ANALYZING THE PAYMENT BEHAVIOR AND BASIC CHARACTERISTICSOF CREDIT CARD HOLDERS

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Abstract

In this study the credit card holders (respondents) were divided into two groups, the obedient (O) and the disobedient (DO) groups. Obedient payers were those who had their entire credit card balance every month and those who made their monthly payment on time, while disobedient payers were those who made monthly payment not on time and those regularly carry unpaid credit card debt. Using the cross-tab analyses and inferences, this paper attempts to identify the basic characteristics associated with each group of card payers. The characteristics focused on two main factors; the demographic factors and the income factor. The demographic factors were comprised of the holders' race, age, gender, marital status and education level. The findings of the study indicated that, significant results were documented in the income, age, and status factors. From the income analysis, those who earned between RM1001-4000 had a higher tendency to make payment on time (Obedient) compared to those from other income categories. Other than income factor, the age factor also was identified as having a significant association with the credit card payment behaviour. In particular, card holders aged 45 years and below had a higher tendency to make payment on time (Obedient) than the other age categories. Apart of the findings, the respondents payment behavior was detected to also have a significant association with the marital status factor. The result obtained gave an indication that, card holders under divorced status had a higher tendency to be in the Obedient group than those who were single and married. Based on these findings we concluded, in order in ensure payment received on timely basis from the card debtors, institutions that issue credit cards should give priority to those who are 45 years or

below, earning between RM1001-RMI4000 per month, and were married or with divorced status.

Introduction

Innovation in the financial services sector of the world economy has made credit more available, cheaper, and convenient than at any time in history. The credit card is one such innovation. When it was first introduced in Malaysia, the issuers had set tight requirements before individuals can own credit cards, in order to ensure the cards are given to the right users. At that time, the cards were given mainly to those who could afford to pay the debts. However, as time goes by, these conditions were loosened where those from the lower income group could also entitle a credit card. In the effort to capture as many credit card users as possible, there are instances where one need not even have to submit his or her pay slip to apply for one.

This development however does not come with zero cost to the banking institutions and the country. According to Bank Negara's stats, as at end of March 2009, the amount of credit card debt owed by Malaysians was RM24.4 billion. Throughout the years, the number of people declaring bankruptcy due to credit card debts is consistently increasing.[1] This problem may be contagious if not treated properly and may cause a significant loss to the economy. The existing phenomenon relating to credit card has raised important questions. Among the few are; how do we identify a good and a bad card-payer? What are the general characteristics of each group? In relation to the issues discussed this study attempts to conduct a study as such in this area, particularly in the Malaysian perspective. In general, the study attempts to aimed the payment behavior of credit card users, and the specific objective is to identify significant factors associated with the payment behavior of credit card users.

Table 1

Number of Malaysians Declaring Bankruptcy due to Credit Card Debts

Year	Total

2005	733
2006	285
2007	1,011
2008	1,065
2009 (as of may)	454
Total	**3,548**

Source: Malay Mail (2009)

Literature review

The focus of studies on credit cards has diverted into many directions. The study by Slocum and Matthews (1970) centers on the relationship between credit card use or selection, with attitudinal, demographic and/or socio-economic characteristics. In general, the findings reveal that social class affects consumer attitudes towards credit card usage within certain income categories. Other studies (Kinsey, 1981; Barker and Sekerkaya, 1992; Wasburg et al., 1992;, Heck, 1987; Arora, 1987; Mandell, 1972) focus on the relationship between income levels and credit card possession. All studies show similar findings that high income is a significant determinant for increasing the number of credit card accounts as well as higher credit card usage. However, study by Choi and De Vaney (1995) finds income factor is insignificant in the use of credit cards, and Danes and Hira (1990) discovers credit card usage among lower and middle-income families was higher than among higher income families.

Focusing on demographic factor, studies by Kinsey (1981), Arora (1987); Barker and Sekerkaya (1992), and by Kaynak and Halcar (2001) suggest that the middle-aged group is more likely to hold and use credit cards more extensively. This finding is supported by other studies of Chan (1997), Crook *et al.* (1992), and Amine (1989) which show that young and better educated people are more receptive to credit cards and credit card ownership appear to decline with age factor (Wegner, 1988). Interestingly, studies by Hultgren (1998) and Weiner (1987) conclude that, credit card companies which procured customers when they were teenagers benefited because these customers are shown to have a long tenure. Other findings related to the credit card analysis are studies by Mandell (1972), Kinsey (1981), Danes and Hira (1990), Barker and Sckerkaya (1992), Kaynak *et al.* (1995), who all find, as education level increase and awareness of consumer credit prevailed, there is an increased tendency to use credit cards frequently. Canner and Lucket (1992) provide an affirmation to this statement when they observed that, the amount charged each month by credit card users increased with the level of education.

