL9 | I often watch religious programs on TV.<br>*Saya sering menonton program agama di TV.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL10 | I always cautious on the validity of HALAL mark used by non-Muslim food operators.<br>*Saya sering berhati-hati dengan kesahihan logo HALAL yang digunakan oleh pengendali makanan bukan Islam* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL11 | I always against cheating on weighing scales.<br>*Saya sentiasa tidak bersetuju dengan penipuan timbangan.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL12 | I support punishment on those who are eligible but reluctant to pay zakat.<br>*Saya menyokong hukuman kepada individu yang layak membayar zakat tetapi enggan berbuat demikian.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL13 | I support the implementation of Syariah Law.<br>*Saya menyokong pelaksanaan perundangan Syariah.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL14 | I support the plan to forbid liquor sales.<br>*Saya menyokong perancangan menghalang penjualan arak.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL15 | I always suspicious on imported halal meat.<br>*Saya sentiasa sangsi terhadap daging halal yang diimport* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL16 | I always be careful with local | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | canned/boxed food even though they have HALAL mark.<br>*Saya sentiasa berhati-hati dengan makanan bertin tempatan walaupun mempunyai logo HALAL* | | | | | | | |
| REL17 | I only used toiletries(tooth paste/soap/hair shampoo) that are produced by Muslims.<br>*Saya hanya menggunakan bahan mendandan diri (ubat gigi/sabun/syampu) yang dikeluarkan oleh Muslim.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL18 | I am always cautious with mixed flour (for baking, bread, pastry, pudding) that are not produced by Muslim operators.<br>*Saya sentiasa berhati-hati dengan tepung (untuk membuat roti, pastri, puding) yang tidak dikeluarkan oleh pengusaha Muslim.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
| REL19 | I prefer only perfume/deodorant that does not contain alcohol.<br>*Saya hanya menggunakan minyak wangi yang tidak mengandungi alkohol.* | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |

**End of Survey**
*Tamat Kajian*

**Thank you very much for your time and support.**
**Your participation in this study is truly appreciated.**
*Terima kasih untuk masa dan sokongan anda.*
*Penyertaan anda dalam kajian ini amat dihargai*

## Appendix 3: Outlier, Mahalanobis Distance

*Table of Chi-squares statistics*

| df | P = 0.05 | P = 0.01 | P = 0.001 | df | P = 0.05 | P = 0.01 | P = 0.001 | df | P = 0.05 | P = 0.01 | P = 0.001 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.84 | 6.64 | 10.83 | 35 | 49.8 | 57.34 | 66.62 | 69 | 89.39 | 99.23 | 111.06 |
| 2 | 5.99 | 9.21 | 13.82 | 36 | 51 | 58.62 | 67.99 | 70 | 90.53 | 100.42 | 112.31 |
| 3 | 7.82 | 11.35 | 16.27 | 37 | 52.19 | 59.89 | 69.35 | 71 | 91.67 | 101.62 | 113.56 |
| 4 | 9.49 | 13.28 | 18.47 | 38 | 53.38 | 61.16 | 70.71 | 72 | 92.81 | 102.82 | 114.84 |
| 5 | 11.07 | 15.09 | 20.52 | 39 | 54.57 | 62.43 | 72.06 | 73 | 93.95 | 104.01 | 116.08 |
| 6 | 12.59 | 16.81 | 22.46 | 40 | 55.76 | 63.69 | 73.41 | 74 | 95.08 | 105.2 | 117.35 |
| 7 | 14.07 | 18.48 | 24.32 | 41 | 56.94 | 64.95 | 74.75 | 75 | 96.22 | 106.39 | 118.6 |
| 8 | 15.51 | 20.09 | 26.13 | 42 | 58.12 | 66.21 | 76.09 | 76 | 97.35 | 107.58 | 119.85 |
| 9 | 16.92 | 21.67 | 27.88 | 43 | 59.3 | 67.46 | 77.42 | 77 | 98.49 | 108.77 | 121.11 |
| 10 | 18.31 | 23.21 | 29.59 | 44 | 60.48 | 68.71 | 78.75 | 78 | 99.62 | 109.96 | 122.36 |
| 11 | 19.68 | 24.73 | 31.26 | 45 | 61.66 | 69.96 | 80.08 | 79 | 100.75 | 111.15 | 123.6 |
| 12 | 21.03 | 26.22 | 32.91 | 46 | 62.83 | 71.2 | 81.4 | 80 | 101.88 | 112.33 | 124.84 |
| 13 | 22.36 | 27.69 | 34.53 | 47 | 64 | 72.44 | 82.72 | 81 | 103.01 | 113.51 | 126.09 |
| 14 | 23.69 | 29.14 | 36.12 | 48 | 65.17 | 73.68 | 84.03 | 82 | 104.14 | 114.7 | 127.33 |
| 15 | 25 | 30.58 | 37.7 | 49 | 66.34 | 74.92 | 85.35 | 83 | 105.27 | 115.88 | 128.57 |
| 16 | 26.3 | 32 | 39.25 | 50 | 67.51 | 76.15 | 86.66 | 84 | 106.4 | 117.06 | 129.8 |
| 17 | 27.59 | 33.41 | 40.79 | 51 | 68.67 | 77.39 | 87.97 | 85 | 107.52 | 118.24 | 131.04 |
| 18 | 28.87 | 34.81 | 42.31 | 52 | 69.83 | 78.62 | 89.27 | 86 | 108.65 | 119.41 | 132.28 |
| 19 | 30.14 | 36.19 | 43.82 | 53 | 70.99 | 79.84 | 90.57 | 87 | 109.77 | 120.59 | 133.51 |
| 20 | 31.41 | 37.57 | 45.32 | 54 | 72.15 | 81.07 | 91.88 | 88 | 110.9 | 121.77 | 134.74 |
| 21 | 32.67 | 38.93 | 46.8 | 55 | 73.31 | 82.29 | 93.17 | 89 | 112.02 | 122.94 | 135.96 |
| 22 | 33.92 | 40.29 | 48.27 | 56 | 74.47 | 83.52 | 94.47 | 90 | 113.15 | 124.12 | 137.19 |
| 23 | 35.17 | 41.64 | 49.73 | 57 | 75.62 | 84.73 | 95.75 | 91 | 114.27 | 125.29 | 138.45 |
| 24 | 36.42 | 42.98 | 51.18 | 58 | 76.78 | 85.95 | 97.03 | 92 | 115.39 | 126.46 | 139.66 |
| 25 | 37.65 | 44.31 | 52.62 | 59 | 77.93 | 87.17 | 98.34 | 93 | 116.51 | 127.63 | 140.9 |
| 26 | 38.89 | 45.64 | 54.05 | 60 | 79.08 | 88.38 | 99.62 | 94 | 117.63 | 128.8 | 142.12 |
| 27 | 40.11 | 46.96 | 55.48 | 61 | 80.23 | 89.59 | 100.88 | 95 | 118.75 | 129.97 | 143.32 |
| 28 | 41.34 | 48.28 | 56.89 | 62 | 81.38 | 90.8 | 102.15 | 96 | 119.87 | 131.14 | 144.55 |
| 29 | 42.56 | 49.59 | 58.3 | 63 | 82.53 | 92.01 | 103.46 | 97 | 120.99 | 132.31 | 145.78 |
| 30 | 43.77 | 50.89 | 59.7 | 64 | 83.68 | 93.22 | 104.72 | 98 | 122.11 | 133.47 | 146.99 |
| 31 | 44.99 | 52.19 | 61.1 | 65 | 84.82 | 94.42 | 105.97 | 99 | 123.23 | 134.64 | 148.21 |
| 32 | 46.19 | 53.49 | 62.49 | 66 | 85.97 | 95.63 | 107.26 | 100 | 124.34 | 135.81 | 149.48 |
| 33 | 47.4 | 54.78 | 63.87 | 67 | 87.11 | 96.83 | 108.54 |  |  |  |  |
| 34 | 48.6 | 56.06 | 65.25 | 68 | 88.25 | 98.03 | 109.79 |  |  |  |  |

| Respondent | Mahalanobis | Respondent | Mahalanobis | Respondent | Mahalanobis |
|---|---|---|---|---|---|
| 1 | 4.20696 | 26 | 6.19589 | 51 | 5.22965 |
| 2 | 2.36255 | 27 | 7.34334 | 52 | 10.19987 |
| 3 | 3.17687 | 28 | 5.51983 | 53 | 8.59869 |
| 4 | 0.91206 | 29 | 5.07461 | 54 | 3.69552 |
| 5 | 2.7717 | 30 | 0.68213 | 55 | 2.41314 |
| 6 | 18.91307 | 31 | 1.80078 | 56 | 12.71613 |
| 7 | 2.93817 | 32 | 2.47121 | 57 | 4.24656 |
| 8 | 2.21542 | 33 | 2.45185 | 58 | 2.41766 |
| 9 | 5.22355 | 34 | 5.3735 | 59 | 3.9223 |
| 10 | 2.19657 | 35 | 4.46584 | 60 | 5.14857 |
| 11 | 4.91071 | 36 | 1.55848 | 61 | 5.77097 |
| 12 | 4.57934 | 37 | 9.49263 | 62 | 3.46177 |
| 13 | 26.77898 | 38 | 3.92894 | 63 | 1.89043 |
| 14 | 12.8755 | 39 | 1.94873 | 64 | 4.85395 |
| 15 | 11.71964 | 40 | 2.25001 | 65 | 2.84084 |
| 16 | 3.13766 | 41 | 39.39246 | 66 | 5.19507 |
| 17 | 1.83838 | 42 | 4.14065 | 67 | 1.28791 |
| 18 | 1.79245 | 43 | 14.98727 | 68 | 1.15541 |
| 19 | 1.12754 | 44 | 2.38049 | 69 | 2.60742 |
| 20 | 4.5092 | 45 | 12.88049 | 70 | 2.12713 |
| 21 | 1.85351 | 46 | 14.17598 | 71 | 7.24719 |
| 22 | 6.87747 | 47 | 5.83566 | 72 | 7.24719 |
| 23 | 3.67259 | 48 | 0.51594 | 73 | 12.23607 |
| 24 | 9.28061 | 49 | 3.44593 | 74 | 3.43861 |
| 25 | 1.49817 | 50 | 5.83902 | 75 | 1.19341 |

| Respondent | Mahalanobis | Respondent | Mahalanobis | Respondent | Mahalanobis |
|---|---|---|---|---|---|
| 76 | 1.75254 | 101 | 2.76601 | 126 | 1.66127 |
| 77 | 0.71359 | 102 | 8.65869 | 127 | 4.43813 |
| 78 | 2.60742 | 103 | 4.79334 | 128 | 2.52109 |
| 79 | 5.14703 | 104 | 6.46839 | 129 | 2.78694 |
| 80 | 4.89838 | 105 | 7.76075 | 130 | 2.60742 |
| 81 | 3.14755 | 106 | 3.46067 | 131 | 2.77008 |
| 82 | 2.49994 | 107 | 1.60322 | 132 | 3.03714 |
| 83 | 2.60742 | 108 | 1.51603 | 133 | 2.57612 |
| 84 | 1.87446 | 109 | 3.99961 | 134 | 10.08985 |
| 85 | 3.2321 | 110 | 3.38573 | 135 | 3.51965 |
| 86 | 5.23805 | 111 | 7.27485 | 136 | 4.82427 |
| 87 | 2.65849 | 112 | 18.21642 | 137 | 1.67502 |
| 88 | 3.08356 | 113 | 3.47559 | 138 | 0.76736 |
| 89 | 47.82944 | 114 | 3.71204 | 139 | 7.32115 |
| 90 | 21.56928 | 115 | 1.75031 | 140 | 1.43083 |
| 91 | 2.8736 | 116 | 1.83541 | 141 | 3.79477 |
| 92 | 1.41722 | 117 | 2.76091 | 142 | 3.50196 |
| 93 | 0.1526 | 118 | 1.69934 | 143 | 3.15898 |
| 94 | 1.00664 | 119 | 0.06991 | 144 | 2.26264 |
| 95 | 3.16799 | 120 | 10.12107 | 145 | 1.77663 |
| 96 | 3.98743 | 121 | 18.64271 | 146 | 1.9838 |
| 97 | 3.98743 | 122 | 4.13858 | 147 | 2.25146 |
| 98 | 27.75042 | 123 | 2.27758 | 148 | 7.01452 |
| 99 | 6.06284 | 124 | 2.05509 | 149 | 1.65535 |
| 100 | 7.03819 | 125 | 0.6074 | 150 | 3.43742 |

