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The Critical Factors Influencing Consumer Spending by Using Credit Card

Mohd Hafiz Bakar[a], Siti Norbaya Yahaya[b,*], Chan Car Men[b]

[a] *Universiti Teknologi MARA,Malaysia*
[b] *Universiti Teknikal Malaysia Melaka, Malaysia*

Abstract

In Malaysia, credit card outstanding balance is in a rise and credit card is used widely as a payment instrument. One of the reasons that contribute to the popularity of credit card is Malaysian consumers possessed a positive attitude towards the facility provided by credit cards. In this research, the researcher intended to study on the critical factors influencing consumer spending by using credit cards. Economics, social and technological factors are identified as the factors influencing consumer spending by using credit cards. Besides, descriptive and explanatory studies are applied in this study. This study is conducted using quantitative method. Primary data will be obtained using survey by distributing questionnaire to credit card holders. Furthermore, probability sampling will be applied for selecting 384 respondents. Pilot test, reliability analysis will be done to ensure the consistency of the data. In addition, the results obtained from respondents will be analysed using Statistical Package for Social Sciences (SPSS). Descriptive statistics, Pearson's correlation coefficient and multiple regression analysis are used to test hypothesis developed by the researcher. From the result, economic, social and technological factors have significant relationship in influencing consumer spending by using credit cards and technological factor is the most significant factor influencing consumer spending by using credit cards. In future research, the researchers can use the proposed new conceptual framework to carry out the study or add other variables for the study.

*Keywords :*Credit Card ;Consumer Spending

1. Introduction

At the beginning of 20th century, credit cards were issued by larger hotels and department stores in United States. In developed countries such as United States and Europe, credit cards are seen as an indication of cashless society where financial transactions are not carried out by physical money but through the transfer of digital information. Cashless society allows high technology infrastructure to be carried out in developed country through the usage of credit card. Nowadays, credit cards have been widely used and is one of the

[*] * Corresponding author.
E-mail address: sitinorbaya@utem.edu.my.

major mediums of payment for consumers (Teoh et al., 2013a). Credit card is a plastic card made for payment that enables card holders to purchase goods or services on credit (Foscht et al., 2010).

In Malaysia, credit cards were first familiarized in 1970s (Loke, 2007). Initially, credit cards which served as non-cash payment instrument are only meant for the rich or successful persons. At that time, credit cards were viewed as a symbol of prestige. Nevertheless, as time pass by, the eligibility criteria for owning credit cards have been gradually loosened. Consequently, the credit cards rights and practice have been overwhelming. As per October 2018, the number of credit cards in Malaysia is 10.3 million (Bank Negara Malaysia, 2018a) which then indicates credit cards has been used widely for Malaysian consumers.

There are several studies have examined credit card spending behaviour (Teoh et al., 2013a; Ahmed et al., 2010), effect of personal financial knowledge on students' credit card behaviour (Robb & Sharpe, 2009), factors affecting credit card use (Khare et al., 2012), credit card usage with income level and occupation (Mansoor & Mat, 2009), consumer behaviour and adhesiveness of credit card interest rates (Calem & Mester, 1994), credit card usage practice and incontrollable buying behaviour (Robert & Jones, 2001) and the effects of credit cards on willingness to pay (Prelec & Simester, 2001). Most of the studies were conducted outside of Malaysia and there is a scarcity in credit card research in emerging market economies. Due to the differences in political, economy, social and technology between countries, changes of practices may affect consumer spending on credit cards.

'000	Credit Card				
	Total	Principal	Supplementary	Cards Applied[1]	Cards Approved[1]
2005	7,815.5	6,620.4	1,195.1	5,008.9	2,645.8
2006	8,833.0	7,710.1	1,122.9	5,214.2	2,606.2
2007	9,901.3	8,721.3	1,179.9	5,566.9	2,764.1
2008	10,812.4	9,570.7	1,241.7	5,738.6	2,712.2
2009	10,817.6	9,574.6	1,243.0	4,829.2	2,308.0
2010	8,547.2	7,525.1	1,022.1	2,364.7	1,302.6
2011	8,281.1	7,396.1	885.1	2,498.0	1,226.9
2012	8,150.0	7,268.9	881.2	2,617.4	1,235.3
2013	8,127.5	7,249.8	877.7	2,812.2	1,239.1
2014	8,048.4	7,121.4	927.0	2,782.2	1,240.4
2015	8,612.0	7,676.6	935.4	3,978.9	1,807.1
2016	9,178.5	8,179.2	999.2	4,530.6	1,879.2
2017	9,861.2	8,802.1	1,059.1	4,530.3	2,124.3
Oct-18	10,337.3	9,263.3	1,074.1	3,791.2	1,582.3