Where gender is concerned, Kinsey (1981), and Slocum and Matthews (1970) found sex and marital status to be significant determinants of credit selection and usage. Several authors, like White (1975), and Adcock *et al.* (1977), suggested that single males were more likely to use credit cards rather than females.Contradicting to this finding, both Kinsey (1981) and Arora (1987) have figured that females use their credit cards more frequently, while Armstrong and Craven (1993) find that females tend to have a higher average number of credit cards than males. Ingram and Pugh (1981) concluded that fewer bank credit cards were held by single member households, young married couples, retired individuals, and sole survivors.

Apart from these credit card studies, Zhu and Makes (1994) put their main focus of consumer credit use in low-income families. They specifically test the relationship between the ability and willingness to use credit and the outstanding credit balance. From the output generated, they discovered that age and employment status were significant determinants of the amount of credit outstanding. Younger households and those who are employed full-time were found to have higher outstanding credit balances as compared to the elderly or the unemployed. The elderly were viewed to have greater control over their expenditures and had more opportunities to ask for emergency financial aid from other sources. A number of studies have discovered that credit card users tend to overspend compared to those who use cash or cheques (Soman, 2000; Feinberg, 1986; Hirschman, 1979).

Other than the above mentioned studies, there are a number of studies which focus on credit card spending, borrowing and debt. The nature of credit cards may make credit card spending (and borrowing) particularly susceptible to self-control problems. Behavioral research on credit card use highlights decoupling: the separation of payment decisions from consumption decisions (Prelec and Lowenstein, 1998; Thaler, 1999). With a credit card, payment is separated from the act of purchasing and can occur substantially later than purchase or consumption. Psychologically, such temporal separation may encourage credit card spending and, credit card debt (Bar-Gill 2004).

Based on the existing literature, we may infer that there are many aspects of credit card studies and the results obtained are relatively mixed. Moreover, the studies conducted are mainly concentrated in the US and other developed countries. In light of this, we are interested to explore the issue further in Malaysian's perspective. Considering that Malaysia is a melting pot country, where the spending and borrowing patterns may be different by race, culture, geographical location, it is important to pay specific focus on a particular location to avoid an overgeneralization of the national results. In relation to this, the current study attempts to analyze the payment behavior of the credit card users in Seremban, Negeri Sembilan.

Methodology

In this analysis the term credit card mainly refers to bank cards like Visa and MasterCard cards, which also includes charge cards, like American Express and Diners. The difference between the two is that, the latter requires payment in full while the former allows certain minimum payment. In general, a credit-card is defined as a card issued by banks or financial institutions enabling the holder to obtain goods and services on credit. In a simpler word, a card-credit is a short-term loan given out to the card-holder , and allows customers to either pay in full amount or just by minimum amount of their total bill. Interest accrues on the unpaid balance, and credit-card issuers get revenue from the annual fees and interest paid by cardholders and from the fees paid by participating merchants.

This study is a micro analysis and is specifically conducted in Seremban. The data were collected by distributing structured questionnaires to potential respondents. The respondents were the credit-card users in the area. Each respondent was given a set of questions which consisted of four sub-sections. Information in section one and two of the questionnaires suited the objective of this study which put specific focus on the association between demographic and income factors with the payment behavior. The demographic factors covered the gender, age, race, marital status, and education achievement. In differentiating between an Obedient and a Disobedient payer, we refer to question no. 27 in the question set which sought individual's self-proclamation on his or her type of payment behavior. Data collected were coded and sorted out, and finally were keyed in into SPSS version 17. In analyzing the association between demographic and income factors with credit-card payment behavior, the data were analyzed by using descriptive, cross-tab and inferential statistics analyzes.

