

Mobile Application for Credit Card Management: EZ Pay

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Abstract— Nowadays, the widespread use of credit card without a proper management control especially among young generations in Malaysia has increased the chance of bankruptcy. In order to help society in prudent credit card management, this study proposes EZ Pay version 1.1 that basically adopts the concept of Easy Payment Plan (EPP) and developed on Android platform. The EZ Pay 1.1 is a combination of four apps which are Easy payment plan, credit card manager, calculator and card spending tracker. The EZ Pay version 1.1 is an upgraded mobile app from version 1.0 which is a credit management software to assist credit card holder in managing payment of credit card balance. EPP is a method of payment through credit card with 0% interest rate change with an upfront processing fee (varies for each bank) for a period of 12-36 months. The originality of this product lies on the way how we compile the information on the different processing fees of EPP across almost all Malaysian banks. This product educates users on the usefulness of EPP that is simply developed on a mobile platform. This software has an ability to encourage wise spending habit among users with a greater practically at your fingertips.

Index terms- Mobile Application, Credit Card Management, Easy Payment Plan (EPP).

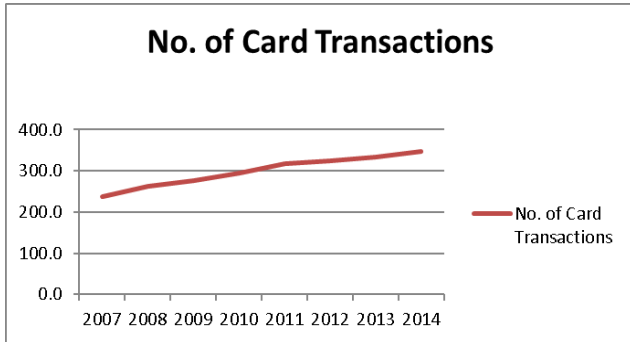
I. INTRODUCTION

Credit card is a method of payment whereby the user can purchase goods with bank's credit. A credit card is an alternative and convenience way of paying something when you do not have ready cash at hand. In other words, credit card is perceived as a viable substitute to deferred cash payment. Nowadays, credit card is widely used by many people. Lifestyle is one of the major factors why many people tend to use credit card. Many people enjoy the convenience of credit card as well as enhanced protection in transaction. Given the easy access to credit card, people are no longer need to carry a lot amount of money at hand. Credit card seems to be convenient as the method does not require immediate cash payment. In comparison, debit card requires instant payment for any purchase made on the spot. The deferred payment of credit card can either improve your lifestyle by offering convenient payment or it can leave you with a pile and burden of debt. It all depends on behavior of credit card spending in their daily financial transactions. All the problems arise from credit cards can be avoided by understanding the terms of credit card agreement, selecting the appropriate card and having good monitoring system for all transactions.

In Malaysia, credit card is ubiquitous and it has significant potentials particularly among young generations. The credit card was first issued in the mid of 1970's where the target group was focused on professionals with stable income stream. During the inception stage, there were about 20,000 credit cards issued in the retail market. The eligibility for application during that time was quite demanding, as only applicant with sound financial background would be given cards. Thus, it is not surprising to see that credit card reflected social status of individual during the embryonic phase. However, with the passage of time, the selection process has been relaxed systematically due to stiff competition by several commercial banks. Nowadays, there are about 7.1 million credit cards have been issued where the sum of credit card limits reaching up to RM 123 billion in 2014 (Monthly Bulletin Statistics, Bank Negara Malaysia). To date, there are two types of credit card offered in retail market which are conventional and Islamic credit card. The former basically has interest element in repayment and has no restrictions in terms of buying goods and services while the latter needs to strictly follow Shariah injunction that forbids the purchase of haram (illegal) items such as pork, wines and illegal activities such as gambling, prostitutions, alcohol consumption etc. Furthermore, there is no element of interest payment for Islamic credit card as it subscribes profit rate instead of interest rate and follows permissible Shariah concept of Bay al-Inah and wadiah [2].