Fig. 1: Number of Cards and Users of Payment Instruments

Source: (Bank Negara Malaysia, 2018)

1.1. Development of Credit Card Usage in Malaysia

According to Lombardi et al. (2017) and Rani et al. (2017), household debts increase rapidly in other countries and in Malaysia. Household debt is the money on loan provided by banks or other financial institutions that are meant to repaid later. The types of household debt include individual loans, transportation loans, study loans, outstanding balance in credit cards, and overdrafts on bank financial statement (Harari, 2018). The rising of debt may indicate that consumers are not aware of their usage of credit card and tends to spend additional than they earn whereby consumers are not realizing their expenses surpass their profits. Consumers tend to use more on credit card because credit card seems abstract and unreal. As the credit card transaction process is not transparent as cash payments, consumers will become less price-sensitive and under predict their own usage which then leads to debt accumulation or overspending (Soman, 2003).

As of January 2018, the credit card debt was RM 36.3 billion where the remaining unsettled debt more than settlement date not more than three months is RM 2.1 billion, while the balance that surpassed three months valued at RM 0.34 billion (Bank Negara Malaysia, 2018b). Credit card spending is on the escalation as consumers tend to use credit card to pay for expensive items and online transactions encourage credit card spending. It is important to educate consumers to recognize the consequences of getting into financial debt.

The aim of this study is to examine the factors influencing consumer spending by using credit cards and to analyse the relationship between economic, social and technological factors with consumer spending by using credit card.

2. Literature Review

Consumer spending by credit cards is what households purchase to fulfill needs and wants via credit cards. Credit cards act as a common payment device for transactions among consumers who settle their credit card balances each month (Chakravorti & Emmons, 2001). There are pros and cons of using credit cards as payment medium. Credit card allows consumers to minimize cash balance where consumers can shift their assets to higher return investments (Teoh et al., 2013a).

2.1. Economic Factors

Credit cards are interrelated with banking industry and economy. Economic factors can be defined as the central data about the environment and economy taken into account when an investment is calculated. The banking institutions are the dominant financial institutions in Malaysia and the bank system plays a vital role in Malaysian economy by transferring funds from those who has extra funds to those who needs those funds (Sufian, 2009). The economic factors consist of interest rates, tax rates, inflation rates, economic policies and unemployment. Credit cards are not standardized products and become increasingly significant for banking institutions (Thomas et al., 2005). According to Sufian (2009), there will be small amount of debt accumulated when the economy is stable. Conversely, consumers are likely failing to pay on their loans during unstable economy. In fact, banking institutions must benefit from favorable economic environments and able to protect themselves during weak economy. When the economy is stable, consumer spending will increase although the small amount of debt accumulated.

2.2. Interest Rates

Salami (2018) described interest rates as the rate of borrowing money in an economy and occurs to be main determining factor of the costs of credit in an economy. According to Semuel & Nurina (2015), interest rate is defined as the value that is added in the effort that has been saved or capitalized. The interest rates will be illustrated in the transactions of money. Besides, it gives an impact on the level of consumer spending on purchases where high-end consumer products often purchased on credit. Hence, higher interest rates result in a more expensive purchase significantly. Interest rates have impact on economy especially in banking industry because interest rates directly deal with dollar and cents.Credit card has vital role in consumer finances and it will be interesting to study on the interest rates (Gross & Souleles, 2002). Paquin & Weiss (1998) presented the main determinants which cause personal bankruptcies which is the supply of consumer credit, condition of the market, the ability of credit card holders to pay their debts and interest rates.