Results reporting

Descriptive statistics

The results in Table 2 provide the summary on the overall characteristics of the respondents. In total there were 300 respondents participated in this survey. They were equally divided by gender, and by age, the biggest number of participants came from the age range of 26-35 years (40%), followed by age range of 36-45 years (33%), and finally from the age range of >=46 years (17%) and <= 25 years (10%). Out of the total number of respondents, the Malays and Indians formed the larger percent; of 42% and 40%

Table 2

Data Frequency Table: Demographic Factors

Sub-factor	Categories	Frequency	Percent	Cumulative Percent
Gender	Female	150	50.0	50.0
	Male	150	50.0	100.0
	Total	300	100.0	
Age	<= 25 years	29	9.7	9.7
	26-35 years	121	40.3	50.0
	36-45 years	99	33.0	83.0
	>= 46 years	51	17.0	100.0
	Total	**30**	**100**	
Race	Malay	126	42.0	42.0
	Chinese	55	18.3	60.3
	Indian	119	39.7	100.0
	Total	**300**	**100.0**	
Marital status	Single	137	45.7	45.7
	Married	129	43.0	88.7
	Divorced	34	11.3	100
	Total	**300**	**100.0**	
Education	SPM & STPM	87	29.0	29.0
	Dip. & Degree	150	50.0	79.0
	Postgraduate Deg.	63	21.0	100
	Total	**300**	**100.0**	
	<= RM 1000			
	RM 1001 - 2000			
	RM 2001 - 3000			
	RM 3001 - 4000			

Income	>= 4001		
	Total	**300**	**100.0**

respectively, and the Chinese covered only 18% of the total. Focusing on marital status, an average of 46% were single, 43% were married and the other 11% were divorced. In relation to educational achievement, 50% of the respondents were diploma and degree

holders, while the other 29% were the SPM & STPM certificate holders and the rest were the postgraduate degree holders (21%). Economically, the largest percent came from the income range of RM2001-3000 (33.3%), followed by the income range of RM1001-2000 (30%) and RM3001-4000 (24%), and finally from the income limit of RM >=4000 (4%).

Using these data we next pursued the study on credit care payment behavior into two analyses. The first was to identify the payment behavior among credit card users, and the second was to identify significant factors associated with the payment behavior.

Analysis 1: Credit-card Payment Behavior

Analysis 1 was to identify the percent of respondents who were categorized as Obedient (0) and Disobedient (DO) card payers. Table 3 provides the summary of the results.

Table 3

The Payment Behavior of Credit Card Users

Credit Card Users	Frequency	Percent	Cumulative Percent
Obedient	168	56.0	56.0
Disobedient	132	44.0	100.0
Total	300	100.0	

Based on the figures displayed, out of 300 respondents, 56 percent of them proclaimed that they were categorized as Obedient payers and the other 44 percent were the Disobedient payers. To obtain the detail characteristics of these payers, we

conduct similar analysis on each group. The overall findings of the two analyses are summarized in Table 4.

Table 4

Summary Statistics of Obedient and Disobedient Payers

Demographic Factors	Categories	OBEDIENT (168)		DISOBEDIENT (132)	
		Freq.	%	Freq.	%
Gender	Female	90	53.6	60	45.5
	Male	78	46.4	72	54.5
Age	<= 25 years	18	10.7	11	8.3
	26-35 years	72	42.9	49	37.1
	36-45 years	67	39.9	32	24.2
	>= 46 years	11	6.5	40	30.3
Race	Malay	64	38.1	62	47
	Chinese	34	20.2	21	15.9
	Indian	70	41.7	49	37.1
Marital status	Single	76	45.2	61	46.2
	Maried	66	39.3	63	47.7
	Divorced	26	15.5	8	6.1
Education	SPM & STPM	56	33.3	31	23.5
	Dip. & Degree	81	48.3	69	52.3
	Postgraduate Deg.	31	18.5	32	24.2
Income	<= RM 1000	69	41.1	13	9.8
	RM 1001 - 2000	44	26.2	34	25.8.
	RM 2001 - 3000	34	20.2	43	32.6
	RM 3001 - 4000	9	5.4	30	22.7
	>= 4001	12	7.1	12	9.1

Table 4 presents the summary statistics of the Obedient and the Disobedient groups of card payer. Under the Obedient group, the female payers appeared to dominate the majority percentage (53.6), while the male group covers 46.4 percent. By age factor both groups were mainly dominated by respondents of age range within 26-35 years old. The minimum percent for both groups of card payers came from two different income categories. For the obedient group, the minimum percentage of 6.5% comes from the age range of >=46 years old, while for the Disobedient group the minimum percent of 8.3 came from the age range of <=25 years old. Based on race factor, the majority of the obedient group was the Indians (41.7%), followed by the Malays (38.1%) and Chinese (20.2%). However, in the other group, the Malays form the majority (47%), followed by the Indians (37.1%) and finally the Chinese (15.9%). Focusing in the status category, both groups were mainly dominated by the single and the married people, and lastly followed by the divorced. Similar findings could be observed under the education factor. In both groups, the respondents were mainly diploma and degree holders and a smaller percent of respondents were mainly the high school certificate or the postgraduate degree holders. Under the income factor, the obedient group was mainly comprised of card holders with an income range of <=1000, while the disobedient group was mainly covered by the card holders with an income range between RM2001-3000.

