

Credit Cardholder: Convenience User or Credit Revolver?

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Abstract: The credit card is a double-edged sword. Credit facilities offered by a credit card, which provide liquidity for unforeseen circumstances, can also tempt its holder to overspend. This paper investigates the factors that distinguish a cardholder who uses the credit card as a convenient payment tool from a cardholder who uses the credit card as a credit instrument. It is found that socio-economic variables are significant in profiling the type of credit card user. Credit education is also found to be important in shaping a responsible usage of credit cards.

Keywords: Credit card, consumer credit and revolving credit
JEL classification: D12, D14, E51

1. Introduction

In today's economy, making payments using a payment card has become part and parcel of modern day living. The credit card is distinctively different from the other payment cards such as the charge cards, debit cards and electronic purses.¹ Although both credit cards and charge cards are referred to as 'pay later' cards, the two cards are different. Credit card is considered a revolving credit instrument where its holder can roll over its outstanding balance to the following month and interest will be charged on the outstanding balance. On the other hand, charge cardholders must settle the full amount of balances at the end of each month.

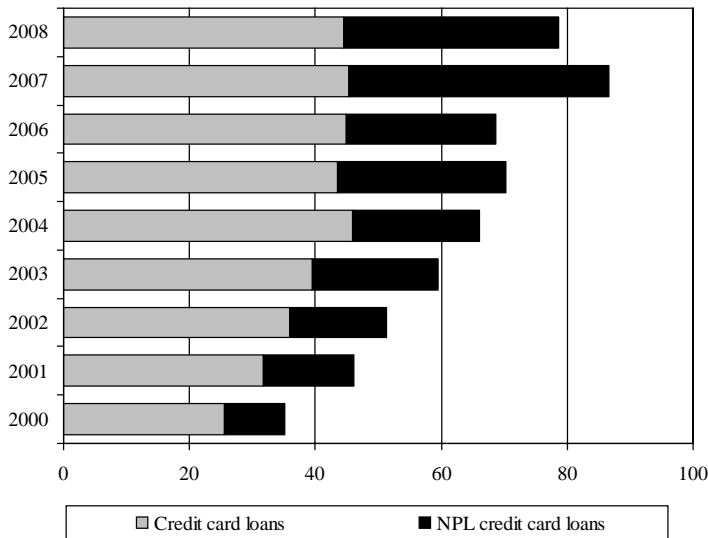
The revolving credit feature of the credit card makes it an interesting subject in the study of consumer credit. Through credit card usage, consumers are able to gain easy access to credit which was not possible previously. The automatic credit extended to each eligible credit cardholder can tempt cardholders to lead a 'buy today, pay later' lifestyle. The credit facilities offered in credit card usage is only one of the features that make it popular among consumers. Other advantages offered by credit card usage are the convenience and security of making payments without carrying large amounts of cash around, warranty

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¹ Debit cards are known as a 'pay now cards'; electronic purses are usually pre-paid cards while credit cards and charge cards are 'pay later cards'.



Source: Bank Negara Malaysia, Credit Card Operations in Malaysia, Monthly Statistical Bulletin, June 2008; Bank Negara Malaysia, Commercial Banks: Non performing loans by Sector, Monthly Statistical Bulletin, June 2002, June 2005, June 2006 and June 2008.

Figure 1: Percentage of credit card debts to total consumer debts and percentage of non performing credit card debts to total non performing consumer debts in Malaysia (2000- 2008)

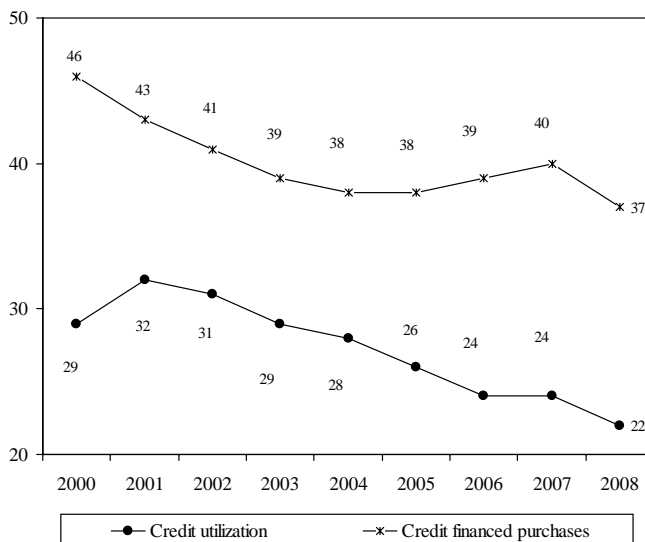
protection in the merchandise purchased, emergency cash advance, cash rebates and rewards redemption points, 24-hour customer service and interest-free instalment plans.