During booming economic period, the lax screening routine for credit card acceptance renders to the proliferation of credit cards in market. The strong economic foundation of Malaysia and accommodative government policy has undeniably increased domestic consumer's spending and consequently stimulated the expansion of credit card issuance. The government encourages wide spending by customer to boost GDP of the nation. The trend of gradual increase in credit card issuance in Malaysia can be seen in Figure 1. There were about RM346.9 million of transactions involving credit card were recorded by Bank Negara Malaysia in 2014. In comparison, about RM237.7 million card transactions were reported in 2007. Furthermore, in July 2015 alone, about RM30.1 million credit card transactions were reported with approximately 10% increase compared to the same period of July 2010.

FIGURE 1: Value of credit card transactions from 2007-2014



Source: Bank Negara Malaysia Monthly Bulletin Statistics, July 2015. Units are in RM million

The wide availability of credit card has increased motivation for compulsive spending on products and services that are basically not part of actual needs. These unplanned purchases might not have been possible using actual cash in hand. It is a norm that a rise in credit card spending incurs consequential rise in excessive buying and consumer’s indebtedness across all strata of Malaysian society. In terms of credit card default, Malaysia Department of Insolvency (MDI) announced that there were 4,875 users had been declared bankruptcy due to outstanding credit card in 2013 where most of them were young males. For more recent record, Bank Negara Malaysia reports that the total balance of overdue credit card payment in 2014 was RM32.84 billion as stated in Table 1. In terms of repayment period, it seems that the short term default outperformed the long term default. In fact, there was declining trend for long term credit card debt for period more than 6-month from RM63.8 million to around RM7.2 million. Relatively, short term debt (< 3-month) exhibits climbing trend from RM1.9 billion in 2007 to RM2.4 billion in 2014. This phenomenon suggests that the short term debt is much more prevalent due to heavy interest penalties for longer settlement.

TABLE 1: The overdue credit card amounts from 2007-2014

Year	Current Balances	Overdue credit card balances <3 Months	Overdue credit card balances >3 To 6 Months	Overdue credit card balances >6 Months
2007	20,761.7	1,933.0	442.3	63.8
2008	22,810.2	1,996.1	487.1	51.8
2009	24,282.0	1,880.6	476.6	62.1
2010	28,174.5	2,067.9	476.4	53.6
2011	30,862.8	2,070.6	483.8	44.3
2012	31,564.6	2,028.1	405.3	32.6
2013	32,882.6	2,178.0	403.7	19.2
2014	32,841.4	2,493.9	335.8	7.2

Source: Bank Negara Malaysia Monthly Bulletin Statistics, July 2015. Units are in RM million

In order to solve the prevalence of overdue credit card repayment, Bank Negara Malaysia has introduced Easy Payment Plan (EPP). Easy payment plan (EPP) is a series of installment that offers zero interest payments. Nowadays, most

banks are offering this plan to credit card holders with repayment periods typically ranging between 3 and 36 months. Different banks have different processing fees. By having this plan, people never have to worry about the high interest and not being able to settle the remaining card balance at the end of the month. Credit card holder can negotiate with their credit card issuer regarding this plan. In practice, the credit card company will review your account first before process your application to convert current regular payment to installment based repayment.

This study aims to educate people on managing overdue credit card balance using a mobile application called EZ-Pay. This research focuses on credit card users in Malaysia. This study sought to extend understanding about how EZ Pay operates in a non-interest repayment scheme. EZ Pay version 1.1 is an upgraded software product from version 1.0 which is a credit management software to assist credit card holder in managing repayment of credit card balance. Using the concept of Easy payment plan (EPP) introduced by Bank Negara Malaysia, EZ Pay calculates EPP installment with 0% interest rate. There is an upfront processing fee (varies for each bank) charged under EPP for a period of 12-36 months. Further details of EPP processing fee can be referred to Appendix 1. The main purpose of introducing EZ PAY is to help society in having proper credit card management and to promote EPP (Easy Payment Plan). Once credit card holder chooses to restructure their credit card repayment to the EPP 0% interest, our EPP apps will recalculate the outstanding balance of loan/financing plus upfront fee and divide it according to the repayment period selected by customer. This application is incredibly easy to be used by users to help them manage their debt directly on smartphones and can easily keep track of their spending.