2.3. Inflation Rates

In the study of Semuel & Nurina (2015), inflation can be defined as the increase in price commonly where inflation rates can reduce the purchasing power from a currency. Inflation is one of the vital macroeconomic variables that can alter and drive the growth of country's economy (Salami, 2018). Inflation also can be known as the process of continuous rising of prices (Laidler & Parkin, 1977). Besides, inflation rates will be affecting credit card rates as the rates will be higher when the inflation is high. Consumers will need to pay more for products when there is an increase in inflation. The banking industry will raise their price to cope with current market environment while consumers will bear the cost.In the study of Effah & Adusei (2017), inflation affect consumers to save rather than to spend because of the high uncertainty in the economic environment.

2.4. Taxes

Taxes are the involuntary charges imposed on individuals or corporations and enforced by governments in terms of local, regional or national to finance government activities. The credit cards did aggressive promotion to motivate credit card application where the institutions will waive the annual fee for the first year and some banking institutions even introduce the campaign named "Free for Life" to attract consumers to be their customers (Teoh et al., 2013). However, the slogan only effective until the Malaysian government announced to impose credit card service tax in 2010 (Hunt, 2009). The implementation of credit card service tax influences the number of credit card where it declined by 20 percent from 11.1 million cards in 2009 dropped to 8.8 million cards in 2010 (Bank Negara Malaysia, 2010). From the statistics, it can be clearly seen that the tax imposed discouraged consumers to have more than one cards. However, Malaysian government implemented Goods and Services Tax (GST) in 2015 which then substitutes the Sales and Service Tax to improve the effectiveness and efficacy on the current Malaysian tax policy system (Bank Negara Malaysia, 2015). Besides, credit card spending increases significantly before the implementation of GST and record low growth rate after the implementation of GST.

2.5. Social Factors

Social factors are the truths and experiences that affect people's beliefs, personality, attitudes and lifestyles. The social factors possess a huge impact on banking industry (Khan et al., 2018). Social factors concentrate on the forces within the society where the factors can impact on consumers' decision on spending. According to Chou et al. (2004), social, economic and technological considerations were the important factors affecting the wide acceptance of online payments. In the study of Chou et al. (2004), social factor is recognized as influences that contribute to the popularity of online payments. The framework below shows social factors as one of the independent variables that influence online payment system.

2.6. Lifestyles

According to Ahmed et al. (2010), consumers define their lifestyles by the choice of consumption for goods and services. The spending pattern between rich and poor people is different. For instance, the rich tend to shop for pleasure instead of just focusing on own necessity and the middle class will explore for more evidence before they buy the items Conversely, the poor will be relying more on in store purchases instead of advice from sales person. Currently, Malaysians are moving towards to improvement of living standard where the lifestyle will be changed.Norvilitis et al. (2003) work on the reasons contribute to level of credit card outstanding balance of college students. The study found that lifestyles of students and peers' behavior will affect their own credit card debt level. Today, consumers view credit card as payment instrument that can facilitate lifestyle and increase living standard (Bernthal et al., 2005). Consumers are aware of lifestyles will results in influencing their credit card usage practices (Wickramasinghe & Gurugamage, 2012). Pirog and Roberts (2007) suggests that communication programs should be held to assist students at risk to modify their own lifestyles in order to reduce the personality characteristics on the mismanagement credit card.

2.7. Attitude towards Credit Cards

Attitude means the tendency that is articulated by assessing a specific with degree of favor or disfavor (Eagly & Chaiken, 2007). According to Bernthal et al. (2005), there are many studies expressed attitudes towards credit card and credit card default generally in terms of convenience, necessity, addicting and tempting. Kaynak & Harcar (2001) study on user purposes and attitudes towards credit card proprietorship and practice discover that views, favor and disfavor, knowledge and attitudes influence credit card usage in Turkey. Consumers' attitude establishment is deeply affected by the mental determination of the benefits brought by credit card instead of loyalty towards certain banks.