Figure 1 shows that credit card debts and non performing credit card debts have been gradually increasing in Malaysia from the year 2000 to 2008. The gradual upward trend in the fraction of the credit card debts relative to total consumer debts (excluding housing loans) and the higher percentage of non performing credit card debts to non-performing total consumer credit is definitely a concern to monetary authorities and policy makers.²

The ratio of credit card debts to the total consumer credit (excluding housing loans) also increased steadily from 25.5 to 45 per cent over the same period. While the upward trend may be alarming, further investigation found that the increasing share of credit card debts to the total consumer credit is largely due to the shift in consumer durables credit to credit card. The shift is possibly due to the many interest-free instalment plans jointly

² Cheah (2006) and Tam (2006) have both reported that Malaysian Domestic Trade and Consumer Affairs Secretary-General, Datuk Seri Talaat Husain, and the Assistant Governor of Bank Negara Malaysia, Datuk Mohd Razif Abdul Kadir, have voiced serious concerns over the changing lifestyle of Malaysians living on credit. Since its establishment in May 2006, Credit Counselling and Debt Management Agency (AKPK) found that 31 per cent of those who have approached the agency for assistance have problem settling their credit card debts. Further, Ng (2009) reported that as of May 2009, of the 454 Malaysians who were declared bankrupt due to credit card debts, 46.04% were below 30 years old.

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Source: Bank Negara Malaysia, Credit Card Operations in Malaysia, Monthly Statistical Bulletin, June 2008, June 2009.

Figure 2: Credit utilisation (%) and percentage of credit financed purchases

offered by the credit card issuers and retail outlets for the purchase of durable goods when these purchases are made using credit cards.

Further, on analysing the trends in credit utilisation of credit cards and the fraction of credit card purchases which are credit financed, the concern over the increasing credit card debts and non performing credit card debts problems appear to be over hyped. Figure 2 shows the trend of credit utilisation of credit cards and the percentage of credit financed purchases which is referred to as the fraction of credit card debts to total credit card purchases.

Credit utilisation is measured as the percentage of total outstanding credit card debts against the total credit limit extended. Total credit limit extended has increased over the years following the increase in the number of credit cards in circulation. The number of credit cards in circulation has increased drastically from 2.82 million in 2000 to 10.812 million in 2008. From Figure 2, it is clear that despite the increase in credit limit extended from RM 22,430 million in 2000 to RM 101,853.1 million in 2008, credit utilisation of the credit cards has in fact decreased. Further, the fraction of credit card purchases that is credit financed has also decreased.

The analysis on the credit card data appears to give mixed signals on the severity of the credit card debt and the interpretation of the data very much depends on how one wants to read it. Is the introduction of credit card into the payment landscape a curse or a gift to consumers and policy makers? Is it tempting consumers to live on credit or is it making payment more convenient for consumers and cost efficient for payment providers? Credit card issuers also run into risk with increasing credit card debts as credit card debts are

considered as unsecured loans. One of the ways to control credit card debt problems is to understand the characteristics and perception of credit cardholders through their monthly credit card bill payments habits. What distinguishes a credit cardholder from another in the way the credit card is used?

Several studies have been conducted on profiling consumers and their credit card usage habits such as the extent of credit card expenditure, the extent of credit cards debt and also the ownership of credit cards.³ However, little has been done on the analysis of consumer motivation towards using the credit card with the exception of the studies by Kim and DeVaney (2001), Lee and Kwon (2002) and King (2004).

This paper extends from these studies in several ways. First, this study takes into account the credit cardholders' awareness and knowledge of the fee structure imposed by the credit card issuers on the various credit card facilities. To our best knowledge, so far no studies on the credit card have taken this factor into account when examining credit card usage. Second, this study assumes that most individuals hold more than one loan portfolio. Hence, instead of investigating the obvious which is 'more loan commitments would lead to a higher likelihood of not being able to settle the monthly credit card bill in full', this study attempts to investigate if different types of loan portfolios would have an effect on the credit cardholders' repayment habit. Third, the majority of the existing credit card studies are conducted using data from the Survey of Consumer Finance (SCF) in the USA and little is known if Asian credit cardholders behave in the same way as the Americans. Despite the concerns on the upward trend in credit card debts in Malaysia, there has not been a study carried out on Malaysian credit cardholders.

The study uses a logistic regression model to analyse if the credit cardholder's monthly bill payment habit indicates if the cardholder uses the credit card as a payment instrument or as a credit instrument.