| Respondent | Mahalanobis | Respondent | Mahalanobis | Respondent | Mahalanobis |
|---|---|---|---|---|---|
| 151 | 1.69947 | 176 | 2.43534 | 201 | 1.61055 |
| 152 | 0.93199 | 177 | 1.45254 | 202 | 5.40238 |
| 153 | 1.21859 | 178 | 1.45254 | 203 | 1.06455 |
| 154 | 2.73359 | 179 | 9.22948 | 204 | 3.38111 |
| 155 | 0.958 | 180 | 2.06445 | 205 | 2.39736 |
| 156 | 1.15466 | 181 | 2.55678 | 206 | 1.13699 |
| 157 | 3.72136 | 182 | 12.57329 | 207 | 3.92209 |
| 158 | 3.75378 | 183 | 2.82441 | 208 | 1.87476 |
| 159 | 21.89786 | 184 | 4.10038 | 209 | 1.25481 |
| 160 | 0.93651 | 185 | 6.59727 | 210 | 7.60862 |
| 161 | 1.67426 | 186 | 13.24642 | 211 | 2.47443 |
| 162 | 3.52479 | 187 | 12.62287 | 212 | 1.55441 |
| 163 | 4.10826 | 188 | 12.57329 | 213 | 5.24033 |
| 164 | 3.06544 | 189 | 5.59972 | 214 | 1.27794 |
| 165 | 6.87387 | 190 | 1.40481 | 215 | 2.60742 |
| 166 | 0.38204 | 191 | 1.11079 | 216 | 5.74925 |
| 167 | 5.82072 | 192 | 3.34853 | 217 | 3.69424 |
| 168 | 1.94222 | 193 | 1.41415 | 218 | 1.73214 |
| 169 | 5.84809 | 194 | 4.39626 | 219 | 0.34128 |
| 170 | 2.81116 | 195 | 3.67539 | 220 | 2.26858 |
| 171 | 0.34569 | 196 | 3.27915 | 221 | 1.79037 |
| 172 | 2.63638 | 197 | 1.19328 | 222 | 1.0625 |
| 173 | 2.60742 | 198 | 4.99059 | 223 | 13.02464 |
| 174 | 3.9406 | 199 | 0.86769 | 224 | 11.71964 |
| 175 | 5.65106 | 200 | 3.99096 | 225 | 4.82328 |

| Respondent | Mahalanobis | Respondent | Mahalanobis | Respondent | Mahalanobis |
|---|---|---|---|---|---|
| 226 | 1.83838 | 251 | 14.98727 | 276 | 3.98743 |
| 227 | 1.79366 | 252 | 2.38049 | 277 | 27.75042 |
| 228 | 0.43253 | 253 | 12.88049 | 278 | 6.06284 |
| 229 | 3.57623 | 254 | 14.17598 | 279 | 6.48027 |
| 230 | 5.01185 | 255 | 5.83566 | 280 | 4.18502 |
| 231 | 3.85228 | 256 | 0.51594 | 281 | 2.38883 |
| 232 | 4.37033 | 257 | 3.44593 | 282 | 1.43549 |
| 233 | 2.89584 | 258 | 5.83902 | 283 | 4.13644 |
| 234 | 4.0047 | 259 | 5.66894 | 284 | 6.01434 |
| 235 | 4.84341 | 260 | 10.19987 | 285 | 1.14728 |
| 236 | 3.66903 | 261 | 8.59869 | 286 | 1.61659 |
| 237 | 0.63317 | 262 | 3.69552 | 287 | 8.16423 |
| 238 | 4.5092 | 263 | 2.41314 | 288 | 3.54502 |
| 239 | 1.88919 | 264 | 12.61844 | 289 | 2.76601 |
| 240 | 6.87747 | 265 | 4.24656 | 290 | 0.71359 |
| 241 | 3.67259 | 266 | 2.41766 | 291 | 2.60742 |
| 242 | 9.28061 | 267 | 3.9223 | 292 | 5.14703 |
| 243 | 1.72092 | 268 | 2.84084 | 293 | 4.89838 |
| 244 | 6.19589 | 269 | 5.19507 | 294 | 3.14755 |
| 245 | 7.34334 | 270 | 1.28791 | 295 | 2.49994 |
| 246 | 5.51983 | 271 | 1.15541 | 296 | 2.60742 |
| 247 | 5.07461 | 272 | 2.60742 | 297 | 1.87446 |
| 248 | 2.25001 | 273 | 3.43861 | 298 | 3.2321 |
| 249 | 39.39246 | 274 | 1.19341 | 299 | 5.23805 |
| 250 | 4.14065 | 275 | 1.75254 | 300 | 2.65849 |

| Respondent | Mahalanobis | Respondent | Mahalanobis | Respondent | Mahalanobis |
|---|---|---|---|---|---|
| 301 | 3.08356 | | | | |
| 302 | 32.74114 | | | | |
| 303 | 21.56928 | | | | |
| 304 | 2.8736 | | | | |
| 305 | 1.41722 | | | | |
| 306 | 0.1526 | | | | |
| 307 | 1.00664 | | | | |
| 308 | 3.16799 | | | | |
| 309 | 3.46067 | | | | |
| 310 | 1.60322 | | | | |
| 311 | 1.51603 | | | | |
| 312 | 2.46242 | | | | |
| 313 | 6.16157 | | | | |
| 314 | 2.11856 | | | | |
| 315 | 5.80363 | | | | |
| 316 | 3.5944 | | | | |
| 317 | 4.82427 | | | | |
| 318 | 4.82427 | | | | |
| 319 | 4.82427 | | | | |
| 320 | 4.82427 | | | | |
| 321 | 10.08985 | | | | |
| 322 | 3.51965 | | | | |
| 323 | 4.82427 | | | | |
| | | | | | |
| | | | | | |

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# Appendix 4: Assessment of Normality

| Attitude: Initial | | | | | | | Attitude: Transformed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Item** | **min** | **max** | **skew** | **c.r.** | **kurtosis** | **c.r.** | **Item** | **skew** | **c.r.** | **kurtosis** | **c.r.** |
| ATT1 | 1 | 7 | -1.078 | -7.909 | 0.671 | 2.461 | TTATT1 | -0.328 | -2.409 | -1.471 | -5.395 |
| ATT2 | 1 | 7 | -1.511 | -11.086 | 2.085 | 7.65 | TTATT2 | -0.373 | -2.734 | -1.411 | -5.177 |
| ATT3 | 1 | 7 | -0.959 | -7.037 | 0.392 | 1.437 | TTATT3 | -0.228 | -1.674 | -1.532 | -5.619 |
| ATT4 | 1 | 7 | -1.138 | -8.348 | 0.975 | 3.576 | TTATT4 | -0.302 | -2.216 | -1.473 | -5.403 |
| RATT5 | 1 | 7 | -0.494 | -3.627 | -1.281 | -4.7 | TTRATT5 | -0.266 | -1.95 | -1.695 | -6.217 |

| Subjective Norm: Initial | | | | | | | Subjective Norm: Transformed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Item** | **min** | **max** | **skew** | **c.r.** | **kurtosis** | **c.r.** | **Item** | **skew** | **c.r.** | **kurtosis** | **c.r.** |
| SN1 | 1 | 7 | -0.69 | -5.063 | -0.285 | -1.05 | TTSN1 | -0.181 | -1.331 | -1.615 | -5.924 |
| SN2 | 1 | 7 | -0.763 | -5.597 | 0.114 | 0.417 | TSN2 | -0.239 | -1.756 | -1.267 | -4.646 |
| SN3 | 1 | 7 | -0.714 | -5.238 | 0.082 | 0.299 | TSN3 | -0.214 | -1.569 | -1.286 | -4.717 |
| SN4 | 1 | 7 | -1.034 | -7.589 | 0.662 | 2.429 | TTSN4 | -0.286 | -2.1 | -1.503 | -5.515 |
| SN5 | 1 | 7 | -0.991 | -7.269 | 0.226 | 0.831 | TTSN5 | -0.329 | -2.417 | -1.482 | -5.438 |
| SN6 | 1 | 7 | -0.986 | -7.235 | 0.424 | 1.555 | TTSN6 | -0.251 | -1.842 | -1.477 | -5.418 |
| RSN7 | 1 | 7 | -0.256 | -1.876 | -1.239 | -4.54 | RSN7 | -0.256 | -1.876 | -1.239 | -4.544 |

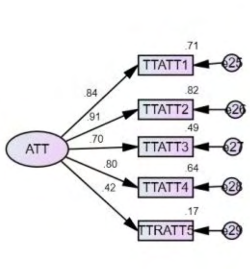
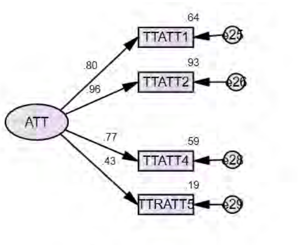
| Perceived Behavior Control: Initial | | | | | | | Perceived Behavior Control: Transformed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Item** | **min** | **max** | **skew** | **c.r.** | **kurtosis** | **c.r.** | **Item** | **skew** | **c.r.** | **kurtosis** | **c.r.** |
| PER1 | 1 | 7 | -1.033 | -7.578 | 0.768 | 2.817 | TTPER1 | -0.251 | -1.844 | -1.519 | -5.574 |
| PER2 | 1 | 7 | -0.858 | -6.294 | 0.193 | 0.708 | TTPER2 | -0.229 | -1.683 | -1.56 | -5.723 |
| PER3 | 1 | 7 | -0.992 | -7.282 | 0.547 | 2.006 | TTPER3 | -0.273 | -2.006 | -1.529 | -5.611 |
| RPER4 | 1 | 7 | 0.413 | 3.03 | -0.79 | -2.9 | TRPER4 | 0.232 | 1.706 | -1.249 | -4.582 |
| PER5 | 1 | 7 | -1.049 | -7.693 | 1.028 | 3.771 | TTPER5 | -0.213 | -1.564 | -1.514 | -5.553 |

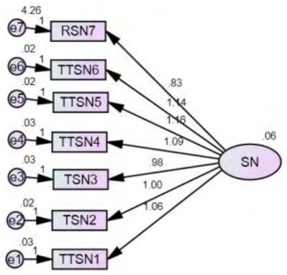
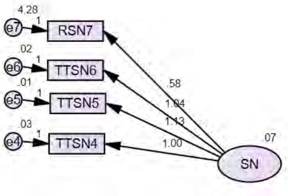
| Religiosity: Initial | | | | | | | Religiosity: Transformed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Item** | **min** | **max** | **skew** | **c.r.** | **kurtosis** | **c.r.** | **Item** | **skew** | **c.r.** | **kurtosis** | **c.r.** |
| REL1 | 1 | 7 | -1.022 | -7.497 | 0.294 | 1.08 | TTREL1 | -0.356 | -2.608 | -1.608 | -5.899 |
| REL2 | 1 | 7 | -1.073 | -7.874 | 0.298 | 1.093 | TTREL2 | -0.412 | -3.024 | -1.506 | -5.526 |
| REL3 | 1 | 7 | -0.937 | -6.877 | 0.239 | 0.876 | TTREL3 | -0.289 | -2.121 | -1.559 | -5.719 |
| REL4 | 1 | 7 | -0.541 | -3.97 | -0.476 | -1.75 | TREL4 | -0.156 | -1.147 | -1.373 | -5.037 |
| REL5 | 1 | 7 | -0.891 | -6.537 | 1.057 | 3.879 | TREL5 | -0.192 | -1.411 | -1.375 | -5.043 |
| REL6 | 1 | 7 | -0.771 | -5.654 | 0.675 | 2.475 | TREL6 | -0.222 | -1.63 | -1.344 | -4.93 |
| REL7 | 1 | 7 | -0.612 | -4.494 | 0.091 | 0.333 | TREL7 | -0.155 | -1.139 | -1.457 | -5.346 |
| REL8 | 1 | 7 | -0.202 | -1.484 | -0.339 | -1.25 | REL8 | -0.202 | -1.484 | -0.339 | -1.245 |
| REL9 | 1 | 7 | -0.723 | -5.302 | 0.56 | 2.054 | TREL9 | -0.139 | -1.019 | -1.357 | -4.977 |
| REL10 | 1 | 7 | -1.815 | -13.316 | 4.077 | 14.96 | TTREL10 | -0.34 | -2.497 | -1.337 | -4.903 |
| REL11 | 1 | 7 | -0.775 | -5.688 | 0.276 | 1.014 | TREL11 | -0.191 | -1.405 | -1.43 | -5.245 |
| REL12 | 1 | 7 | -1.165 | -8.546 | 1.173 | 4.303 | TTREL12 | -0.297 | -2.183 | -1.502 | -5.51 |
| REL13 | 1 | 7 | -0.941 | -6.908 | 0.319 | 1.171 | TTREL13 | -0.309 | -2.269 | -1.588 | -5.824 |
| REL14 | 1 | 7 | -1.754 | -12.868 | 2.851 | 10.46 | TTREL14 | -0.526 | -3.856 | -1.281 | -4.7 |
| REL15 | 1 | 7 | -1.444 | -10.598 | 1.907 | 6.995 | TTREL15 | -0.396 | -2.906 | -1.365 | -5.006 |
| REL16 | 1 | 7 | -1.721 | -12.625 | 3.146 | 11.54 | TTREL16 | -0.455 | -3.336 | -1.314 | -4.819 |
| REL17 | 1 | 7 | -1.345 | -9.871 | 1.317 | 4.832 | TTREL17 | -0.474 | -3.48 | -1.425 | -5.228 |
| REL18 | 1 | 7 | -0.871 | -6.391 | 0.311 | 1.143 | TTREL18 | -0.234 | -1.714 | -1.543 | -5.661 |
| REL19 | 1 | 7 | -0.978 | -7.175 | 0.449 | 1.648 | TTREL19 | -0.325 | -2.383 | -1.541 | -5.652 |