The paper consists of five parts. The first part presents an introduction, indebtedness problems, EZ-pay software, objective and the significance of the study. Second part deals with literature review. Part three provides a brief description on the design of mobile application for EZ Pay user and product application. Part four provides scenario analysis, evaluation and application testing. Finally, part five summarizes the conclusion and recommendations for future research directions.

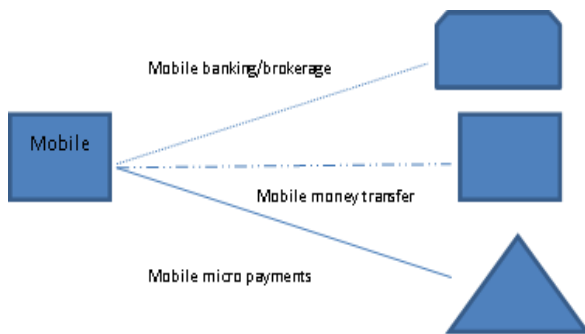
II. LITERATURE REVIEW

Under the spectrum of mobile commerce (m-commerce) research, so far limited a number of studies have been devoted on mobile financial application especially within developing market. It should be noted that web and mobile applications are significantly difference in terms of device, network, user and content of the usage. Mobile application exhibits relative strength than web in terms of size and mobility where mobile application can be brought along daily activities and only requires small display device. However, in terms of memory, bandwidth and size of data transfer, it seems that web based is much more preferable and reliable[8]. Most of m-commerce studies are basically focused on m-commerce theory and research, wireless network infrastructure, mobile middleware and wireless user infrastructure[8]. For recent development, most financial applications basically designed to support

banking transactions. Apart from mobile financial software, large strands of literature have been focused to study several factors influencing credit card consumption with greater highlight places on the demographic factors, bank's policy and also behavioral and attitude. For this paper, we will discuss on some studies related to mobile financial application as well as studies on factors affecting credit card spending.

Mobile financial applications are becoming increasingly important constituent of e-commerce activities. As time goes by, the technological evolution has rendered significant improvement to the architecture of bank services, from traditional face to face counter service to the technological based facilities including e-banking and mobile based technologies (m-commerce). Mobile based facilities feature a range of added value services such as mobile banking and brokerage services, mobile money transfer, mobile micro payments, online shopping, online booking, online entertainment and any other services[11].

Figure 2: Several mobile financial services



The mobile based technology for credit card service has attracted interest from young customer due to its convenience and enhanced practicality. The mobile financial application becomes efficient substitutes to traditional counter banking operations and automated teller machine (ATM). However, stringent security protocol must be put in priority before dealing with mobile banking operations. [1] focused on examining the intention of using mobile credit card. Using Technology acceptance model (TAM), the study found that perceived usefulness, perceived ease of use, perceived credibility and amount of information on mobile credit cards become important criteria that determine the decision to use mobile credit card. It is undeniable that the easiness and conciseness of mobile product has encouraged people to use the product. The mobile product must avoid using difficult language, difficult function, and complicated manuals with enhanced security feature. Moreover, a bank with good reputation is always associated with enhanced credibility. Thus, it is more likely that a good reputation bank has relative strength in promoting mobile credit card compared to other banks. In a recent survey study of [4], the study explored any potential factors that influence the intention to use mobile internet service. The survey was conducted to a group of 881 users of Android smartphones using Partial least square (PLS) method. The study concluded that interface convenience, perceived content and perceived infrastructure were important criteria in affecting user's intention to use mobile internet

service. It seems that the usability and convenience of using the smartphone phone application becomes significant factor in driving people to use mobile internet application. From demographic perspective, the study found that high income group of male exhibits higher potential to be mobile internet users compared to other groups. The author argued that male is much more attracted to read notes and books from online resources and this has significantly influenced the usage of mobile internet. To date, none of previous studies draws attention on the importance of EPP for credit card users perhaps because the concept is relatively new. Thus, this warrants us to solve the indebtedness problem via mobile platform specifically to adopt EPP principles.