2. Credit Cards in Malaysia

Credit cards were first introduced in Malaysia in the 1970s. Before the Asian crisis in 1997, credit cards applicants must earn a minimum annual income of RM24,000 and be in active employment for three months when application for credit card is submitted. After the Asian crisis in 1997, Bank Negara Malaysia (the Central Bank of Malaysia) relaxed the income requirement to a minimum of RM18,000 per annum to help ease liquidity problems among the consumers.

Credit cardholders must pay a minimum of 5 per cent of their monthly transactions or RM 50 whichever is higher. Any outstanding payment will be charged 18 per cent interest rate per annum (1.5% per month). Late payment charges will be imposed at the rate of 1% of the minimum payment if the credit cardholder fails to make the minimum payment by payment due date. Credit cardholders are given a 20-day interest free period to enjoy all retail

³ For literature on the extent of credit card usage and credit card debts, see Johnston 2007; Jin and DeVaney 2005; Rui and DeVaney 2005; Castronova and Hagstrom 2004; Min and Kim 2003; Stavins 2001; Chien and DeVaney 2001; Durkin 2000; Delener and Katzenstein 1994. For literature on credit cards ownership, see Durkin (2000), Kaynak *et al.* (1994), Duca and Whitesell 1995, and Kinsey (1981).

transactions, provided all outstanding balances from the previous month have been fully settled.

In an effort to promote responsible usage of credit cards, with effect from 1 July 2007, Bank Negara Malaysia announced a tiered pricing structure for credit card users. According to the tiered pricing structure, credit cardholders who settle their outstanding balances promptly for 12 months consecutively will only be charged an interest rate of 15 per cent per annum instead of the ceiling 18 per cent per annum rate. Following the introduction of the tiered pricing structure in 2007, with effect from 1 July 2008, cardholders who made only minimum or partial payment on their outstanding balances will no longer enjoy the 20-day interest-free period for new retail transactions. The new measures reflect Bank Negara Malaysia's intention to promote financial discipline among credit card users.

3. Model Development

The selection of variables that determine the type of credit card users were drawn from past studies by Johnston (2007), Jin and DeVaney (2005), Castronova and Hagstrom (2004), Lee and Kwon (2002), Min and Kim (2003), Stavins (2001), Chien and DeVaney (2001), Durkin (2000), Delener and Katzenstein (1994) and Kaynak *et al.* (1994). The variables were broadly divided into three categories: (i) credit cardholder's socio-economic characteristics; (ii) credit cardholder's perception towards debt and the role of credit card; and (iii) credit cardholder's level of awareness and knowledge towards the pricing structure of the credit cards.

3.1 Socio-economic Characteristics

The socio-economic characteristics included in the model were age, income, marital status, gender, education level, ethnic and the type of loan commitments undertaken by the cardholder.

In the Ando and Modigliani's life cycle hypothesis (1957), it was argued that the propensity to consume is higher in either the younger or the older households, whose members are borrowing against future incomes or exhausting their life savings. The younger and the older households have lower incomes than those in the middle age group as the younger ones are just starting out in their career and the older ones are retired or approaching retirement. In other words, this suggests that besides age, income levels also play a role in consumer credit. Hence, age and income are usually included in studies on consumer credit and credit card (for more recent studies, see Bertaut and Haliassos 2004; Castronova and Hagstrom 2004; Yilmazer and DeVaney 2006).

Further, marital status of an individual will affect the level of financial commitments undertaken by an individual. Married individuals are more likely to face budget constraints and hence would seek other means to ease their financial burden. Lyons (2003) and Yilmazer and DeVaney (2006) found that married individuals are more likely to hold debts than single individuals.

Males and females approach financial transactions and financial related decisions differently and this is found to be true by Jianankopoulous and Bernasek (1998) who showed that women are more risk averse when making financial related decisions. Further, as males are more likely to be the head of the household, responsible for the financial needs

of the household, it is expected that males are more likely to use credit card as a credit instrument than females. Yieh (1996), Flynn and Bermant (2003), Lyons (2003) and Yilmazer and DeVaney (2006) are amongst those who found that males are more likely to hold credit card debts with the amount of the credit card debt also being higher than the female credit cardholders.

According to the life-cycle permanent income hypothesis, rational individuals form expectations of their future earnings, where individuals borrow against expected future earnings and smooth their consumption over their life cycle. Hence, if education is considered a future resource as argued by Becker (1975), this could imply that higher educated individuals expect higher future income which will then likely translated into higher demand for consumption and higher current borrowing. On the other hand, higher education implies better credit worthiness as higher educated individuals are more likely to hold higher paying jobs. Further, higher educated individuals have better understanding on credit and financial management. Thus, if the former argument holds true, education is expected to have a negative effect on usage of the credit card as a credit instrument. Choi and DeVaney (1995) and Zhu and Meeks (1994) are amongst those who found a positive relationship between education and credit use while Lee and Kwon (2002), Castronova and Hagstrom (2004), Steidle (1994) and Bei (1993) found the reverse relationship to be true.