Analysis 2: The association between demographic factors and payment behavior

Analysis 2 focuses on the relationship between demographic factors and payment the marital behavior. The summary of the results is presented in Table 5. Based on the chi-square results displayed in Table 5, significant findings were detected in the age and the marital status factors only. Both demographic factors were identified as having significant influence over the behavior of credit card payers. A relative 30% difference between the two groups is a considered as a significant difference. We next review in detail the age and the marital status factors. Under the age factor, significant difference in in payment behavior (between the Obedient and the Disobedient groups) was detected in all age categories. In particular, those who ages below 46 years appeared to have higher tendency to make payment on time compared to those who ages equal or more than 46 years. Under the marital status factor, significant difference in payment behavior payment behavior

Table 5

The relationship between demographic factors and the payment behavior

PAYMENT BEHAVIOR

		Obedient	Disobedient	Total	% difference between groups	Pearson Chi-Square
Gender	Female	90	60	150	-	
	Male	78	72	150	-	.163
	Total	**168**	**132**	**300**	**-**	
	<=25 years	18	11	29	63.64	
Age	26-35 years	72	49	121	46.94	
	36-45 years	67	32	99	109.38	.000***
	>=46 years	11	40	51	263.64	
	Total	**168**	**132**	**300**	**27.27**	
	Malay	64	62	29	-	
Race	Chinese	34	21	121	-	.283
	Indian	70	49	119	-	
	Total	**168**	**132**	**300**	**-**	
	Single	76	61	137	24.59	
Marital status	Maried	66	63	129	4.76	.030**
	Divorced	26	8	34	225.00	
	Total	**168**	**132**	**300**	**27.27**	
	SPM & STPM	56	31	87		
Education	Dip. & Degree	81	69	150		
	Postgraduate Deg.	31	32	63		
	Total	**168**	**132**	**300**	**-**	

Note: *** and **, significant at 1% and 5% levels

between the two groups was detected in the divorce category only. In particular, out of 34 respondents under this status, almost 74% were in the obedient group. Based on these findings we may conclude that, an applicant, regardless of his/her gender, race and education factors, but ages below 46 years old and divorced, has higher tendency to be in the Obedient group in terms of credit card payment behavior.

Analysis 3: Identifying the relationship between income factor and the payment behavior

Analysis 3 pays specific focus on the relationship between income levels and payment behavior. The overall findings are summarized in Table 6.

Table 6

The relationship between Income factor and payment behavior

Income Levels	PAYMENT BEHAVIOR		Percent	Total	PearsonChi-
	Obedient	Disobedient	Difference		Square
<= RM 1000	13	13	0	26	
					0.002***
RM 1001 - 2000	55	34	61.76	89	
RM 2001 - 3000	57	43	32.56	100	
RM 3001 - 4000	43	30	43.33	73	
>= 4001	0	12	100	12	
Total	168	132		100	

Note: *** is significant a 1% level.

Based on the results displayed in Table 6, the payment behavior appeared to have significant association with the income factor. Significant income categories were detected in all given ranges except for the income range of <=RM1000. In particular, for those who earn between RM1001-4000, there was a higher tendency for them to fall in the Obedient group, while for those who earn >=RM4000, there was a higher tendency of them to fall into the Disobedient group.

Conclusion & recommendation

The objective of this research was to identify significant demographic and economic factors associated with credit card payment behaviors. Based on the results obtained, th observed significant factors were the age, status and income factors, while other factors such as race, gender and education was insignificant. Here we have presumed that, an applicant, regardless of his or her gender, race, and education level, with an income category between RM1000 to RM4000, below 46 years of age and divorced, has a higher tendency to be an Obedient card payer.

The findings of this study may provide useful guidelines to card issuers in two ways. If the objective of the credit cards issuers is to avoid non-performing loans or card debt bankruptcy in the future, these findings provide useful guideline in identifying the specific characteristics of the potential Obedient applicant. However, if the main objective of the issuers is to maximize profit, then the institutions are not keen to find a good or an Obedient card payer but otherwise. This is because; more profits can be obtained through extra charges for late payments from a disobedient payer. Based on the findings of this study, a Disobedient payer is the one who is 46 years or more and earn an income of RM4000 or more, regardless of his/her gender, race, and educational achievement.

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