For card spending factors, so far mixed findings were found mainly due to differences in methodologies and target groups. The authors [3] investigated several factors that drive Malaysian customer to choose Islamic credit cards. Using partial least square (PLS) method on a survey data from 257 respondents, they found that attitude, subjective norm (religion) and perceived financial cost were the main contributors to the selection of Islamic credit card. Moreover, the study discovered that individual demographic factors such as religion, financial literacy, age, marital status and educational level significantly contributed to the intention of using Islamic credit card [3]. Next, under the study of 354 Malaysian bank customers [2], the study concluded that religion has largely influenced the desire of owning Islamic credit card as pious Muslim customers do not want to get involved in ribawi based transactions available under conventional credit card. Islamic credit card attracts better confidence among Muslim as it is believed that Islamic credit card does not violate Shariah principle of having interest charges, enhanced uncertainties (gharar) and better transparency. Besides, the study concluded that young educated person is more likely to use Islamic credit card supported by the fact that this group has better information on the features of credit card, high eligibility and requires more spending to meet their improved lifestyle. This study also found that married person tends to use credit card more than individuals. It is not peculiar to see that married couple has higher propensity to use credit card as married consumers tend to consume and spend more specifically to meet the needs of several family members.

[12] studied the relation between customer's attitude and spending behavior using credit card. Using questionnaire survey conducted on 2000 cardholders in shopping malls (with 1210 returned questionnaire) and city square of Penang Island, they found strong link between lifestyle and spending behavior. They argued that improvement in lifestyle has significantly affected the way young people spend and they become more brand conscious. Thus brand becomes main criteria to fulfill the lavish lifestyle. Interestingly, they found no influence of self-esteem to spending behavior. This implies that credit card has no more becomes prestigious instrument but instead it becomes a necessity nowadays. On the other hand, [5] investigated the link between image consciousness, materialism, credit card usage intention and compulsive spending among 191 business and management students at a private higher education in Subang Jaya. By employing

Structural equation modeling, the study found that materialism becomes weak mediating factor in the middle connection between image consciousness and compulsive spending. This finding infers that students willing to spend more than what they actually need specially to fulfill their image consciousness satisfaction.

Bank Policies also play significant role in determining credit card behaviour. The policies can be further divided into benefits and convenience during application. First, there are different incentives or benefits provided by issuing bank to entice customer to use credit card. These incentives consisting of fee waiver, point rewards, rebates, free airline trip, discount of selected items and services and easy instalment plan. Some banks also provide insurance protection (usually personal accident) to cardholder that indemnifies losses against accident while trip, premature death and also total permanent disability [7]. Besides that, the wide acceptance of credit card for most transactions such as dining, hotel reservation, travelling, online purchase, entertainment activities and other purposes provides convenience to cardholder and encourages them to use credit card regularly. Second, the convenience during application process really helps to boost the number of credit card applicants. In previous time, customer needs to provide copies of identification card, income statement, EPF statement etc. which is basically not efficient and time consuming. However, the process can be completed effectively within a short time as many banks nowadays open booths and kiosks in shopping malls that are well equipped with photocopy and scanner machine. This facility has reduced saved time need to be spent by customer to go to banks to make formal application. Thus, the ease application process has invariably increased the application rate.

III. METHODOLOGY

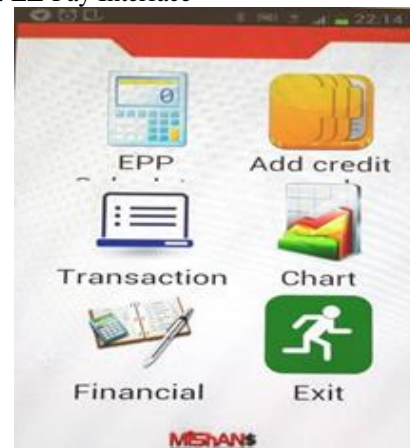
A. The design of mobile application– EZ Pay