In a multi-ethnic country like Malaysia, the ethnic factor is added to investigate if there are differences across ethnic groups in the way they use credit cards. Ethnicity was added into the studies on credit card usage and debt by previous researches such as Min and Kim (2003), Castronova and Hagstrom (2004), Delener and Katzenstein (1994), Delener (1995) and Chebat *et al.* (1988).

There are four common loans included in the model namely housing loan, car loan, study loan and personal loans. These loans serve different purposes and differ in terms of the average value of the loan, the repayment period and interest rates.⁴ In other words, these loans signal different levels of financial commitments and needs of individuals, which may influence the way a credit cardholder uses the credit card.

3.2 Perception towards Debt and the Credit Card

Theory of Planned Behaviour (Ajzen 1991) and the Theory of Reasoned Action (Fishbein and Ajzen 1980) show that beliefs and attitude play an important role in determining the action and behaviour of an individual. Chien and DeVaney (2001) distinguished between general and specific attitudes towards the use of credit. The general attitude in this paper refers to the general perception of credit cardholder towards debt and borrowing while the specific attitude refers to the opinion of the credit cardholder on the primary function of the credit card. Several researchers (Lee and Kwon 2002; Chien and DeVaney 2001; Bi and Montalto 2005; Steidle 1994; Bei 1993) have examined how the credit cardholder's attitude towards debt will influence the extent of credit card debt that a cardholder undertakes.

⁴ For example, the average repayment period for a car loan is 7 years while the housing loan has a longer repayment period which is over 20 years.

3.3 Awareness and Knowledge towards the Pricing Structure

The inclusion of the variable on regulatory knowledge is based on the premise that sound financial management can only take place when consumers are financially literate and have full understanding on the terms and conditions involved in the use of any financial facilities. The ignorance of credit cardholders on the terms and conditions stipulated by credit card issuers have been cited as one of the contributory factors to excessive spending behaviour and the failure of repayment. Hence, this paper will investigate if lack of awareness and knowledge on the pricing structure of credit cards will affect the way credit cards are used.

In this paper, respondents were given six questions to test their awareness on the various charges imposed on the use of credit cards and four questions were given to test their specific knowledge on the charges imposed on the use of credit cards. The questions touched on matters such as the number of interest-free days entitled to a cardholder, the level of interest rate charged should there be an outstanding balance, the amount of minimum payment expected and the amount of transaction fees charged for the usage of cash advance facilities. Respondents' answers were marked with the maximum score of 100 per cent.

4. Methodology: Data and Model

4.1 Data

The data used in this study was collected from a survey conducted on active credit cardholders in Penang from December 2007 to February 2008. Active credit cardholders are defined as those with at least RM50 transactions per month. All credit card issuers stipulate a minimum payment of monthly credit card bill to be RM50. Hence, if a credit cardholder uses less than RM50, it will be impossible to judge from their monthly bill payment habit whether they are using the credit card as a payment instrument or a credit instrument. Thus, credit cardholders with less than RM50 monthly transactions were considered as inactive credit cardholders and were excluded from the study.

Responses from the credit cardholders were obtained either through face-to-face interviews or self-administered questionnaires. Respondents were selected randomly. The questionnaire focused on credit cards only. A total of 685 credit cardholders were approached for the study, of which, 635 responded to the survey. However, only 617 returned questionnaires which were complete; those questionnaires with key information missing were considered as incomplete. Some respondents had reservations about revealing information related to their income and loan portfolios.

4.2 Model

A binary choice logistic regression model was used to determine the likelihood that a credit cardholder typically pays his monthly credit card bill in full or pays only the minimum or less than minimum payment required in his monthly credit card bill. The former is said to be a convenience user who treats the credit card as a payment instrument while the latter is regarded as a credit revolver who takes the credit card as a credit instrument. The logistic regression model can be expressed as follows:

Table 1. Summary of sample characteristics and explanatory variables

Variables	Description of variables	Pays monthly credit card bill in full (Convenience user) $n_1=334$		Does not pay monthly credit card bill in full (Credit revolver) $n_2= 283$		Total sample $N= 617$	
		Mean	S.E	Mean	S.E	Mean	S.E
1. Socio-demographic and economic factors (Binary variables: yes=1, no=0)							
Age	Respondent's age (years)	37.61	0.56	36.82	0.57	37.25	0.40
Male	Respondent is male	0.63	0.026	0.46	0.030	0.55	0.020
Married	Respondent is married	0.48	0.027	0.60	0.029	0.53	0.020
Tertiary	Respondent has tertiary education	0.72	0.024	0.59	0.029	0.66	0.019
Income 1	Respondent's income is between RM1400-RM2999	0.31	0.025	0.23	0.025	0.28	0.018
Income 2	Respondent's income is between RM3000 –RM4599	0.35	0.026	0.38	0.029	0.3	0.019
Income 3	Respondent's income is between RM4600-RM5999	0.22	0.023	0.19	0.023	0.21	0.016
Malay	Respondent is a Malay	0.28	0.024	0.42	0.029	0.34	0.019
Chinese	Respondent is a Chinese	0.59	0.027	0.44	0.029	0.52	0.020
Housing loan	Respondent has housing loan	0.51	0.027	0.64	0.029	0.57	0.020
Car loan	Respondent has car loan	0.69	0.025	0.65	0.029	0.67	0.019
Study loan	Respondent has study loan	0.25	0.024	0.74	0.026	0.48	0.020
Personal loan	Respondent has personal loan	0.31	0.025	0.32	0.028	0.32	0.019

Continued on next page

Table 1. Continued

Variables	Description of variables	Pays monthly credit card bill in full (Convenience user) $n_1=334$		Does not pay monthly credit card bill in full (Credit revolver) $n_2= 283$		Total Sample $N= 617$	
		Mean	S.E	Mean	S.E	Mean	S.E
2. Opinion towards ... (Binary variables: yes=1, no=0)							
Debt	Should not borrow money if cannot afford to repay and any money owed should be paid back straight away even if that means going short on other things	0.84	0.021	0.87	0.020	0.85	0.014
Credit card	Credit card is a payment instrument	0.84	0.020	0.52	0.030	0.69	0.019
3. Awareness and knowledge on pricing structure							
	Level of awareness (%)	82.4	1.11	76.3	1.38	79.6	0.88
	Level of knowledge (%)	61.9	1.60	55.6	1.68	59.0	1.16

$$\text{Log} \frac{P}{1-P} = \alpha + \beta_i X_i + \varepsilon \quad (1)$$

The dependent variable used in examining the determinants of a credit cardholder's purpose of using credit card is measured by a binary dummy variable with value equals 1 if the credit cardholder (respondent) typically pays his monthly credit card bill in full and equals 0 if the credit cardholder fails to pay his monthly credit card in full. This would imply that the credit cardholder only pays minimum or less than the minimum required amount of his monthly credit card bill. Hence, P refers to the probability that a credit cardholder uses the credit card as a payment instrument (hence, a convenience user) and $1-P$ refers to the probability that a credit cardholder uses the credit card as a credit instrument (hence, a credit revolver). $\text{Log} \frac{P}{1-P}$ is the log of odds that a credit cardholder is a convenience user. β_i are the coefficients of the explanatory variables and X_i are the explanatory variables as hypothesised in Table 1. ε is the stochastic disturbance term of the regression.

4.3 Characteristics of Survey Respondents

From Table 1, in terms of the socio-economic factors, it appears that there are considerable differences in the gender, marital status and education level of respondents in their monthly credit card bill payment habit. It is found that 63 per cent of males, 48 per cent of married and 73 per cent of cardholders with tertiary education paid their monthly credit card bills in full. Further, among the four types of loan holdings, there exist differences among those who have housing loans and/or study loans. Those who have a housing loan and a study loan are more likely to fail in settling their monthly credit card bill in full. It is found that among the respondents interviewed, 64 per cent of those with a housing loan and 74 per cent of those who held a study loan did not settle their monthly credit card bill in full.

While attitude towards debt does not make huge differences in the respondents' monthly credit card bill payment habit, perception towards the role of the credit card appears to have an effect on respondents' monthly credit card bill payment. Further, respondents who have a better understanding of the pricing structure of the credit card have a higher tendency to pay their monthly credit card bill in full.

5. Empirical Findings

The estimated logit coefficients (column 1), the odds ratio (column 2), the standard error (column 3) and the associated *z*-statistics (column 4) are reported in Table 2. The goodness-of-fit tests for the model indicate that the likelihood ratio (LR) statistics is 293.44 which has a probability value of 0.0000. Thus, the null hypothesis is rejected and this concludes that the model fits the data well. This is supported by the Hosmer-Lemeshow statistics which have a value of 8.21 and a probability value of 0.4137. This indicates that the null hypothesis is accepted and that the model is a good fit. Further, on evaluating the prediction power of the model, it is found that 80.56 per cent of the prediction of this model is correct. The correlation matrix⁵ of the explanatory variables was used to check on possible multicollinearity problems. No strong links were found between variables. Hence, it can be concluded that the model developed has a good fit.