2.8. Social Influences

Social influences are the changes in behavior influenced intentionally or unintentionally by subjective norms as well as attitudes (Hsu & Lu,2004). Roberts (1998) study that external social influences such as television, shopping and social status of purchasing that is mainly conveyed by mass media are significant in affecting levels of compulsive buying. The social status of each individual can be defined as the position, role and status in different groups. According to Wang & Xiao (2009), when parents participate in the acquisition of credit cards for students, the students are likely to carry low credit card balances later. The parental influences on their children possess a positive effect on the credit card use.

2.9. Technological Factors

Technology advances in credit card industry are changing the way consumers spend. Consumers nowadays demand for efficiency and effectiveness in paying hence the payment system will be more complex with the assistance of technology. The development of technology has enabled credit card to be a easy access of payment (Phau & Woo, 2008). Credit card act as a payment instrument, a source of revolving credit and a lifestyle facilitator technology (Yayar & Karaca, 2012). The penetration of world wide web enabled mobile technology is not significant, consumers considered the technology as symbolic of wealth and fashion and adopt the technology to enhance their sense of self-importance.

2.10. Security

According to Flavián & Guinalíu (2006), the security issues in credit card can be defined as personal possibility in which consumers have confidence that their personal data will be viewed and transferred by any third parties improperly. The widespread of technologies expected to gain and processing data concerning consumer characteristics and behavior indicates that consumers are very concerned their personal data. The introduction of new information technologies risen security concerns of consumers (Chellappa & Pavlou, 2002). The credit cards are still a popular method regardless of its security leakages when used online.

Nowadays, privacy and security are considered as the critical factors that online businesses need to pay attention to build customer trust.

2.11. Mobile banking

Today, credit card not only exists in traditional plastic credit card format but also exists in mobile phones. Mobile banking can be defined as the use of smartphones or any other devices to perform online banking. With the emergence of new technologies and devices, mobile banking is an important payment system because of the characteristics of mobile banking in terms of convenience, connectivity and ubiquity (Gu et al., 2009). In addition, consumers do not need to carry their credit cards at all times to make payments for their purchases (Amin, 2008). Mobile banking has implication on consumer buying behavior of consumers in Malaysia. By using mobile banking, consumers can make purchases flexibly and wirelessly (Swartz, 2001). Mobile banking is a better alternative for consumers to traditional bank payment such as physical locations, internet banking and automated teller machine (ATM).

2.12. Conceptual Framework

The proposed conceptual framework in this study is to illustrate a diagram of the constructs and variables and the interrelationships between variables. The independent variable consists of economy, social and technology factors. The framework below shows the relationship between independent and dependent variables.

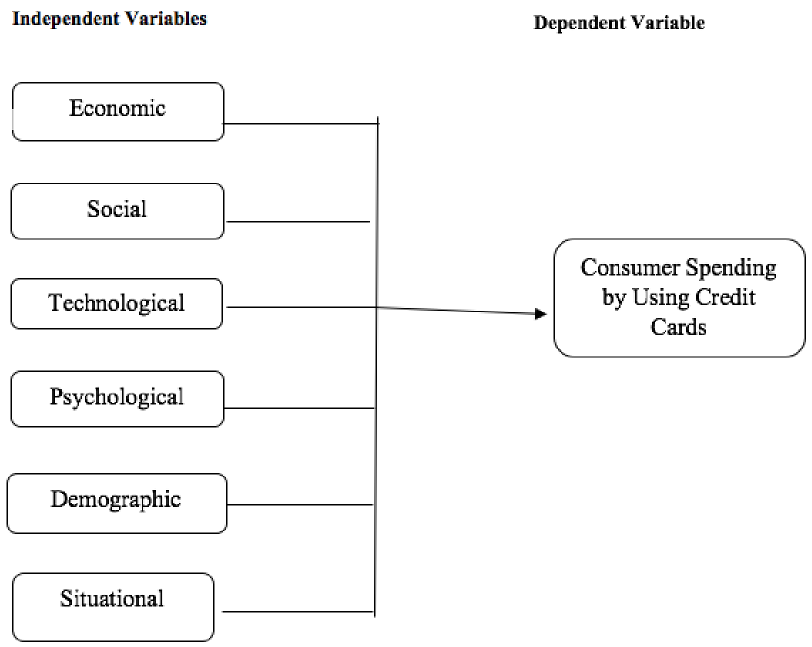

Fig. 2: Conceptual Framework

3. Research Methodology

In this research, quantitative method will be used to collect data information from respondents. Quantitative method emphasizes on the numerical data and generalised across a population or to describe phenomenon (Mujis, 2010). The quantitative methods are used to study the relationship between variables with statistical analysis. The study used primary and secondary data to gather information and collect data. In the research, primary data is collected from survey through distributing questionnaire to credit card holders in Malaysia. The data is firsthand data without any amendments. Besides, secondary data are data been gathered and readily obtainable from other sources.