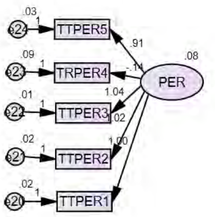
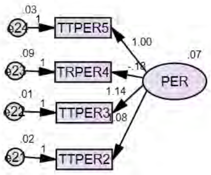
| Intention: Initial | | | | | | | Intention: Transformed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Item** | **min** | **max** | **skew** | **c.r.** | **kurtosis** | **c.r.** | **Item** | **skew** | **c.r.** | **kurtosis** | **c.r.** |
| INT1 | 1 | 7 | -1.26 | -9.242 | 1.311 | 4.811 | TTINT1 | -0.35 | -2.567 | -1.384 | -5.076 |
| INT2 | 1 | 7 | -1.205 | -8.845 | 1.361 | 4.995 | TTINT2 | -0.324 | -2.381 | -1.415 | -5.189 |
| INT3 | 1 | 7 | -1.226 | -8.996 | 1.247 | 4.574 | TTINT3 | -0.369 | -2.709 | -1.397 | -5.125 |
| INT4 | 1 | 7 | -0.919 | -6.744 | -0.048 | -0.18 | TTINT4 | -0.314 | -2.303 | -1.472 | -5.4 |
| RINT5 | 1 | 7 | -0.637 | -4.672 | -0.93 | -3.41 | TTRINT5 | -0.303 | -2.221 | -1.627 | -5.968 |
| INT6 | 1 | 7 | -1.248 | -9.155 | 0.899 | 3.297 | TTINT6 | -0.448 | -3.287 | -1.353 | -4.962 |

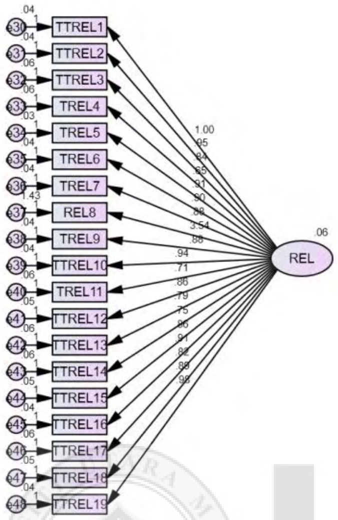
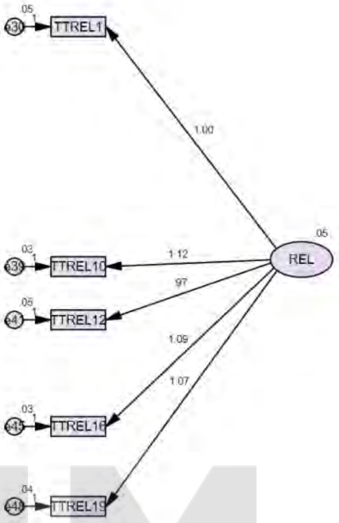
| Default: Initial | | | | | | | Default: Transformed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Item** | **min** | **max** | **skew** | **c.r.** | **kurtosis** | **c.r.** | **Item** | **skew** | **c.r.** | **kurtosis** | **c.r.** |
| DEF1 | 1 | 7 | 0.095 | 0.70 | -1.5 | -5.5 | DEF1 | 0.095 | 0.7 | -1.5 | -5.504 |
| DEF2 | 1 | 7 | 0.719 | 5.272 | -0.866 | -3.18 | TTDEF2 | 0.384 | 2.815 | -1.597 | -5.857 |
| DEF3 | 1 | 7 | 0.141 | 1.035 | -1.323 | -4.85 | DEF3 | 0.141 | 1.035 | -1.323 | -4.854 |
| DEF4 | 1 | 7 | 0.487 | 3.576 | -1.196 | -4.39 | TTDEF4 | 0.248 | 1.818 | -1.714 | -6.29 |
| DEF5 | 1 | 7 | 1.126 | 8.26 | -0.084 | -0.31 | TTDEF5 | 0.65 | 4.772 | -1.298 | -4.762 |
| DEF6 | 1 | 7 | -0.068 | -0.501 | -1.363 | -5 | DEF6 | -0.068 | -0.501 | -1.363 | -5 |

## Appendix 5: Confirmatory analysis for individual constructs

| Initial Model | Fit Model |
|---|---|
| Attitude | Attitude |
|  ATT<br>.84<br>.91<br>.70<br>.80<br>.42<br>.71<br>TTATT1<br>e25<br>.82<br>TTATT2<br>e26<br>.49<br>TTATT3<br>e27<br>.64<br>TTATT4<br>e28<br>.17<br>TTRATT5<br>e29<br>Model Specification<br>Chi-Square: 54.441<br>DF: 5<br>Ratio: 10.888<br>GFI: .942<br>AGFI: .827<br>CFI: .940<br>TLI: .881<br>RMSEA: .175<br>P value: .000 |  ATT<br>.80<br>.96<br>.77<br>.43<br>.64<br>TTATT1<br>e25<br>.93<br>TTATT2<br>e26<br>.59<br>TTATT4<br>e28<br>.19<br>TTRATT5<br>e29<br>Model Specification<br>Chi-Square: 4.586<br>DF: 2<br>Ratio: 2.293<br>GFI: .993<br>AGFI: .965<br>CFI: .996<br>TLI: .987<br>RMSEA: .063<br>P value: .101 |

| Initial Model | Fit Model |
|---|---|
| Subjective Norm | Subjective Norm |
|  4.26<br>.02<br>.02<br>.03<br>.03<br>.02<br>.03<br>1<br>e7<br>e6<br>e5<br>e4<br>e3<br>e2<br>e1<br>RSN7<br>TTSN6<br>TTSN5<br>TTSN4<br>TSN3<br>TSN2<br>TTSN1<br>.83<br>1.14<br>1.16<br>1.09<br>.98<br>1.00<br>1.06<br>.06<br>SN |  4.28<br>.02<br>.01<br>.03<br>1<br>e7<br>e6<br>e5<br>e4<br>RSN7<br>TTSN6<br>TTSN5<br>TTSN4<br>.58<br>1.04<br>1.13<br>1.00<br>.07<br>SN |
| Model Specification<br>Chi-Square: 294.803<br>DF: 14<br>Ratio: 21.057<br>GFI: .773<br>AGFI: .546<br>CFI: .858<br>TLI: .786<br>RMSEA: .250<br>P value: .000 | Model Specification<br>Chi-Square: 1.157<br>DF: 2<br>Ratio: .579<br>GFI: .998<br>AGFI: .991<br>CFI: 1.000<br>TLI: 1.003<br>RMSEA: .000<br>P value: .561 |

<table>
<tr><th>Initial Model</th><th>Fit Model</th></tr>
<tr><td>Perceived Behavior Control</td><td>Perceived Behavior Control</td></tr>
<tr><td>

.03
e24
1
TTPER5
.91
.09
e23
1
TRPER4
-.14
.08
PER
.01
e22
1
TTPER3
1.04
1.02
.02
e21
1
TTPER2
1.00
.02
e20
1
TTPER1
</td><td>

.03
e24
1
TTPER5
1.00
.09
e23
1
TRPER4
-.18
.07
PER
.01
e22
1
TTPER3
1.14
1.08
.02
e21
1
TTPER2
</td></tr>
<tr><td>Model Specification<br>Chi-Square: 24.899<br>DF: 5<br>Ratio: 4.980<br>GFI: .969<br>AGFI: .907<br>CFI: .984<br>TLI: .969<br>RMSEA: .111<br>P value: .000</td><td>Model Specification<br>Chi-Square: 2.853<br>DF: 2<br>Ratio: 1.427<br>GFI: .996<br>AGFI: .978<br>CFI: .999<br>TLI: .997<br>RMSEA: .036<br>P value: .240</td></tr>
</table>

| Initial Model | Fit Model |
|---|---|
| Religiosity | Religiosity |
|  |  |
| Model Specification<br>Chi-Square: 1550.096<br>DF: 152<br>Ratio: 10.198<br>GFI: .601<br>AGFI: .501<br>CFI: .685<br>TLI: .646<br>RMSEA: .169<br>P value: .000 | Model Specification<br>Chi-Square: 7.316<br>DF: 5<br>Ratio: 1.463<br>GFI: .991<br>AGFI: .974<br>CFI: .997<br>TLI: .993<br>RMSEA: .038<br>P value: .198 |

e30
e31
e32
e33
e34
e35
e36
e37
e38
e39
e40
e41
e42
e43
e44
e45
e46
e47
e48
.04
.04
.06
.06
.03
.04
.04
1.43
.04
.04
.06
.05
.06
.06
.05
.04
.06
.05
.04
TTREL1
TTREL2
TTREL3
TREL4
TREL5
TREL6
TREL7
REL8
TREL9
TTREL10
TREL11
TTREL12
TTREL13
TTREL14
TTREL15
TTREL16
TTREL17
TTREL18
TTREL19
1.00
.95
.84
.65
.91
.90
.88
3.54
.88
.94
.71
.86
.79
.75
.86
.91
.82
.89
.98
.06
REL

e30
e39
e41
e45
e48
.05
.03
.05
.03
.04
TTREL1
TTREL10
TTREL12
TTREL16
TTREL19
1.00
1.12
.97
1.09
1.07
.05
REL

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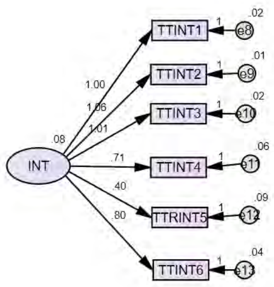
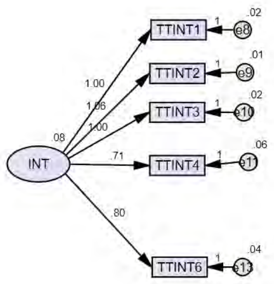
| Initial Model | Fit Model |
|---|---|
| Intention | Intention |


INT
.08
1.00
1.06
1.01
.71
.40
.80
TTINT1
TTINT2
TTINT3
TTINT4
TTRINT5
TTINT6
1
1
1
1
1
1
e8
e9
e10
e11
e12
e13
.02
.01
.02
.06
.09
.04

Model Specification
Chi-Square: 19.505
DF: 9
Ratio: 2.167
GFI: .981
AGFI: .956
CFI: .993
TLI: .988
RMSEA: .060
P value: .021


INT
.08
1.00
1.06
1.00
.71
.80
TTINT1
TTINT2
TTINT3
TTINT4
TTINT6
1
1
1
1
1
e8
e9
e10
e11
e13
.02
.01
.02
.06
.04

Model Specification
Chi-Square: 1.925
DF: 5
Ratio: .385
GFI: .998
AGFI: .993
CFI: 1.000
TLI: 1.005
RMSEA: .000
P value: .859