5.1 Socio-economic Factors

In terms of socio-economic factors, age, gender, marital status, education, income and holdings of housing and study loan were found to have a significant effect on the type of credit card user. Ethnic factor and other loan holdings do not have a significant impact on credit card bill repayment habit.

Despite the different cultural and lifestyle values among the different ethnic groups, the insignificance of ethnicity on credit card bill repayment habit suggests that the concept of 'buy today, pay later' lifestyle is well embraced in Malaysians' modern living regardless of ethnic groups. The findings appear to debunk the anecdotal conceptions that certain ethnic groups may favour credit consumption more than other ethnic groups. Credit consumption appears to make no distinction between colour or race in Malaysia.

Age is significant and it is found that for every 10 years increase in age, the likelihood of settling the monthly credit card bill in full increases by 1.25 times. Older credit cardholders

⁵ The correlation matrix output on the explanatory variables is available upon request from the authors.

Table 2. Summary statistics for logit analysis for the determinants of credit cardholder's monthly credit card bill payments habit

Explanatory variables	(1) Log of odds, β	(2) Odds ratio, e^{β}	(3) Std. error	(4) Z-statistics
1. Socio-economic factors				
Age \div 10	0.221*	1.248	0.116	1.901
Male	0.503**	1.654	0.228	2.21
Married	-0.816***	0.442	0.222	-3.67
Education (Tertiary)	0.385*	1.471	0.232	1.66
Income 1 (RM1400-RM2999)	0.730**	2.074	0.353	2.07
Income 2 (RM3000-RM4599)	-0.073	0.930	0.341	-0.21
Income 3 (RM4600-RM5999)	0.643*	1.902	0.386	1.67
Malay	-0.408	0.665	0.343	-1.19
Chinese	-0.082	0.921	0.324	-0.25
Housing loan	-0.414*	0.661	0.221	-1.87
Car loan	0.224	1.25	0.225	1.00
Study loan	-2.589***	0.075	0.233	-11.13
Personal loan	0.281	1.325	0.229	1.23
2. Perception towards...				
Debt	-0.380	0.684	0.287	-1.32
Credit Card	1.760***	5.810	0.259	6.79
3. Level of awareness and knowledge				
Awareness	0.011**	1.011	0.006	2.01
Knowledge	0.002	1.002	0.004	0.46

Note: ***, ** and * indicate significance at 1%, 5% and 10% respectively.

appear to be more responsible than the younger credit cardholders in repaying their credit card spending. Compared to the younger credit cardholders, older credit cardholders are more averse towards the idea of 'living on credit' as this is a relatively new concept to the older generation. Thus, the older generation prefers to enjoy the convenience of credit card as a payment tool rather than a credit instrument.

From column (2) in Table 2, it is found that a male cardholder is 1.65 times more likely to pay his monthly credit card bill in full (convenience user) than a female credit cardholder. A married credit cardholder is 0.44 times less likely to pay the monthly credit card bill in full than an unmarried credit cardholder. The finding suggests that males are more careful when spending on credit than females, which differs from the existing empirical findings of Yieh (1996), Lyons (2003) and Yilmazer and DeVaney (2006). Lately, many retail outlets and credit card issuers have jointly offered various shopping discounts to credit cardholders. The partnerships between the retail outlets and credit card issuers aim to entice cardholders to shop at those advertised outlets and to spend using the credit cards issued by the respective credit card issuers. Females who are generally known as 'shopaholics' pay more attention

to such discounts and are more tempted by these privileges compared to males. As such, females may find these privileges irresistible and unwittingly overspend on their credit card and eventually may have difficulty in repaying their expenditure in full.

The higher likelihood for a married credit cardholder to be a credit revolver than an unmarried credit cardholder is perhaps due to the higher financial commitments that a married cardholder has compared to an unmarried cardholder. Further, married cardholders are more likely to care of more dependents than unmarried cardholders. This partly attributes to the higher financial commitments of the married cardholders. This is supported by the fact that married credit cardholders are found to hold more loan portfolios than single married cardholders.⁶

A credit cardholder who has a tertiary education is 1.5 times more likely to pay his monthly credit card bill in full than a credit cardholder who does not have tertiary education. This finding is consistent with that of Zhu and Meeks (1994) and Choi and DeVaney (1995) who also found a negative relationship between education and credit use. Tertiary educated credit cardholders may have a better understanding of the financial implications of failure to pay the monthly credit card bill in full.