Usefulness, usability (adaptability), mobility, easiness, relevant and user interface design becomes critical criteria in developing good smartphone software. Mobility refers to ability to provide information wherever the user needs, usefulness relates to benefits in daily life activities, relevance refers to authenticity of information, easiness relates to hands-on practicality and concise terminology and adaptability is to fulfill every user's own need [4]. Basically, the design of this mobile application is slightly similar with common application in the android market. The user interface must be designed in a convenient way to simplify device operation with improved human-system interaction feature [4]. EZ-PAY application is basically built using Basic4Android B4A platform to make all-in-one debt and credit card management include Easy Payment Plan Calculator for local banks in Malaysia. There are five icons in the main interface of EZ-Pay. The first icon is EPP calculator. By clicking this icon, EZ-Pay will simultaneously calculate the monthly payment that need to be paid by user to respective bank. Before that, registered credit card holder needs to declare outstanding balance and credit limit. Then the user needs to choose EPP scheme provided by respective bank. These steps can be seen in figure 3(a), 3(b) and 3(c). Then EZ

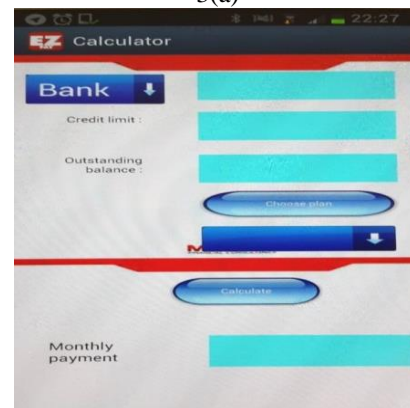
Pay will assess the overdue balance and estimate the outstanding amount and rescheduled the remaining amount of outstanding balances that need to be paid. User may update their overdue balance and the apps will simultaneously adjust the changes on the repayment amount. The processing fee for your chosen plan varies across different banks and maturities (refer Appendix 1). There is no limit on data entry. No matter what amount put into the apps, EZ Pay will calculate the repayment value instantly.

Next icon to the EPP calculator is “Add credit card”. The user can add any credit card their own. Therefore they need to fill in the blanks the credit card name, provider and credit limit. The user also can edit-save, add new and delete. Furthermore, this application provides an icon called transaction. The user must declare all the transactions that their made by using credit card. For example, a user purchases a laptop worth RM 3,000. So, the user just need to add new transaction with the price he or she bought the laptop. This function is useful to monitor historical purchases made by the cardholder and can be spending tracker. Then, move to the chart. By clicking this icon, the user can know how much they have spent and how much they need to save in order to avoid over expenses. This is because the chart reflects all the current expenses made by user and how much credit balance the users have. The last icon is Financial. In this section the application tries to help the user manages a portfolio of assets. The exit button is used when the user want to quit from using EZ-Pay apps.

FIGURE 3: EZ-Pay Interface



3(a)



3(b)



3(c)

IV. RESULTS AND DISCUSSIONS

A. Scenario Analysis

To test the effectiveness and practicality of EZ-Pay, a scenario analysis can be conducted [9]. We conducted a scenario analysis that involves two methods which are Regular Payment Plan (hereafter RPP) and Easy Payment Plan (EPP). We tested a scenario of a person who has overdue credit card balance of RM10,000 and a credit card limit of the same value. According to BNM, customers are allowed to make a minimum payment of 5% of total outstanding which is applicable for both conventional and Islamic credit card. The RPP calculation involved late payment interest of 18% p.a. (1.5% per month) that was commonly used by most banks in Malaysia. For EPP, we used Maybank 360-month EPP plan with zero interest where all calculations were performed by EZ-Pay. This calculation incorporated processing fee at the upfront payment. Please be noted that zero interest is only applicable when customer fulfils his commitment to make actual payment set by EZ-Pay calculator. If the customer makes minimum payment below than settlement value, late interest payment will be imposed accordingly.