In this research, survey method by using self-administered questionnaire is applied for the process of distributing questionnaire to respondents. There are three sections in the questionnaire design. Section A intended to collect demographic information such as gender, age, income level and education level. Next, Section B ask questions that are related to the factors influencing consumer spending by using credit cards. The variables include economy, social and technology.

Probability sampling is used, and simple probability sampling is the method to select random sample. This is a process of selecting sample size from the sampling population provided each sample has equal and independent chance to be selected. The target respondents of the survey are the credit card holders in Melaka. The researcher estimated 92,000 credit cards holders' population in Melaka. According to Krejcie & Morgan (1970), when the population is more than 75,000 people, the sample size is 384. Therefore, 384 respondents are selected as source of data and evaluation to answer questionnaires. The main location of the research focus on Melaka state. Statistical Package for Social Sciences (SPSS) is used to accomplish the data analysis.

In this research, the regression examined on three independent variables which include economic, social and technological factors. The regression equation is developed to show how the independent variables overall fit and examine the relative contribution of each of the predictors of total variance. The equation of multiple regression is shown as below:

Equation: $Y = a + bX_1 + cX_2 + dX_3$

Quantitative method is selected to perform the study. The data obtained in the study is from primary data and secondary data. As for the research strategy, survey is chosen, and a structured questionnaire is used to conduct the survey. In data analysis, there are pilot test, Cronbach's alpha, reliability analysis, descriptive statistics, Pearson's correlation coefficient, multiple regression analysis and SPSS used to accomplish research aim and interpret results of the study.

4. Data Analysis and Results

There are total 26 items of questions are measured using Likert scale ranging from 1 to 5 where 1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree. The value of Cronbach's Alpha coefficient indicates the strength of association of each item in independent variable on dependent variable.

Table 1: Reliability Test

Cronbach's Alpha		Cronbach's Alpha based on Standardized Items	N of Items
Economics	0.780	0.778	5
Social	0.836	0.836	7
Technological	0.799	0.800	7

Consumer Spending	0.763	0.765	7

The overall value of Cronbach's Alpha is 0.935 which is greater than 0.7 and is considered as good reliability. Overall, the result of Cronbach's Alpha has good reliability but the independent variables, social and technological factors and dependent variable, consumer spending by using credit cards has value less than 0. A total of 19 items being analysed and the result shows that there are no items being eliminated because the all of the value is more than 0.4 and contribute to the factor structure (Chan & Idris, 2017). Therefore, all the questions constructed in independent variables are valid and retained for the actual questionnaire. The KMO test for the independent variables is 0.757, 0.876 and 0.820 respectively. According to Hair et al. (2010), if the value is greater than 0.6, the factorability of correlation matrix is significant.

There are total 384 respondents and among the respondents, male respondents consist of 187 which are 48.7% while female respondents consist of 197 which are 51.3. Among 384 respondents, there are 6 respondents (1.6%) below 20 years old. The respondents who are aged between 20 – 29 years old consist of 127 respondents (34.7%). Besides, the range from 30 – 39 years old has 155 respondents (40.3%) which is the highest age group among the respondents. There are 67 respondents (17.4%) who aged between 40 – 49 and 29 respondents (7.6%) aged 50 and above. Among the respondents, 9 students (2.3%) has credit cards while 350 respondents (91.1%) are employed, the highest group of employment status of respondents.