There are four categories of income levels considered in the model with income above RM6000 as the base variable. It is found that two income groups (RM1400-RM2999) and (RM4600 to RM5999) which is lower than the highest income group (above RM6000) are more likely to pay their monthly credit card bill in full than those earning above RM6000. Those earning between RM1400-RM2999 are more likely to pay their monthly credit card bill in full compared to those earning between RM4600 to RM5999. These findings seem to contradict the results of existing studies such as those of Chien and DeVaney (2001), Min and Kim (2003) and Castronova and Hagstrom (2004). Perhaps this may suggest that those earning a higher income are more willing to pay the financial charges compared to those earning a lower income and they may even find it worth to pay the financial charges given the credit convenience they get to enjoy from using the credit cards. However, there are no significant differences between income earners of RM3000 to RM4599 with the highest income group (above RM6000) in the way the monthly credit card bill is paid.

Amongst the four types of loans, only holders of housing and study loans are significant. It is found that a credit cardholder who holds a study loan is 0.08 times less likely to pay his monthly credit card bill in full while a credit cardholder who holds a housing loan is 0.66 times less likely to pay his monthly credit card bill in full. Holders of study loans are likely to be those who have just completed their studies and are at the early stage of their career.⁷ Credit cards provide easy credit access for them compared to other alternatives of financial relief which may not be as easily available to them given their short employment and credit history. Thus, holders of study loans are more likely to use the credit card as a credit instrument to cushion their financial constraints. On the other hand, as housing loans are commonly high in value, the monthly interest payments on housing loans make

⁶ A cross-tabulation was done to see the relationship between marital status and number of loans undertaken by each individual. From the survey, more married individuals were found to hold two or more loan portfolios than single individuals.

⁷ It is found that 50% of study loanholders in this study were between the ages of 18 and 30. In other words, the majority of study loanholders were just starting out in their career.

up a significant portion of an individual's monthly expenditure. Thus, holders of housing loan are more likely to have problems settling their monthly credit card bill in full due to the higher financial commitments.

5.2 Perception of Debt and Credit Card

General perceptions on debt and borrowing have no significant impact on the way a credit cardholder manages his monthly credit card bill payments. In fact, the results here show that perception of debt does not reflect the actual action taken by credit cardholders on their monthly credit card bill payment habit. However, the specific perception of the main function of credit card appears to have a significant impact on the way a credit card is actually used. A credit cardholder who thinks that the credit card is a convenient payment tool is 5.81 times more likely to pay his monthly credit card bill in full than a credit cardholder who thinks that the credit card is a credit instrument. This indicates that to instil responsible usage of the credit card, it is essential that a credit cardholder be educated on the correct primary function of the credit card.

5.3 Level of Knowledge and Awareness of the Pricing Structure

The findings show that a credit cardholder who has a higher level of awareness of the pricing structure of credit cards is 1.01 times more likely to pay his monthly credit card bill in full. However, knowledge level of the pricing structure is found to have no significant effect. In general, respondents are aware that fees are charged for the various facilities offered by the credit card but fewer respondents are knowledgeable about the exact fees charged. It is found that over 68 per cent of the respondents in this survey had scored more than half of the questions related to the awareness of fees correctly while only about 48 per cent of the respondents could answer correctly more than half of the knowledge-based questions that asked for the exact fees charged. Nevertheless, the positive relationship between awareness and knowledge on the way the credit card is used indicates that educating credit cardholders on the financial costs of using the credit card as a credit instrument is essential in shaping responsible usage of credit cards.

5.4 Drivers to Credit Card Ownership

Respondents were asked to rank the top three reasons for holding credit cards. Figure 3 shows the drivers to holding the credit card according to the respondent's opinion. In terms of the most important driver, it is clear from Figure 3 that the convenience of using the credit card as a payment tool is the most important driver to credit card ownership. This is followed by the ease of accessing credit via the credit card and annual fee waiver offered by credit card issuers. However, when taking into account the overall top three most important drivers to credit card ownership, the attractiveness of credit access via the credit card fails to dominate other credit card features. Other credit card features such as the waiver of annual fees and the attractive reward redemption programmes were found to be more appealing.

It is also found that in the ranking for all the potential drivers to credit card ownership as listed above, only for 'convenient payment tool' and 'easy access to credit', there exists significant differences in the respondents' monthly credit card bill payment habit. In other