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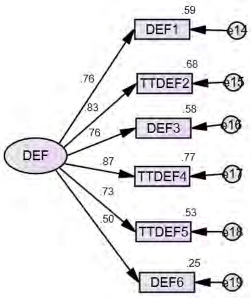
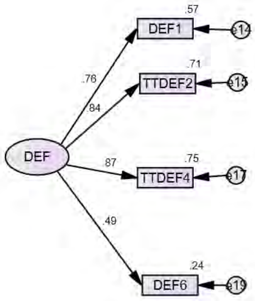
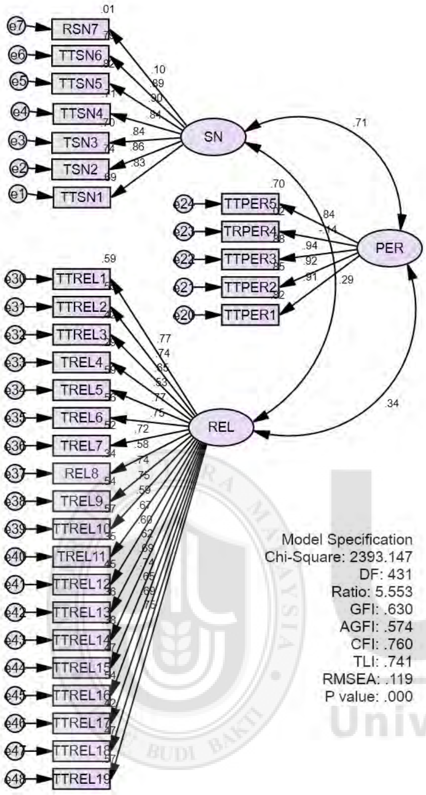
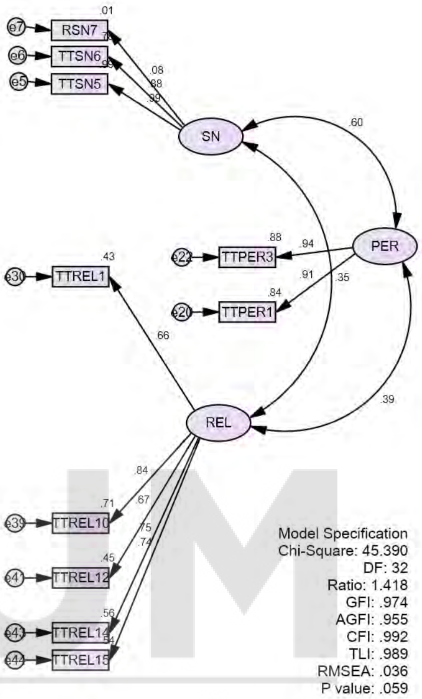
| Initial Model | Fit Model |
|---|---|
| Default | Default |
|  DEF<br>DEF1<br>TTDEF2<br>DEF3<br>TTDEF4<br>TTDEF5<br>DEF6<br>e14<br>e15<br>e16<br>e17<br>e18<br>e19<br>.76<br>.83<br>.76<br>.87<br>.73<br>.50<br>.59<br>.68<br>.58<br>.77<br>.53<br>.25 |  DEF<br>DEF1<br>TTDEF2<br>TTDEF4<br>DEF6<br>e14<br>e15<br>e17<br>e19<br>.76<br>.84<br>.87<br>.49<br>.57<br>.71<br>.75<br>.24 |
| Model Specification<br>Chi-Square: 99.897<br>DF: 9<br>Ratio: 11.100<br>GFI: .910<br>AGFI: .791<br>CFI: .914<br>TLI: .857<br>RMSEA: .177<br>P value: .000 | Model Specification<br>Chi-Square: 2.496<br>DF: 2<br>Ratio: 1.248<br>GFI: .996<br>AGFI: .981<br>CFI: .999<br>TLI: .997<br>RMSEA: .028<br>P value: .287 |

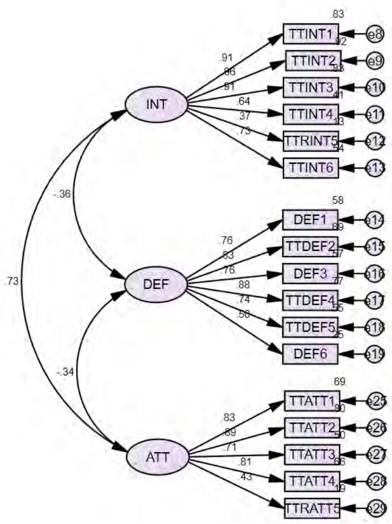
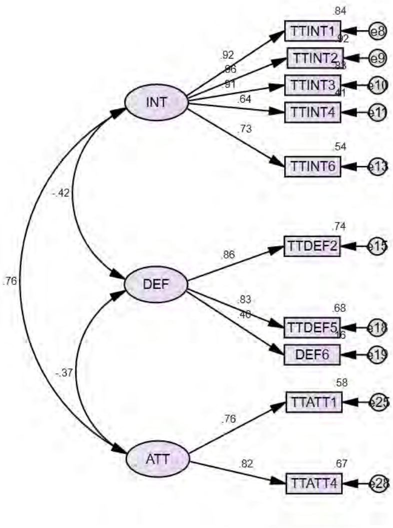
## Appendix 6: Confirmatory analysis for exogenous constructs

| Initial Model | Fit Model |
|---|---|
| Exogenous | Exogenous |
|  |  |

RSN7
TTSN6
TTSN5
TTSN4
TSN3
TSN2
TTSN1
SN
PER
REL
TTPER5
TRPER4
TTPER3
TTPER2
TTPER1
TTREL1
TTREL2
TTREL3
TREL4
TREL5
TREL6
TREL7
REL8
TREL9
TTREL10
TREL11
TTREL12
TTREL13
TTREL14
TTREL15
TTREL16
TTREL17
TTREL18
TTREL19
.71
.29
.34
Model Specification
Chi-Square: 2393.147
DF: 431
Ratio: 5.553
GFI: .630
AGFI: .574
CFI: .760
TLI: .741
RMSEA: .119
P value: .000

RSN7
TTSN6
TTSN5
SN
PER
REL
TTPER3
TTPER1
TTREL1
TTREL10
TTREL12
TTREL14
TTREL15
.60
.35
.39
.94
.91
.66
.84
.67
.75
.74
Model Specification
Chi-Square: 45.390
DF: 32
Ratio: 1.418
GFI: .974
AGFI: .955
CFI: .992
TLI: .989
RMSEA: .036
P value: .059

## Appendix 7: Confirmatory analysis for endogenous constructs

| Initial Model | Fit Model |
|---|---|
| Endogenous | Endogenous |
|  |  |
| Model Specification<br>Chi-Square: 539.247<br>DF: 116<br>Ratio: 4.649<br>GFI: .851<br>AGFI: .804<br>CFI: .889<br>TLI: .870<br>RMSEA: .106<br>P value: .000 | Model Specification<br>Chi-Square: 44.921<br>DF: 32<br>Ratio: 1.404<br>GFI: .972<br>AGFI: .951<br>CFI: .994<br>TLI: .991<br>RMSEA: .035<br>P value: .064 |

INT
DEF
ATT
TTINT1
TTINT2
TTINT3
TTINT4
TTRINT5
TTINT6
DEF1
TTDEF2
DEF3
TTDEF4
TTDEF5
DEF6
TTATT1
TTATT2
TTATT3
TTATT4
TTRATT5
e8
e9
e10
e11
e12
e13
e14
e15
e16
e17
e18
e19
e25
e26
e27
e28
e29
-.36
.73
-.34
.91
.86
.91
.64
.37
.73
.83
.92
.83
.41
.13
.54
.76
.83
.76
.88
.74
.56
.58
.69
.57
.77
.55
.25
.83
.89
.71
.81
.43
.69
.80
.50
.66
.19

INT
DEF
ATT
TTINT1
TTINT2
TTINT3
TTINT4
TTINT6
TTDEF2
TTDEF5
DEF6
TTATT1
TTATT4
e8
e9
e10
e11
e13
e15
e18
e19
e25
e28
-.42
.76
-.37
.92
.86
.91
.64
.73
.84
.92
.83
.41
.54
.86
.83
.40
.74
.68
.16
.76
.82
.58
.67

# Appendix 8: Amos Output

## 1. Actual test

## Demographic output

**Statistics**

| | | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N | Valid | 323 | 323 | 323 | 323 | 323 | 323 | 323 | 323 | 323 | 323 |
| | Missing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**S1**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 323 | 100.0 | 100.0 | 100.0 |

**S2**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Citibank | 55 | 17.0 | 17.0 | 17.0 |
| | Maybank Berhad | 90 | 27.9 | 27.9 | 44.9 |
| | CIMB Bank Berhad | 46 | 14.2 | 14.2 | 59.1 |
| | Bank Islam | 72 | 22.3 | 22.3 | 81.4 |
| | Others | 60 | 18.6 | 18.6 | 100.0 |
| | Total | 323 | 100.0 | 100.0 | |

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**S3**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Master Card | 185 | 57.3 | 57.3 | 57.3 |
| | Visa | 134 | 41.5 | 41.5 | 98.8 |
| | Dynasty | 2 | .6 | .6 | 99.4 |
| | Others | 2 | .6 | .6 | 100.0 |
| | Total | 323 | 100.0 | 100.0 | |

**S4**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Less than one(1) year | 37 | 11.5 | 11.5 | 11.5 |
| | Two to three year | 96 | 29.7 | 29.7 | 41.2 |
| | Three to four years | 57 | 17.6 | 17.6 | 58.8 |
| | More than four years | 133 | 41.2 | 41.2 | 100.0 |
| | Total | 323 | 100.0 | 100.0 | |

### S5

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 time | 117 | 36.2 | 36.2 | 36.2 |
| | 2 times | 115 | 35.6 | 35.6 | 71.8 |
| | 3 times | 57 | 17.6 | 17.6 | 89.5 |
| | More than 3 times | 34 | 10.5 | 10.5 | 100.0 |
| | Total | 323 | 100.0 | 100.0 | |

### S6

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Male | 179 | 55.4 | 55.4 | 55.4 |
| | Female | 144 | 44.6 | 44.6 | 100.0 |
| | Total | 323 | 100.0 | 100.0 | |

### S7

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Less than 24 | 15 | 4.6 | 4.6 | 4.6 |
| | 25-34 | 123 | 38.1 | 38.1 | 42.7 |
| | 35-44 | 121 | 37.5 | 37.5 | 80.2 |
| | 45-54 | 52 | 16.1 | 16.1 | 96.3 |
| | More than 55 | 12 | 3.7 | 3.7 | 100.0 |
| | Total | 323 | 100.0 | 100.0 | |

### S8

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Muslim | 323 | 100.0 | 100.0 | 100.0 |

### S9

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Secondary School | 50 | 15.5 | 15.5 | 15.5 |
| | Diploma | 119 | 36.8 | 36.8 | 52.3 |
| | Bachelor's Degree | 115 | 35.6 | 35.6 | 87.9 |
| | Master Degree | 24 | 7.4 | 7.4 | 95.4 |
| | Phd/DBA | 13 | 4.0 | 4.0 | 99.4 |
| | Other | 2 | .6 | .6 | 100.0 |
| | Total | 323 | 100.0 | 100.0 | |

**S10**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | RM1,500 till RM2,499 | 69 | 21.4 | 21.4 | 21.4 |
| | RM2,500 till RM3,499 | 89 | 27.6 | 27.6 | 48.9 |
| | RM3,500 till RM4,499 | 52 | 16.1 | 16.1 | 65.0 |
| | More than RM4,500 | 113 | 35.0 | 35.0 | 100.0 |
| | Total | 323 | 100.0 | 100.0 | |

## Descriptive statistics

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| MDEF | 323 | 1.00 | 7.00 | 3.1383 | 1.55344 |
| MATT | 323 | 1.00 | 7.00 | 5.3573 | 1.28132 |
| MSN | 323 | 1.00 | 7.00 | 5.0801 | 1.28417 |
| MPER | 323 | 1.00 | 7.00 | 5.0390 | 1.12569 |
| MINT | 323 | 1.00 | 7.00 | 5.0387 | 1.08234 |
| MREL | 323 | 1.00 | 7.00 | 5.4994 | 1.04286 |
| Valid N (listwise) | 323 | | | | |

## Response Bias

**Attitude**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| MATT | Equal variances assumed | 1.057 | .305 | .626 | 423 | .532 | .07677 | .12267 | -.16434 | .31788 |
| | Equal variances not assumed | | | .626 | 421.914 | .532 | .07677 | .12265 | -.16431 | .31785 |

## Response Bias

**Attitude**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| MATT | Equal variances assumed | 1.057 | .305 | .626 | 423 | .532 | .07677 | .12267 | -.16434 | .31788 |
| | Equal variances not assumed | | | .626 | 421.914 | .532 | .07677 | .12265 | -.16431 | .31785 |

**Subjective Norm**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| MSN | Equal variances assumed | .005 | .942 | .248 | 423 | .804 | .03086 | .12439 | -.21363 | .27535 |
| | Equal variances not assumed | | | .248 | 422.994 | .804 | .03086 | .12438 | -.21363 | .27535 |

**Perceived Behavior Control**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| MPER | Equal variances assumed | .001 | .973 | -.069 | 423 | .945 | -.00744 | .10840 | -.22051 | .20562 |
| | Equal variances not assumed | | | -.069 | 422.884 | .945 | -.00744 | .10839 | -.22049 | .20561 |