There are several noteworthy information can be extracted from Table 2. First, it seems that the processing fee of EPP (equivalent to 28% for 36-month) is charged at time $t=0$ and perceived as an opportunity cost for any potential deferred interest payment gained from RPP. Secondly, looking at interest payment if customer makes minimum payment, it is obvious that the customer needs to pay RM142.50 under RPP during first year which is significantly higher than that of EPP that charges only RM 5.03. The difference between these two amounts is RM137.47 which can be used to make settlement for other expenditures. In the same vein, during the second year, the interest payment charged under RPP remains large with RM 137.41 compared to EPP with only RM10.13. Although interest payment under RPP is declining as time moving while EPP showing increasing trend as shown in Figure 4(a), but RPP penalizes customer much heavily during the beginning of repayment period which really affects cardholders. Besides, EPP encourages participant to make installment payment which is much lower than instant payment

of outstanding balance under RPP. Thus making minimum payment under EPP (lower than prescribed installment) basically violates the original purpose of EPP of having zero interest payment.

TABLE 2: Comparative analysis on Regular Payment Plan (RPP) & Easy Payment Plan (EPP)

Months	0	1	2	3	....	35	36
Regular Payment Method							
Amount should be paid		10000.00	9642.50	9297.78	.....	2900.33	2796.65
Minimum Payment (5% of outstanding balance)		500.00	482.13	464.89	.....	145.02	139.83
Interest Payment (if pay minimum payment) (1.5%)		142.50	137.41	132.49	.....	41.33	39.85
Outstanding balance (if pay minimum 5%)	10000.00	9642.50	9297.78	8965.38	.....	2796.65	2696.67
EPP Method							
Amount should be paid*		385.00	385.00	385.00	.....	385.00	385.00
Minimum Payment (RM50)		50.00	50.00	50.00	.....	50.00	50.00
Interest Payment (if pay minimum payment) (1.5%)		5.03	10.13	15.30	.....	229.10	237.56
Outstanding balance (if pay minimum 50)		340.03	685.15	1035.45	.....	15502.45	16075.01
Outstanding balance (if pay full 385 per month)	13860*	13475.00	13090.00	12705.00	.....	385.00	0.00

*The installment amount already includes the processing fee at the upfront payment

FIGURE 4(a): Monthly Interest for minimum repayment

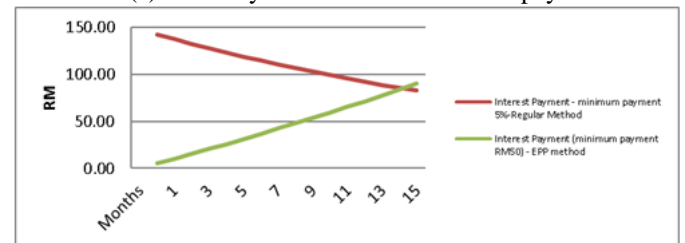
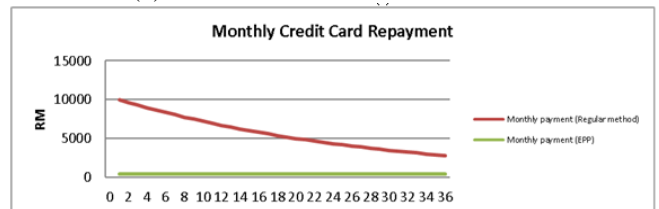


Figure 4(b) compares the pattern of monthly repayment under RPP and EPP. It can be clearly seen that a cardholder that subscribes RPP needs to make a full amount once purchase is made. It means that with RM10,000 outstanding debt, the cardholder needs to try his best to make a full settlement to avoid any interest late charge. It is quite burdensome to prepare the large some of payment immediately as we know that people use credit as a substitution for instant cash payment. Thus, such deferred payment incurs large interest income for bank. Comparatively, EPP promotes a series of fixed installment to give more space for customer to fulfill his commitment. For this case, the customer is only need to pay RM385 generated by EZ-Pay. Besides, the remaining balance between EPP and RPP can be used to support other expenditures. Thus, EPP repayment scheme provides benefits to cardholder by having greater financial freedom, healthy risk profile and high chance for acceptance of other loan's application such as housing loan, car loan and others.