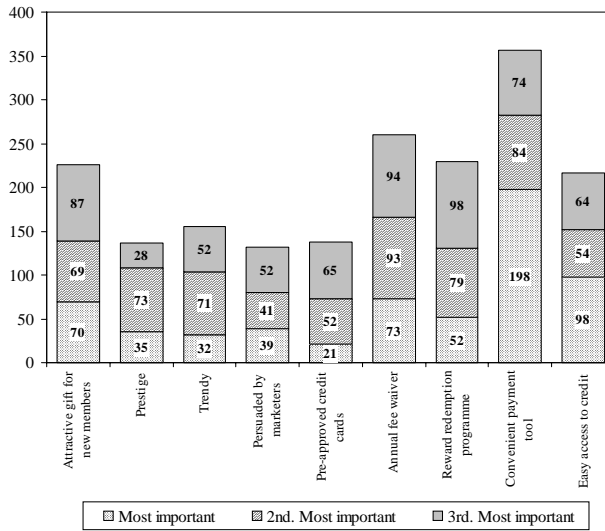


Figure 3: *Three most important drivers to credit card ownership*

words, the credit cardholder’s motive for holding the credit card is a good indicator on how the credit card is used - as a payment tool or as a credit instrument.

6. Conclusion

The purpose of this study is to analyse the determinants that are significant in distinguishing the types of credit card users, namely a convenient credit card user or a credit revolver. The findings can help credit card issuers in assessing the risks of a potential credit card applicant as well as assisting the financial institutions in the risk management of the credit card business.

The results from the logistic regression model revealed several results that contradict existing findings. First, females are found to be more likely to be a credit card revolver than males. Unlike other forms of debts such as instalment debts, credit card debts are largely unplanned debts. Men are usually the main holders of instalment debts such as housing loans and car loans, which are considered planned debts. However, women who are generally more compulsive shoppers than men, are more likely to utilise the readily available credit offered by the credit card to satisfy their impulsive or unplanned expenditure. As a result, women unintentionally rake up high credit card bills, which they later find difficult to repay. In some ways, the findings of this study highlight the differences between credit card debts and other forms of debts.

Second, it is found that higher income credit cardholders are more likely to fail in paying their monthly credit card bill in full than the lower income credit cardholders. As interest rate charged on late payments is the same across all credit cardholders, higher income credit cardholders may find the interest rate charges and late payment charges relatively more affordable than lower income credit cardholders. As a result, higher income

credit cardholders are less prudent in using the credit facilities offered by credit cards. The easy access to credit offered by credit cards becomes a curse for higher income credit cardholders. As such, in addition to the current tiered interest rate charges based on credit cardholder's monthly credit card bill payment behaviour, the authorities may wish to consider tiered charges according to cardholder's credit limit. After all, credit cardholder's credit limit is dependent on his income level and credit history.

Third, the insignificance of ethnicity in distinguishing convenience users of credit card from credit revolvers may indicate that credit consumption goes beyond ethnicity and consumers across all ethnic groups in Malaysia do not differ significantly in their perception towards non cash payments or a 'buy today, pay later' lifestyle.

Specific perceptions of the main role of the credit card and the motives of holding a credit card are significant in distinguishing a convenience credit card user from a credit revolver. In other words, the 'right' portrayal of the functions of the credit card is crucial in shaping the 'right' usage of the credit cards. Hence, if credit card issuers place more emphasis in promoting credit facilities of credit cards such as the offer of pre-approved credit cards, the attractive balance transfers rates and the interest-free instalment programmes for purchases of durable goods, then we can anticipate credit cardholders to begin perceiving credit cards as a credit instrument rather than a payment instrument. Thus, besides the implementation of stiffer finance charges on late payers, the monetary authorities may need to look into the ways credit issuers compete in the credit card industry.

In general, it is found that while credit cardholders are aware of the existence of some of the terms and conditions of credit card use, they however, do not really know the actual charges involved in using the various facilities provided by the credit cards issues. As a result, the impact of knowledge of the pricing structure on the monthly credit card bill payment habit is not significant. Nevertheless, the positive relationship between knowledge of price structure and bill payment habit implies that good knowledge of the finance charges involved in the use of the various credit card facilities will increase the likelihood of paying the monthly credit card bill in full. In short, promoting the 'right' function of the credit card and educating credit cardholders on the finance charges involved are essential in nurturing good credit cardholders.

The positive and significant effect of age on credit cardholders' repayment habit appears to support the recent finding that a majority of those who were declared bankrupt due to credit card debts are those below 30 years of age. Older credit cardholders may be wiser in personal finance management. This reinforces the importance of credit education and greater emphasis on educating the younger generation about personal finance management.

In reality, while the credit revolvers are considered the 'bad apples' among credit cardholders, they are a source of profit to credit issuers and it is this group of credit cardholders that make credit card business so attractive and profitable. If all credit cardholders are 'good apples', credit issuers will not be able to reap much profit. However, good credit cardholders are important in the risk management of the credit card business. Knowledge on the possibility that a potential credit cardholder is a 'good apple' or a 'bad apple' is helpful to credit card issuers in diversifying their risks when offering credit to credit cardholders accordingly.

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