**Religiosity**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| MREL | Equal variances assumed | .020 | .888 | -.289 | 423 | .773 | -.02909 | .10059 | -.22682 | .16864 |
| | Equal variances not assumed | | | -.289 | 422.349 | .773 | -.02909 | .10058 | -.22680 | .16862 |

**Intention**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| MINT | Equal variances assumed | .729 | .394 | .453 | 423 | .650 | .05400 | .11909 | -.18008 | .28808 |
| | Equal variances not assumed | | | .454 | 421.452 | .650 | .05400 | .11907 | -.18005 | .28805 |

**Default**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| MDEF | Equal variances assumed | .684 | .409 | -.702 | 423 | .483 | -.10149 | .14461 | -.38574 | .18276 |
| | Equal variances not assumed | | | -.702 | 420.460 | .483 | -.10149 | .14464 | -.38580 | .18281 |

## Assessment of normality
## Normality before transformed

Assessment of normality (Group number 1) – ori

| Variable | min | max | skew | c.r. | kurtosis | c.r. |
|---|---|---|---|---|---|---|
| SN1 | 1 | 7 | -0.69 | -5.063 | -0.285 | -1.045 |
| REL19 | 1 | 7 | -0.978 | -7.175 | 0.449 | 1.648 |
| REL18 | 1 | 7 | -0.871 | -6.391 | 0.311 | 1.143 |
| REL17 | 1 | 7 | -1.345 | -9.871 | 1.317 | 4.832 |
| REL16 | 1 | 7 | -1.721 | -12.625 | 3.146 | 11.54 |
| REL15 | 1 | 7 | -1.444 | -10.598 | 1.907 | 6.995 |
| REL14 | 1 | 7 | -1.754 | -12.868 | 2.851 | 10.458 |
| REL13 | 1 | 7 | -0.941 | -6.908 | 0.319 | 1.171 |
| REL12 | 1 | 7 | -1.165 | -8.546 | 1.173 | 4.303 |
| REL11 | 1 | 7 | -0.775 | -5.688 | 0.276 | 1.014 |
| REL10 | 1 | 7 | -1.815 | -13.316 | 4.077 | 14.956 |
| REL9 | 1 | 7 | -0.723 | -5.302 | 0.56 | 2.054 |
| REL8 | 1 | 7 | -0.202 | -1.484 | -0.339 | -1.245 |
| REL7 | 1 | 7 | -0.612 | -4.494 | 0.091 | 0.333 |
| REL6 | 1 | 7 | -0.771 | -5.654 | 0.675 | 2.475 |
| REL5 | 1 | 7 | -0.891 | -6.537 | 1.057 | 3.879 |
| REL1 | 1 | 7 | -1.022 | -7.497 | 0.294 | 1.08 |
| REL2 | 1 | 7 | -1.073 | -7.874 | 0.298 | 1.093 |
| REL3 | 1 | 7 | -0.937 | -6.877 | 0.239 | 0.876 |
| REL4 | 1 | 7 | -0.541 | -3.97 | -0.476 | -1.747 |
| RATT5 | 1 | 7 | -0.494 | -3.627 | -1.281 | -4.7 |
| ATT4 | 1 | 7 | -1.138 | -8.348 | 0.975 | 3.576 |
| ATT3 | 1 | 7 | -0.959 | -7.037 | 0.392 | 1.437 |
| ATT2 | 1 | 7 | -1.511 | -11.086 | 2.085 | 7.65 |
| ATT1 | 1 | 7 | -1.078 | -7.909 | 0.671 | 2.461 |
| PER5 | 1 | 7 | -1.049 | -7.693 | 1.028 | 3.771 |
| RPER4 | 1 | 7 | 0.413 | 3.03 | -0.79 | -2.898 |
| PER3 | 1 | 7 | -0.992 | -7.282 | 0.547 | 2.006 |
| PER2 | 1 | 7 | -0.858 | -6.294 | 0.193 | 0.708 |
| PER1 | 1 | 7 | -1.033 | -7.578 | 0.768 | 2.817 |
| DEF6 | 1 | 7 | -0.068 | -0.501 | -1.363 | -5 |
| DEF5 | 1 | 7 | 1.126 | 8.26 | -0.084 | -0.309 |
| DEF4 | 1 | 7 | 0.487 | 3.576 | -1.196 | -4.389 |
| DEF3 | 1 | 7 | 0.141 | 1.035 | -1.323 | -4.854 |
| DEF2 | 1 | 7 | 0.719 | 5.272 | -0.866 | -3.178 |
| DEF1 | 1 | 7 | 0.095 | 0.7 | -1.5 | -5.504 |
| INT6 | 1 | 7 | -1.248 | -9.155 | 0.899 | 3.297 |
| RINT5 | 1 | 7 | -0.637 | -4.672 | -0.93 | -3.414 |
| INT4 | 1 | 7 | -0.919 | -6.744 | -0.048 | -0.176 |
| INT3 | 1 | 7 | -1.226 | -8.996 | 1.247 | 4.574 |
| INT2 | 1 | 7 | -1.205 | -8.845 | 1.361 | 4.995 |
| INT1 | 1 | 7 | -1.26 | -9.242 | 1.311 | 4.811 |
| RSN7 | 1 | 7 | -0.256 | -1.876 | -1.239 | -4.544 |
| SN6 | 1 | 7 | -0.986 | -7.235 | 0.424 | 1.555 |
| SN5 | 1 | 7 | -0.991 | -7.269 | 0.226 | 0.831 |
| SN4 | 1 | 7 | -1.034 | -7.589 | 0.662 | 2.429 |
| SN3 | 1 | 7 | -0.714 | -5.238 | 0.082 | 0.299 |
| SN2 | 1 | 7 | -0.763 | -5.597 | 0.114 | 0.417 |
| Multivariate | | | | | 660.107 | 85.618 |

**Assessment of normality (Group number 1) – ori**

## Assessment of normality (Group number 1)

| Variable | min | max | skew | c.r. | kurtosis | c.r. |
|---|---|---|---|---|---|---|
| SN1 | 1 | 7 | -0.69 | -5.063 | -0.285 | -1.045 |
| REL19 | 1 | 7 | -0.978 | -7.175 | 0.449 | 1.648 |
| REL18 | 1 | 7 | -0.871 | -6.391 | 0.311 | 1.143 |
| REL17 | 1 | 7 | -1.345 | -9.871 | 1.317 | 4.832 |
| REL16 | 1 | 7 | -1.721 | -12.625 | 3.146 | 11.54 |
| REL15 | 1 | 7 | -1.444 | -10.598 | 1.907 | 6.995 |
| REL14 | 1 | 7 | -1.754 | -12.868 | 2.851 | 10.458 |
| REL13 | 1 | 7 | -0.941 | -6.908 | 0.319 | 1.171 |
| REL12 | 1 | 7 | -1.165 | -8.546 | 1.173 | 4.303 |
| REL11 | 1 | 7 | -0.775 | -5.688 | 0.276 | 1.014 |
| REL10 | 1 | 7 | -1.815 | -13.316 | 4.077 | 14.956 |
| REL9 | 1 | 7 | -0.723 | -5.302 | 0.56 | 2.054 |
| REL8 | 1 | 7 | -0.202 | -1.484 | -0.339 | -1.245 |
| REL7 | 1 | 7 | -0.612 | -4.494 | 0.091 | 0.333 |
| REL6 | 1 | 7 | -0.771 | -5.654 | 0.675 | 2.475 |
| REL5 | 1 | 7 | -0.891 | -6.537 | 1.057 | 3.879 |
| REL1 | 1 | 7 | -1.022 | -7.497 | 0.294 | 1.08 |
| REL2 | 1 | 7 | -1.073 | -7.874 | 0.298 | 1.093 |
| REL3 | 1 | 7 | -0.937 | -6.877 | 0.239 | 0.876 |
| REL4 | 1 | 7 | -0.541 | -3.97 | -0.476 | -1.747 |
| RATT5 | 1 | 7 | -0.494 | -3.627 | -1.281 | -4.7 |
| ATT4 | 1 | 7 | -1.138 | -8.348 | 0.975 | 3.576 |
| ATT3 | 1 | 7 | -0.959 | -7.037 | 0.392 | 1.437 |
| ATT2 | 1 | 7 | -1.511 | -11.086 | 2.085 | 7.65 |
| ATT1 | 1 | 7 | -1.078 | -7.909 | 0.671 | 2.461 |
| PER5 | 1 | 7 | -1.049 | -7.693 | 1.028 | 3.771 |
| RPER4 | 1 | 7 | 0.413 | 3.03 | -0.79 | -2.898 |
| PER3 | 1 | 7 | -0.992 | -7.282 | 0.547 | 2.006 |
| PER2 | 1 | 7 | -0.858 | -6.294 | 0.193 | 0.708 |
| PER1 | 1 | 7 | -1.033 | -7.578 | 0.768 | 2.817 |
| DEF6 | 1 | 7 | -0.068 | -0.501 | -1.363 | -5 |
| DEF5 | 1 | 7 | 1.126 | 8.26 | -0.084 | -0.309 |
| DEF4 | 1 | 7 | 0.487 | 3.576 | -1.196 | -4.389 |
| DEF3 | 1 | 7 | 0.141 | 1.035 | -1.323 | -4.854 |
| DEF2 | 1 | 7 | 0.719 | 5.272 | -0.866 | -3.178 |
| DEF1 | 1 | 7 | 0.095 | 0.7 | -1.5 | -5.504 |
| INT6 | 1 | 7 | -1.248 | -9.155 | 0.899 | 3.297 |
| RINT5 | 1 | 7 | -0.637 | -4.672 | -0.93 | -3.414 |
| INT4 | 1 | 7 | -0.919 | -6.744 | -0.048 | -0.176 |
| INT3 | 1 | 7 | -1.226 | -8.996 | 1.247 | 4.574 |
| INT2 | 1 | 7 | -1.205 | -8.845 | 1.361 | 4.995 |
| INT1 | 1 | 7 | -1.26 | -9.242 | 1.311 | 4.811 |
| RSN7 | 1 | 7 | -0.256 | -1.876 | -1.239 | -4.544 |
| SN6 | 1 | 7 | -0.986 | -7.235 | 0.424 | 1.555 |
| SN5 | 1 | 7 | -0.991 | -7.269 | 0.226 | 0.831 |
| SN4 | 1 | 7 | -1.034 | -7.589 | 0.662 | 2.429 |
| SN3 | 1 | 7 | -0.714 | -5.238 | 0.082 | 0.299 |
| SN2 | 1 | 7 | -0.763 | -5.597 | 0.114 | 0.417 |
| Multivariate |  |  |  |  | 660.107 | 85.618 |