FIGURE 4(b)



B. Usability evaluation and testing of the EZ-Pay application

According to [9], there is a strong statistical connection between perceived usefulness and fluent navigation to mobile user experience. This finding motivates us to conduct

usefulness (usability) testing on EZ-Pay. We perform usability test within experimental environment. According to [6], an experimental setting usually requires a standalone mobile application without need to have a network connectivity requirement. To complete the experiment, participants are basically required to perform several functions inside EZ-Pay to accomplish specific task. The sample of participants involves 150 lecturers and students from Financial Mathematics and Actuarial Science and Risk management programs in Universiti Sains Islam Malaysia which is conducted in May 2015. The selection of this group is made based on their strong background of financial literacy. The participants are randomly selected consisting of 20 males and 130 women with the ages are varied from 20 to 50 years old. It seems that most participants have adequate experience in using mobile applications where most of them had variety of standalone mobile apps such as waze (navigation), calculator, games, calendar, news, dictionary, book, social media, email, prayer time, medical fitness and so on. Interestingly, limited number of them had any experience in financial apps usage. All participants are basically need to perform three tasks using EZ-Pay application which are:

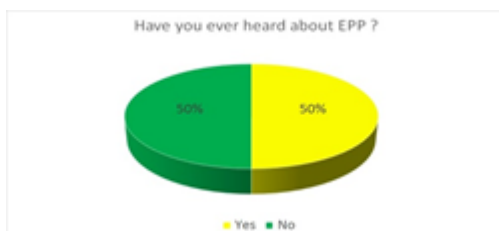
1. To use EPP calculator to calculate zero-interest monthly installment
2. To record credit card transactions
3. To produce chart of transactions

After the usability test, facilitators have distributed survey forms to all participants to see their feedbacks on our mobile application. The survey form contains two levels of question where the first part is to test the understanding about credit card transactions and EPP concept while the second part focuses on the usability attributes of the product. Figure 5 shows selected survey results.

FIGURE 5 (a)



FIGURE 5 (b)



Taking a close look on Figure 5(a), it is interesting to see that about 84% of total participants have limited knowledge on how much interest being charged for their late payment of debt. This result signifies the lack of awareness and efforts taken to understand or even read product disclosure sheet. With limited knowledge on interest for overdue payment, it can

consequently stimulate compulsive spending as the user is not aware that the remaining credit card balance is subject to interest charge and keep growing by time if they keep making minimum payment. Next, we test participant on the understanding of EPP. Our expectation is to see small fraction of people understand about the plan. Based on Figure 5(b), it is found that half of the group understands about EPP which is a good sign despite of prior expectation of minimal percentage. Perhaps this finding is supported by greater exposure given in class as majority of participants have strong finance background. In terms of practicality, as shown in Table 5(c) and Table 5(d), 89% views that our EPP calculator apps is very useful and 84% of them said that it is very user friendly. This finding signifies the convenience of using the EZ-Pay application to perform EPP calculation and managing credit card transactions in a better way.

FIGURE 5 (c)

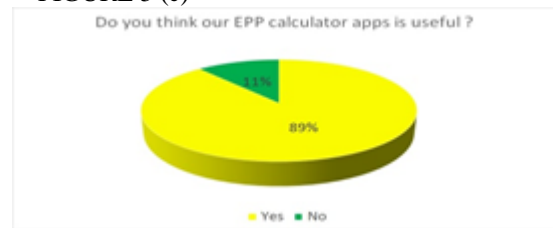
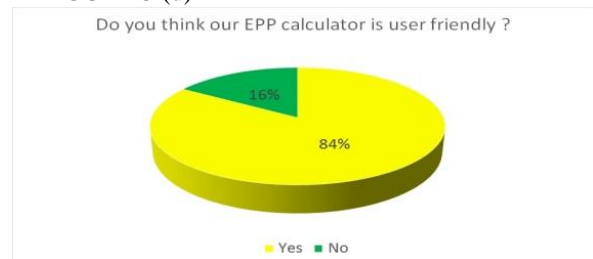


FIGURE 5 (d)