There are 26 respondents (6.8%) current income level are less than RM 1,000. Besides, 7 respondents (1.8%) has current income level from RM 1,001 – RM 2,000 while 49 respondents (12.8%) has current income level from RM 2,001 – RM 3,000. There are 32 respondents (8.3%) out of 384 respondents rarely use credit cards for purchases which approximately few times a year. Besides, 172 respondents (44.8%) purchase via credit cards occasionally which at least once a month. There are 163 respondents (42.4%) who frequently use credit cards for purchases at least once a week. There are 118 respondents (30.7%) who rarely use credit cards for online purchases which approximately few times a year.

Table 2: Correlations of Independent Variables and Dependent Variable

Correlations

		Economics	Social	Technological	Consumer Spending
Economic	Pearson Correlation	1	.735**	.707**	.643**
	Sig. (2-tailed)		.000	.000	.000
	N	384	384	384	384
Social	Pearson Correlation	.735**	1	.808**	.746**
	Sig. (2-tailed)	.000		.000	.000
	N	384	384	384	384
Technological	Pearson Correlation	.707**	.808**	1	.771**
	Sig. (2-tailed)	.000	.000		.000
	N	384	384	384	384
Consumer Spending	Pearson Correlation	.643**	.746**	.771**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	384	384	384	384

**. Correlation is significant at the 0.01 level (2-tailed).

Source: (Develop from Research)

Table 2 illustrate the relationship between economic, social and technological factors with consumer spending by using credit cards through Pearson's Correlation Analysis. The table shows significant correlations ranged from 0.643 to 0.771. Among the three independent variables, technological factor has the highest value of coefficient where value of r is 0.771. The value represents strong positive association between technological factor and consumer spending. The p-value for all the variables are below 0.01 significance level with two asterisks at two-tailed test indicate that there is statistically significant relationship.

According to Tan et al. (2012) and Lea et al. (1995), economic factors that include economic growth rate, joblessness and interest rates influence consumer spending power. Social factor is affecting college students to have credit cards debt as the students are getting higher degree of purchasing freedom and experiencing social network change (Wang & Xiao, 2009). Amin (2012) proposes that future research should use social factor on credit card studies. Technology innovation and advancements had changed the way consumers spend. With mobile payment, consumers appreciate the convenience and security as the key features (Mallat et al., 2004, Hayashi, 2012). Technology has change and digital payments are used in large installed base and influence consumers (Baddeley, 2004).

The study of Gan & Maysami (2006) shows that economic factor is one of the main factors influencing consumer spending. Hence, this study is parallel with the previous study. Based on the study of Chou et al. (2004), social factor has significant relationship with consumer spending by using credit cards. Next, the study is parallel with previous research of Lee et al. (2004) where technological and social factors have relationship with consumer mobile credit card payment.

The result is supported by the study of Chou et al. (2004) that technological factor has the most influence on e-payment system. Credit card with an existing customer base can overshadow technological insufficiencies. The advancement and well managed of technology upsurge the customer satisfaction hence affect customer spending (Nisar & Prabhakar, 2017). In the study, technological factor affects consumer spending by using credit cards the most.

5. Conclusion and Recommendation

The finding of this research is to have deeper understanding about critical factors influencing consumer spending by using credit cards as there is rising of debt among Malaysians. From the research, there are only three factors are being studied but the researcher believed that there are still other factors that can influence consumer spending by using credit cards. Hence, the researcher suggested a new framework that can be used by future researchers.

In this study, the researcher is able to achieve the research objectives through literature review, Pearson's Correlation Coefficient's analysis and Multiple Linear Regression analysis and test the hypothesis on the relationships on independent variables (economic, social and technological) influencing consumer spending by using credit cards. In summary, economic, social and technological factors influence consumer spending by using credit cards and technological factor is the most significant factor that can influence consumer spending by using credit cards.

The critical factors influencing consumer spending by using credit cards is crucial to have in depth understanding on consumer spending for banking institutions and credit card issuer to gain insights about their customers. For consumers, they can increase awareness of their own spending by using credit cards to avoid getting into credit card debt and at the end causes bankruptcy. As the credit card debt rises, Malaysian government implement few programs to build good financial planning for consumers to avoid getting in debt (Teoh et al., 2013a). The marketers should promote the use of credit cards ethically based on consumer spending and provide good advice to credit card consumers instead of only promoting credit card use blindly which will end up with credit card debt.

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