**Assessment of normality (Group number 1) – x1**

| Variable | min | max | skew | c.r. | kurtosis | c.r. |
|---|---|---|---|---|---|---|
| TSN1 | 0.008 | 0.878 | -0.277 | -2.036 | -1.347 | -4.94 |
| TREL19 | 0.001 | 0.834 | -0.411 | -3.013 | -1.355 | -4.969 |
| TREL18 | 0.001 | 0.859 | -0.328 | -2.404 | -1.303 | -4.779 |
| TREL17 | 0.001 | 0.788 | -0.637 | -4.671 | -1.124 | -4.124 |
| TREL16 | 0 | 0.779 | -0.699 | -5.129 | -0.882 | -3.237 |
| TREL15 | 0 | 0.803 | -0.597 | -4.382 | -0.991 | -3.635 |
| TREL14 | 0 | 0.766 | -0.793 | -5.821 | -0.747 | -2.74 |
| TREL13 | 0.002 | 0.833 | -0.388 | -2.847 | -1.409 | -5.168 |
| TREL12 | 0.001 | 0.828 | -0.429 | -3.15 | -1.237 | -4.538 |
| TREL11 | 0.002 | 0.865 | -0.191 | -1.405 | -1.43 | -5.245 |
| TREL10 | 0 | 0.79 | -0.601 | -4.408 | -0.909 | -3.335 |
| TREL9 | 0 | 0.887 | -0.139 | -1.019 | -1.357 | -4.977 |
| REL8 | 1 | 7 | -0.202 | -1.484 | -0.339 | -1.245 |
| TREL7 | 0.001 | 0.898 | -0.155 | -1.139 | -1.457 | -5.346 |
| TREL6 | 0 | 0.892 | -0.222 | -1.63 | -1.344 | -4.93 |
| TREL5 | 0 | 0.878 | -0.192 | -1.411 | -1.375 | -5.043 |
| TREL1 | 0.004 | 0.811 | -0.46 | -3.379 | -1.39 | -5.1 |
| TREL2 | 0.005 | 0.813 | -0.541 | -3.973 | -1.232 | -4.518 |
| TREL3 | 0.003 | 0.844 | -0.395 | -2.898 | -1.305 | -4.788 |
| TREL4 | 0.01 | 0.885 | -0.156 | -1.147 | -1.373 | -5.037 |
| TRATT5 | 0.038 | 0.834 | -0.341 | -2.505 | -1.568 | -5.752 |
| TATT4 | 0.002 | 0.844 | -0.435 | -3.19 | -1.154 | -4.233 |
| TATT3 | 0.005 | 0.856 | -0.364 | -2.671 | -1.21 | -4.438 |
| TATT2 | 0.001 | 0.802 | -0.587 | -4.309 | -0.974 | -3.574 |
| TATT1 | 0.001 | 0.836 | -0.46 | -3.378 | -1.186 | -4.349 |
| TPER5 | 0.001 | 0.864 | -0.326 | -2.39 | -1.211 | -4.443 |
| TRPER4 | 0.071 | 0.97 | 0.232 | 1.706 | -1.249 | -4.582 |
| TPER3 | 0.002 | 0.849 | -0.383 | -2.81 | -1.261 | -4.628 |
| TPER2 | 0.003 | 0.86 | -0.329 | -2.417 | -1.308 | -4.798 |
| TPER1 | 0.001 | 0.849 | -0.37 | -2.717 | -1.238 | -4.543 |
| DEF6 | 1 | 7 | -0.068 | -0.501 | -1.363 | -5 |
| TDEF5 | 0.226 | 0.994 | 0.794 | 5.829 | -1.016 | -3.727 |
| TDEF4 | 0.157 | 0.982 | 0.311 | 2.282 | -1.583 | -5.807 |
| DEF3 | 1 | 7 | 0.141 | 1.035 | -1.323 | -4.854 |
| TDEF2 | 0.181 | 0.988 | 0.479 | 3.511 | -1.419 | -5.206 |
| DEF1 | 1 | 7 | 0.095 | 0.7 | -1.5 | -5.504 |
| TINT6 | 0.003 | 0.822 | -0.612 | -4.489 | -0.992 | -3.637 |
| TRINT5 | 0.023 | 0.837 | -0.399 | -2.927 | -1.442 | -5.291 |
| TINT4 | 0.012 | 0.855 | -0.474 | -3.481 | -1.109 | -4.07 |
| TINT3 | 0.001 | 0.832 | -0.508 | -3.728 | -1.1 | -4.037 |
| TINT2 | 0.001 | 0.843 | -0.457 | -3.35 | -1.109 | -4.07 |
| TINT1 | 0.001 | 0.835 | -0.514 | -3.769 | -1.02 | -3.74 |
| RSN7 | 1 | 7 | -0.256 | -1.876 | -1.239 | -4.544 |
| TSN6 | 0.004 | 0.855 | -0.405 | -2.968 | -1.138 | -4.175 |
| TSN5 | 0.005 | 0.838 | -0.473 | -3.474 | -1.18 | -4.328 |
| TSN4 | 0.002 | 0.848 | -0.405 | -2.97 | -1.218 | -4.468 |
| TSN3 | 0.006 | 0.9 | -0.214 | -1.569 | -1.286 | -4.717 |
| TSN2 | 0.006 | 0.888 | -0.239 | -1.756 | -1.267 | -4.646 |
| Multivariate | | | | | 454.52 | 58.953 |

**Assessment of normality (Group number 1) –x2**

## Assessment of normality (Group number 1)

| Variable | min | max | skew | c.r. | kurtosis | c.r. |
|---|---|---|---|---|---|---|
| TTSN1 | 0.042 | 0.887 | -0.181 | -1.331 | -1.615 | -5.924 |
| TTREL19 | 0.036 | 0.853 | -0.325 | -2.383 | -1.541 | -5.652 |
| TTREL18 | 0.037 | 0.875 | -0.234 | -1.714 | -1.543 | -5.661 |
| TTREL17 | 0.028 | 0.816 | -0.474 | -3.48 | -1.425 | -5.228 |
| TTREL16 | 0.021 | 0.817 | -0.455 | -3.336 | -1.314 | -4.819 |
| TTREL15 | 0.025 | 0.837 | -0.396 | -2.906 | -1.365 | -5.006 |
| TTREL14 | 0.019 | 0.805 | -0.526 | -3.856 | -1.281 | -4.7 |
| TTREL13 | 0.038 | 0.852 | -0.309 | -2.269 | -1.588 | -5.824 |
| TTREL12 | 0.031 | 0.854 | -0.297 | -2.183 | -1.502 | -5.51 |
| TREL11 | 0.002 | 0.865 | -0.191 | -1.405 | -1.43 | -5.245 |
| TTREL10 | 0.021 | 0.833 | -0.34 | -2.497 | -1.337 | -4.903 |
| TREL9 | 0 | 0.887 | -0.139 | -1.019 | -1.357 | -4.977 |
| REL8 | 1 | 7 | -0.202 | -1.484 | -0.339 | -1.245 |
| TREL7 | 0.001 | 0.898 | -0.155 | -1.139 | -1.457 | -5.346 |
| TREL6 | 0 | 0.892 | -0.222 | -1.63 | -1.344 | -4.93 |
| TREL5 | 0 | 0.878 | -0.192 | -1.411 | -1.375 | -5.043 |
| TTREL1 | 0.036 | 0.832 | -0.356 | -2.608 | -1.608 | -5.899 |
| TTREL2 | 0.034 | 0.835 | -0.412 | -3.024 | -1.506 | -5.526 |
| TTREL3 | 0.036 | 0.862 | -0.289 | -2.121 | -1.559 | -5.719 |
| TREL4 | 0.01 | 0.885 | -0.156 | -1.147 | -1.373 | -5.037 |
| TTRATT5 | 0.064 | 0.84 | -0.266 | -1.95 | -1.695 | -6.217 |
| TTATT4 | 0.03 | 0.869 | -0.302 | -2.216 | -1.473 | -5.403 |
| TTATT3 | 0.034 | 0.876 | -0.228 | -1.674 | -1.532 | -5.619 |
| TTATT2 | 0.023 | 0.839 | -0.373 | -2.734 | -1.411 | -5.177 |
| TTATT1 | 0.032 | 0.859 | -0.328 | -2.409 | -1.471 | -5.395 |
| TTPER5 | 0.032 | 0.885 | -0.213 | -1.564 | -1.514 | -5.553 |
| TRPER4 | 0.071 | 0.97 | 0.232 | 1.706 | -1.249 | -4.582 |
| TTPER3 | 0.034 | 0.87 | -0.273 | -2.006 | -1.529 | -5.611 |
| TTPER2 | 0.037 | 0.876 | -0.229 | -1.683 | -1.56 | -5.723 |
| TTPER1 | 0.033 | 0.871 | -0.251 | -1.844 | -1.519 | -5.574 |
| DEF6 | 1 | 7 | -0.068 | -0.501 | -1.363 | -5 |
| TTDEF5 | 0.209 | 0.967 | 0.65 | 4.772 | -1.298 | -4.762 |
| TTDEF4 | 0.152 | 0.944 | 0.248 | 1.818 | -1.714 | -6.29 |
| DEF3 | 1 | 7 | 0.141 | 1.035 | -1.323 | -4.854 |
| TTDEF2 | 0.17 | 0.953 | 0.384 | 2.815 | -1.597 | -5.857 |
| DEF1 | 1 | 7 | 0.095 | 0.7 | -1.5 | -5.504 |
| TTINT6 | 0.027 | 0.849 | -0.448 | -3.287 | -1.353 | -4.962 |
| TTRINT5 | 0.052 | 0.846 | -0.303 | -2.221 | -1.627 | -5.968 |
| TTINT4 | 0.036 | 0.872 | -0.314 | -2.303 | -1.472 | -5.4 |
| TTINT3 | 0.029 | 0.859 | -0.369 | -2.709 | -1.397 | -5.125 |
| TTINT2 | 0.029 | 0.869 | -0.324 | -2.381 | -1.415 | -5.189 |
| TTINT1 | 0.027 | 0.864 | -0.35 | -2.567 | -1.384 | -5.076 |
| RSN7 | 1 | 7 | -0.256 | -1.876 | -1.239 | -4.544 |
| TTSN6 | 0.033 | 0.875 | -0.251 | -1.842 | -1.477 | -5.418 |
| TTSN5 | 0.034 | 0.858 | -0.329 | -2.417 | -1.482 | -5.438 |
| TTSN4 | 0.033 | 0.87 | -0.286 | -2.1 | -1.503 | -5.515 |
| TSN3 | 0.006 | 0.9 | -0.214 | -1.569 | -1.286 | -4.717 |
| TSN2 | 0.006 | 0.888 | -0.239 | -1.756 | -1.267 | -4.646 |
| Multivariate | | | | | 433.819 | 56.268 |

## Reliability

**Attitude**

| Cronbach's Alpha | N of Items |
|---|---|
| .837 | 5 |

**Subjective Norm**

| Cronbach's Alpha | N of Items |
|---|---|
| .893 | 7 |

**Perceived Behavior Control**

| Cronbach's Alpha | N of Items |
|---|---|
| .788 | 5 |

**Intention**

| Cronbach's Alpha | N of Items |
|---|---|
| .850 | 6 |

**Religiosity**

| Cronbach's Alpha | N of Items |
|---|---|
| .946 | 19 |

**Default**

| Cronbach's Alpha | N of Items |
|---|---|
| .883 | 6 |

## Composite Reliability

$$CR= \frac{(\sum fL)^2}{(\sum fL)^2 + \sum e}$$

**Standardized Regression Weights: (Group number 1 - Default model)**

| | | | Estimate |
|---|---|---|---|
| INT | <--- | SN | 0.268 |
| INT | <--- | PER | 0.609 |
| ATT | <--- | PER | 0.305 |
| ATT | <--- | SN | 0.575 |
| ATT | <--- | REL | 0.05 |
| INT | <--- | REL | 0.19 |
| DEF | <--- | SN | -0.504 |
| DEF | <--- | PER | -0.258 |
| DEF | <--- | ATT | 0.489 |
| DEF | <--- | INT | -0.098 |
| DEF | <--- | REL | -0.106 |
| TTSN4 | <--- | SN | 0.868 |
| RSN7 | <--- | SN | 0.085 |
| TTTINT3 | <--- | INT | 0.93 |
| TTINT4 | <--- | INT | 0.589 |
| TTDEF2 | <--- | DEF | 0.898 |
| TDEF4 | <--- | DEF | 0.761 |
| TTTDEF 5 | <--- | DEF | 0.797 |
| TTPER1 | <--- | PER | 0.915 |
| TPER2 | <--- | PER | 0.909 |
| TTPER3 | <--- | PER | 0.943 |
| TTATT1 | <--- | ATT | 0.838 |
| TATT3 | <--- | ATT | 0.764 |
| TTTREL 10 | <--- | REL | 0.859 |
| TTTREL 14 | <--- | REL | 0.723 |
| TTTREL 17 | <--- | REL | 0.65 |

**Standard error -** Regression Weights: (Group number 1 - Default model)

| | | | Estimate | S.E. | C.R. | P | Label |
|---|---|---|---|---|---|---|---|
| INT | <--- | SN | 0.291 | 0.095 | 3.077 | 0.002 | par_7 |
| INT | <--- | PER | 0.629 | 0.068 | 9.279 | *** | par_10 |
| ATT | <--- | PER | 0.278 | 0.11 | 2.522 | 0.012 | par_12 |
| ATT | <--- | SN | | 0.175 | 3.151 | 0.002 | par_13 |
| ATT | <--- | REL | 0.05 | 0.065 | 0.771 | 0.441 | par_20 |
| INT | <--- | REL | 0.216 | 0.051 | 4.254 | *** | par_21 |
| DEF | <--- | SN | -0.534 | 0.321 | -1.663 | 0.096 | par_8 |
| DEF | <--- | PER | -0.259 | 0.148 | -1.754 | 0.08 | par_9 |
| DEF | <--- | ATT | 0.539 | 0.235 | 2.289 | 0.022 | par_14 |
| DEF | <--- | INT | -0.096 | 0.197 | -0.487 | 0.626 | par_15 |
| DEF | <--- | REL | -0.117 | 0.087 | -1.345 | 0.179 | par_19 |
| TTSN4 | <--- | SN | 1 | | | | |
| RSN7 | <--- | SN | 0.649 | 0.476 | 1.364 | 0.172 | par_1 |
| TTTINT3 | <--- | INT | 1 | | | | |
| TTINT4 | <--- | INT | 0.62 | 0.053 | 11.634 | *** | par_2 |
| TTDEF2 | <--- | DEF | 1 | | | | |
| TDEF4 | <--- | DEF | 0.833 | 0.052 | 16.056 | *** | par_3 |
| TTTDEF5 | <--- | DEF | 0.882 | 0.054 | 16.195 | *** | par_4 |
| TTPER1 | <--- | PER | 1 | | | | |
| TPER2 | <--- | PER | 0.926 | 0.033 | 28.422 | *** | par_5 |
| TTPER3 | <--- | PER | 1.033 | 0.033 | 30.897 | *** | par_6 |
| TTATT1 | <--- | ATT | 1 | | | | |
| TATT3 | <--- | ATT | 0.837 | 0.06 | 14.054 | *** | par_11 |
| TTTREL10 | <--- | REL | 1 | | | | |
| TTTREL14 | <--- | REL | 0.838 | 0.069 | 12.117 | *** | par_22 |
| TTTREL17 | <--- | REL | 0.777 | 0.067 | 11.616 | *** | par_23 |

**Factor loading (individual construct before fit)**

Attitude

**Standardized Regression Weights: (Group number 1 - Default model)**

| | | | Estimate |
|---|---|---|---|
| TTATT1 | <--- | ATT | 0.841 |
| TTATT2 | <--- | ATT | 0.905 |
| TTATT3 | <--- | ATT | 0.699 |
| TTATT4 | <--- | ATT | 0.802 |
| TTRATT5 | <--- | ATT | 0.418 |

Subjective Norm

**Standardized Regression Weights: (Group number 1 - Default model)**

| | | | Estimate |
|---|---|---|---|
| TSN2 | <--- | SN | 0.847 |
| TSN3 | <--- | SN | 0.826 |
| TTSN4 | <--- | SN | 0.849 |
| TTSN5 | <--- | SN | 0.912 |
| TTSN6 | <--- | SN | 0.900 |
| RSN7 | <--- | SN | 0.098 |
| TTSN1 | <--- | SN | 0.817 |

Perceived Behavior Control

**Standardized Regression Weights: (Group number 1 - Default model)**

| | | | Estimate |
|---|---|---|---|
| TTPER1 | <--- | PER | 0.908 |
| TTPER2 | <--- | PER | 0.920 |
| TTPER3 | <--- | PER | 0.944 |
| TRPER4 | <--- | PER | -0.134 |
| TTPER5 | <--- | PER | 0.827 |

Intention

**Standardized Regression Weights: (Group number 1 - Default model)**

| | | | Estimate |
|---|---|---|---|
| TTINT1 | <--- | INT | 0.914 |
| TTINT2 | <--- | INT | 0.959 |
| TTINT3 | <--- | INT | 0.914 |
| TTINT4 | <--- | INT | 0.643 |
| TTRINT5 | <--- | INT | 0.352 |
| TTINT6 | <--- | INT | 0.731 |

Religiosity

**Standardized Regression Weights: (Group number 1 - Default model)**

| | | | Estimate |
|---|---|---|---|
| TREL4 | <--- | REL | 0.535 |
| TTREL3 | <--- | REL | 0.650 |
| TTREL2 | <--- | REL | 0.742 |
| TTREL1 | <--- | REL | 0.766 |
| TREL5 | <--- | REL | 0.767 |
| TREL6 | <--- | REL | 0.748 |
| TREL7 | <--- | REL | 0.723 |
| REL8 | <--- | REL | 0.587 |
| TREL9 | <--- | REL | 0.737 |
| TTREL10 | <--- | REL | 0.753 |
| TREL11 | <--- | REL | 0.594 |
| TTREL12 | <--- | REL | 0.670 |
| TTREL13 | <--- | REL | 0.604 |
| TTREL14 | <--- | REL | 0.612 |
| TTREL15 | <--- | REL | 0.686 |
| TTREL16 | <--- | REL | 0.733 |
| TTREL17 | <--- | REL | 0.649 |
| TTREL18 | <--- | REL | 0.690 |
| TTREL19 | <--- | REL | 0.753 |

Default

**Standardized Regression Weights: (Group number 1 - Default model)**

| | | | Estimate |
|---|---|---|---|
| DEF1 | <--- | DEF | 0.765 |
| TTDEF2 | <--- | DEF | 0.826 |
| DEF3 | <--- | DEF | 0.764 |
| TTDEF4 | <--- | DEF | 0.875 |
| TTDEF5 | <--- | DEF | 0.730 |
| DEF6 | <--- | DEF | 0.501 |

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**Factor loading (individual construct after fit)**

Attitude

Standardized Regression Weights: (Group number 1 - Default model)

| | | | Estimate |
|---|---|---|---|
| TTATT1 | <--- | ATT | 0.799 |
| TTATT2 | <--- | ATT | 0.965 |
| TTATT4 | <--- | ATT | 0.767 |
| TTRATT5 | <--- | ATT | 0.434 |

Subjective norm

Standardized Regression Weights: (Group number 1 - Default model)

| | | | Estimate |
|---|---|---|---|
| TTSN4 | <--- | SN | 0.857 |
| TTSN5 | <--- | SN | 0.973 |
| TTSN6 | <--- | SN | 0.900 |
| RSN7 | <--- | SN | 0.075 |

Perceived Behavior Control

Standardized Regression Weights: (Group number 1 - Default model)

| | | | Estimate |
|---|---|---|---|
| TTPER2 | <--- | PER | 0.902 |
| TTPER3 | <--- | PER | 0.953 |
| TRPER4 | <--- | PER | -0.155 |
| TTPER5 | <--- | PER | 0.839 |

Intention

**Standardized Regression Weights: (Group number 1 - Default model)**

| | | | Estimate |
|---|---|---|---|
| TTINT1 | <--- | INT | 0.914 |
| TTINT2 | <--- | INT | 0.960 |
| TTINT3 | <--- | INT | 0.913 |
| TTINT4 | <--- | INT | 0.646 |
| TTINT6 | <--- | INT | 0.730 |

Religiosity

**Standardized Regression Weights: (Group number 1 - Default model)**

| | | | Estimate |
|---|---|---|---|
| TTREL1 | <--- | REL | 0.697 |
| TTREL10 | <--- | REL | 0.819 |
| TTREL12 | <--- | REL | 0.690 |
| TTREL16 | <--- | REL | 0.801 |
| TTREL19 | <--- | REL | 0.752 |

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Default

**Standardized Regression Weights: (Group number 1 - Default model)**

| | | | Estimate |
|---|---|---|---|
| DEF1 | <--- | DEF | 0.757 |
| TTDEF2 | <--- | DEF | 0.840 |
| TTDEF4 | <--- | DEF | 0.865 |
| DEF6 | <--- | DEF | 0.488 |

# 1.22 Sistem Perbankan: Pinjaman Tak Berbayar/Pinjaman Terjejas Mengikut Tujuan
## Banking System: Non-Performing/Impaired Loans by Purpose

RM juta / *RM million*

| Tujuan *Purpose* | | Pembelian sekuriti *Purchase of securities* | Pembelian kenderaan pengangkutan *Purchase of transport vehicle* | yang mana: Pembelian kereta penumpang *of which: Purchase of passenger cars* | Pembelian harta kediaman *Purchase of residential property* | Pembelian harta bukan kediaman *Purchase of non-residential property* | Pembelian aset tetap selain tanah dan bangunan *Purchase of fixed assets other than land and building* | Kegunaan persendirian *Personal uses* | Kad kredit[1] *Credit cards*[1] | Pembelian barangan pengguna *Purchase of consumer durable goods* | Pembinaan *Construction* | Modal kerja *Working capital* | Tujuan lain *Other purpose* | Jumlah pinjaman tak berbayar/ pinjaman terjejas *Total non-performing/ impaired loans* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015[2] | 1 | 254.4 | 2,011.2 | 1,819.8 | 4,949.4 | 1,586.8 | 182.8 | 1,036.9 | 434.6 | 8.4 | 2,252.8 | 8,448.2 | 1,143.8 | 22,309.4 |
| | 2 | 380.9 | 2,076.4 | 1,882.1 | 5,190.4 | 1,581.5 | 182.8 | 1,054.1 | 455.6 | 10.2 | 2,259.3 | 8,217.6 | 1,149.1 | 22,557.9 |
| | 3 | 462.0 | 1,902.0 | 1,719.2 | 5,059.4 | 1,554.2 | 180.6 | 1,028.3 | 442.0 | 11.0 | 2,266.5 | 8,165.8 | 1,148.6 | 22,220.3 |
| | 4 | 229.0 | 1,896.8 | 1,714.9 | 4,953.9 | 1,525.9 | 191.7 | 979.9 | 437.3 | 11.7 | 2,288.5 | 7,520.9 | 1,304.7 | 21,320.2 |
| | 5 | 216.6 | 1,903.3 | 1,769.7 | 4,990.7 | 1,548.9 | 170.0 | 1,096.2 | 448.4 | 2.4 | 2,371.0 | 7,745.1 | 1,429.9 | 21,922.5 |
| | 6 | 376.0 | 1,787.1 | 1,661.6 | 5,056.2 | 1,625.2 | 162.3 | 1,050.2 | 447.5 | 2.1 | 2,434.0 | 8,182.6 | 1,401.7 | 22,524.9 |
| | 7 | 326.7 | 1,805.3 | 1,682.6 | 5,060.1 | 1,716.2 | 163.5 | 1,094.2 | 452.5 | 1.7 | 3,105.4 | 7,501.9 | 1,396.0 | 22,623.5 |
| | 8 | 323.3 | 1,870.2 | 1,744.0 | 5,079.0 | 1,733.9 | 168.2 | 1,117.8 | 465.9 | 1.9 | 2,492.5 | 8,008.3 | 1,408.7 | 22,669.5 |
| | 9 | 341.0 | 1,751.1 | 1,633.4 | 5,159.6 | 1,877.0 | 166.8 | 1,126.6 | 469.1 | 2.0 | 2,482.4 | 8,327.3 | 1,402.7 | 23,105.6 |
| | 10 | 327.4 | 1,748.4 | 1,643.9 | 5,046.2 | 1,892.3 | 187.8 | 1,169.9 | 474.3 | 1.8 | 2,490.9 | 8,120.1 | 1,407.4 | 22,866.4 |
| | 11 | 329.6 | 1,789.2 | 1,667.7 | 5,094.8 | 1,831.6 | 174.3 | 1,187.3 | 476.4 | 1.8 | 2,521.5 | 8,198.3 | 1,412.2 | 23,017.0 |
| | 12 | 372.9 | 1,616.6 | 1,512.8 | 5,030.2 | 1,786.5 | 174.7 | 1,191.7 | 479.8 | 1.4 | 2,494.4 | 8,432.0 | 1,522.3 | 23,102.5 |
| 2016 | 1 | 333.7 | 1,786.8 | 1,543.4 | 5,087.5 | 1,913.6 | 182.2 | 1,206.5 | 489.2 | 1.5 | 2,967.2 | 7,803.7 | 1,507.3 | 23,279.2 |
| | 2 | 345.4 | 1,817.8 | 1,586.2 | 5,264.2 | 1,956.9 | 192.5 | 1,280.2 | 520.7 | 1.3 | 2,978.9 | 8,112.5 | 1,301.4 | 23,771.7 |
| | 3 | 328.9 | 1,658.0 | 1,411.4 | 5,045.3 | 1,955.6 | 165.9 | 1,210.7 | 492.1 | 1.9 | 3,008.8 | 8,036.6 | 1,291.9 | 23,195.7 |
| | 4 | 418.5 | 1,699.5 | 1,448.0 | 5,068.8 | 1,963.7 | 118.2 | 1,288.9 | 490.2 | 1.3 | 3,005.1 | 7,893.1 | 1,288.9 | 23,236.4 |
| | 5 | 416.8 | 1,775.0 | 1,525.1 | 5,143.6 | 2,045.2 | 125.9 | 1,270.6 | 487.2 | 1.7 | 3,306.6 | 8,174.0 | 1,256.7 | 24,003.4 |
| | 6 | 409.9 | 1,647.4 | 1,404.3 | 5,107.3 | 2,023.0 | 105.6 | 1,228.9 | 483.9 | 2.2 | 3,367.9 | 8,624.4 | 1,201.1 | 24,201.5 |
| | 7 | 427.5 | 1,737.5 | 1,482.9 | 5,221.2 | 2,057.5 | 103.2 | 1,366.7 | 487.2 | 1.6 | 3,277.7 | 8,939.9 | 1,091.0 | 24,711.0 |
| | 8 | 300.7 | 1,738.0 | 1,486.4 | 5,219.6 | 2,026.9 | 98.9 | 1,375.2 | 488.0 | 1.6 | 3,258.5 | 8,792.0 | 1,105.3 | 24,404.5 |

Nota: Perolehan jumlah tidak semestinya sama dengan jumlah besar disebabkan oleh penghampiran angka. Berkuatkuasa April 2006, berikutan daripada pengelasan semula Sistem Statistik Institusi Perbankan (FISS), pinjaman/pembiayaan mengikut sektor ekonomi/industri meliputi pelanggan bukan isirumah, manakala pinjaman mengikut tujuan pula meliputi pinjaman kepada semua pelanggan. Oleh itu, pinjaman tidak berbayar kepada bukan isirumah akan ditunjukkan dalam sektor ekonomi/industri dan tujuan.

1 Termasuk transaksi kad kredit dan kad caj institusi-institusi perbankan

2 Mulai bulan Januari 2010, pinjaman dilaporkan berdasarkan Financial Reporting Standards (FRS) 139. Penggunaan FRS139 adalah berdasarkan tahun kewangan bank.

t.d.d.l. tidak diklasifikasikan di tempat lain

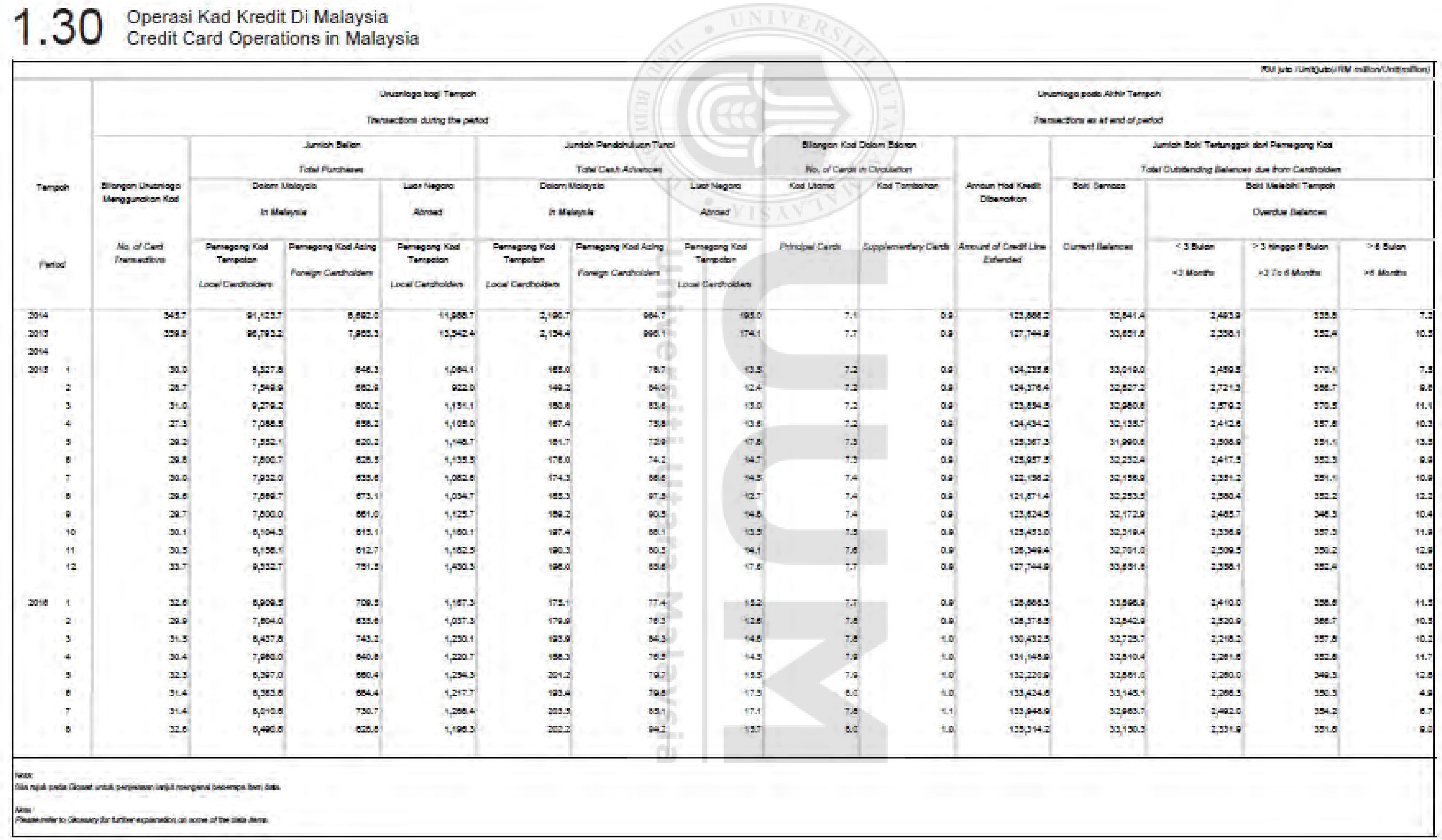
*Note: Numbers may not necessarily add up due to rounding.*
*Beginning April 2006, following reclassifications under the Financial Institutions Statistical System (FISS), loans/financing by economic sector/industry encompasses non-household customers while loans by purpose encompasses loans to all customers. Therefore, a loan to non-household customer will be reflected in both economic sector/industry and purpose.*

*1 Includes credit and charge card transaction of the banking institutions*

*2 Beginning January 2010, loans are reported based on Financial Reporting Standards (FRS) 139. The adoption of FRS139 requirement is based on the financial year of the banks.*

*n.e.c. not elsewhere classified*

Appendix 9: Bank Negara Malaysia Reports



# 1.30 Operasi Kad Kredit Di Malaysia
## Credit Card Operations in Malaysia

RM juta / Unit(juta) / RM million/Unit(million)

| Tempoh<br>Period | | Urusniaga bagi Tempoh<br>Transactions during the period | | | | | | Urusniaga pada Akhir Tempoh<br>Transactions as at end of period | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bilangan Urusniaga Menggunakan Kad<br>No. of Card Transactions | Jumlah Belian<br>Total Purchases | | | Jumlah Pendahuluan Tunai<br>Total Cash Advances | | | Bilangan Kad Dalam Edaran<br>No. of Cards in Circulation | | Amaun Had Kredit Diberikan<br>Amount of Credit Line Extended | Jumlah Baki Tertunggak dari Pemegang Kad<br>Total Outstanding Balances due from Cardholders | | | |
| | | Dalam Malaysia<br>In Malaysia | | Luar Negara<br>Abroad | Dalam Malaysia<br>In Malaysia | | Luar Negara<br>Abroad | Kad Utama<br>Principal Cards | Kad Tambahan<br>Supplementary Cards | | Baki Semasa<br>Current Balances | Baki Melebihi Tempoh<br>Overdue Balances | | |
| | | Pemegang Kad Tempatan<br>Local Cardholders | Pemegang Kad Asing<br>Foreign Cardholders | Pemegang Kad Tempatan<br>Local Cardholders | Pemegang Kad Tempatan<br>Local Cardholders | Pemegang Kad Asing<br>Foreign Cardholders | Pemegang Kad Tempatan<br>Local Cardholders | | | | | < 3 Bulan<br><3 Months | > 3 Hingga 6 Bulan<br>>3 To 6 Months | > 6 Bulan<br>>6 Months |
| 2014 | 345.7 | 91,123.7 | 8,892.0 | 11,888.7 | 2,190.7 | 984.7 | 195.0 | 7.1 | 0.9 | 123,888.2 | 32,841.4 | 2,493.9 | 335.8 | 7.2 |
| 2015 | 359.8 | 96,793.2 | 7,965.3 | 13,542.4 | 2,154.4 | 996.1 | 174.1 | 7.7 | 0.9 | 127,744.9 | 33,651.6 | 2,356.1 | 352.4 | 10.5 |
| 2014 | | | | | | | | | | | | | | |
| 2015 1 | 30.0 | 8,327.8 | 846.3 | 1,084.1 | 185.0 | 78.7 | 13.5 | 7.2 | 0.9 | 124,235.8 | 33,019.0 | 2,459.5 | 370.1 | 7.5 |
| 2 | 28.7 | 7,549.9 | 682.9 | 922.0 | 149.2 | 84.0 | 12.4 | 7.2 | 0.9 | 124,376.4 | 32,827.2 | 2,721.3 | 386.7 | 9.6 |
| 3 | 31.0 | 9,279.2 | 800.2 | 1,131.1 | 180.8 | 83.6 | 13.0 | 7.2 | 0.9 | 123,694.5 | 32,960.8 | 2,579.2 | 379.5 | 11.1 |
| 4 | 27.3 | 7,088.5 | 858.2 | 1,108.0 | 167.4 | 75.8 | 13.6 | 7.2 | 0.9 | 124,434.2 | 32,133.7 | 2,412.6 | 357.6 | 10.3 |
| 5 | 29.2 | 7,552.1 | 620.2 | 1,148.7 | 181.7 | 72.9 | 17.8 | 7.3 | 0.9 | 125,367.3 | 31,990.6 | 2,506.9 | 351.1 | 13.5 |
| 6 | 29.8 | 7,800.7 | 628.5 | 1,135.5 | 176.0 | 74.2 | 14.7 | 7.3 | 0.9 | 125,957.5 | 32,232.4 | 2,417.5 | 352.3 | 9.9 |
| 7 | 30.0 | 7,932.0 | 633.6 | 1,082.6 | 174.3 | 68.8 | 14.5 | 7.4 | 0.9 | 122,156.2 | 32,158.9 | 2,351.2 | 351.1 | 10.9 |
| 8 | 29.6 | 7,869.7 | 673.1 | 1,034.7 | 165.3 | 97.5 | 12.7 | 7.4 | 0.9 | 121,871.4 | 32,253.5 | 2,560.4 | 352.2 | 12.2 |
| 9 | 29.7 | 7,800.0 | 661.0 | 1,125.7 | 169.2 | 90.5 | 14.8 | 7.4 | 0.9 | 123,624.5 | 32,172.9 | 2,465.7 | 346.3 | 10.4 |
| 10 | 30.1 | 8,104.3 | 615.1 | 1,160.1 | 197.4 | 88.1 | 13.5 | 7.5 | 0.9 | 125,453.0 | 32,319.4 | 2,336.9 | 357.3 | 11.9 |
| 11 | 30.5 | 8,158.1 | 612.7 | 1,182.5 | 190.3 | 80.2 | 14.1 | 7.6 | 0.9 | 126,349.4 | 32,701.0 | 2,509.5 | 350.2 | 12.9 |
| 12 | 33.7 | 9,332.7 | 751.5 | 1,430.3 | 196.0 | 83.6 | 17.6 | 7.7 | 0.9 | 127,744.9 | 33,651.6 | 2,356.1 | 352.4 | 10.5 |
| 2016 1 | 32.6 | 8,909.5 | 709.5 | 1,167.3 | 173.1 | 77.4 | 15.2 | 7.7 | 0.9 | 128,888.3 | 33,596.9 | 2,410.0 | 356.6 | 11.5 |
| 2 | 29.9 | 7,804.0 | 633.6 | 1,037.3 | 179.9 | 76.3 | 12.6 | 7.8 | 0.9 | 128,378.5 | 32,842.9 | 2,520.9 | 366.7 | 10.5 |
| 3 | 31.5 | 8,437.8 | 743.2 | 1,230.1 | 193.9 | 84.3 | 14.6 | 7.8 | 1.0 | 130,432.5 | 32,725.7 | 2,218.2 | 357.8 | 10.2 |
| 4 | 30.4 | 7,960.0 | 840.6 | 1,220.7 | 186.3 | 76.5 | 14.3 | 7.9 | 1.0 | 131,146.9 | 32,510.4 | 2,261.6 | 352.6 | 11.7 |
| 5 | 32.3 | 8,397.0 | 880.4 | 1,294.3 | 201.2 | 79.7 | 15.5 | 7.9 | 1.0 | 132,220.9 | 32,881.0 | 2,260.0 | 349.3 | 12.8 |
| 6 | 31.4 | 8,383.6 | 684.4 | 1,217.7 | 193.4 | 79.8 | 17.3 | 8.0 | 1.0 | 133,424.6 | 33,145.1 | 2,266.3 | 350.3 | 4.9 |
| 7 | 31.4 | 8,010.6 | 730.7 | 1,268.4 | 203.5 | 85.1 | 17.1 | 7.8 | 1.1 | 133,848.9 | 32,863.7 | 2,492.0 | 354.2 | 6.7 |
| 8 | 32.6 | 8,490.6 | 828.6 | 1,198.3 | 202.2 | 94.2 | 15.7 | 8.0 | 1.0 | 135,314.2 | 33,150.3 | 2,331.9 | 351.6 | 9.0 |

Nota:
Sila rujuk pada Glosari untuk penjelasan lanjut mengenai beberapa item data.

Note:
Please refer to Glossary for further explanation on some of the data items.