V. CONCLUDING REMARKS

Easy payment plan (EPP) introduced by BNM is basically not a new concept. The plan simply encourages customer to convert their overdue credit card payment to a series of installments with zero interest charge. Since the introduction of the EPP, it seems that the information has not been well circulated to credit card holders and most of the time they have limited understanding of terms and conditions provided by issuing banks. Since there is a strong positive connection between high credit card consumption and indebtedness, we try to educate people to manage their credit card through mobile platform. To best of our knowledge, this study is a pioneering effort in extending existing literature on solving credit card indebtedness using mobile application, with a special emphasis puts on Easy payment plan (EPP). This is worth pointing out that this study provides mobile solution which is beneficial for credit card holders, bankers and academics. The mobile platform provides good platform to end user to manage their credit card with less hassle and greater practicality at your fingertips. EZ-Pay recognizes the problem of compulsive spending by offering EPP calculator that helps customer to

calculate installment payment of their outstanding debt and reduces the amount of interest should be paid under regular payment plan. Moreover, EZ-Pay provides a platform to monitor credit card consumptions regularly using spending tracker function.

From academic perspective, this study contributes to the existing literature of mobile application. Capitalizing on the rapid evolution of mobile technology, we embed the concept of EPP into mobile platform where the apps can be accessed in a much convenient way. There are several limitations for future study. First, in order to increase the usability of EZ-Pay, the software should be extended into Apple's iOS platform for iPhone users because this application is developed on Android platform only. Second, in term of practicality, EZY-Pay can add more functions inside the application such as financial calculator, varied loan calculators (house, car, personal), and also income spending tracker as greater functions increase the level of usefulness of EZ-Pay. Third, the software does not incorporate other charges and benefits into EPP pricing such as GST charge, rebates and promotions provided by each issuing bank. Perhaps, by incorporating this information, it can increase the accuracy of result. Fourth, for usability of EZ-Pay, the study should be conducted by taking real users into design and development work [10] and not limited to experimental users. Fifth, this study makes prior assumption that the customers are well aware about EPP concept before they can use EZ-Pay. However, in reality, most credit card holders are not aware about this plan. Thus, educating people about EPP must be done accordingly by BNM and issuing banks. From academic perspective, it requires extensive marketing research to study the penetration and acceptance of EPP concept among customers. Sixth, it seems that this study focuses only on credit card issued by Malaysian banks and not applicable to credit card issued abroad. Thus, the application can be extended to foreign credit card through extensive works by compiling information of easy payment plan worldwide with different upfront processing fees, formulas and currencies.

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APPENDIX

APPENDIX 1

EPP UPFRONT PROCESSING FEE CHARGE (Updated as on 1 August 2015)						
BANK	12 Month	18 Month	20 Month	24 Month	30 Month	36 Month
AFFIN BANK	14% (min-1000)	-	-	23% (min-2000)	-	28% (min-3000)
ALLIANCE BANK	-	-	-	25% (min-2000)	-	31% (min-3000)
CITIBANK	-	-	-	26% (min-2000)	-	31% (min-3000)
OCBC	-	-	19% (min-2000)	-	-	-
HSBC	-	-	-	25% (min-2000)	-	-
STD CHARTERED	14% (min-1000)	-	-	23% (min-2000)	-	30% (min-3000)
CIMB	-	-	-	28% (min-2000)	-	33% (min-3000)
UOB	-	17% (min-2000)	-	-	-	-
AMBANK	-	-	-	25% (min-2000)	-	30% (min-3000)
BSN	14% (min-1000)	-	-	23% (min-2000)	-	-
PUBLIC BANK	14% (min-1000)	-	-	23% (min-2000)	-	-
RHB	-	-	-	24% (min-2000)	-	30% (Min-3000)
BANK ISLAM	EPP process is postponed for time being					
BANK RAKYAT	EPP process is postponed for time being					
MAYBANK	-	-	-	24% (min-2000)	-	28% (min-3000)
AEON	14% (min-1000)	17% (Min-2000)	-	-	-	-
MBF	-	17% (min-2000)	-	24% (min-2000)	-	-
HONG LEONG BANK (5.99%)	-	-	-	26% (Min-2000)	-	32% (Min-2000)
Processing Fee charge is subject to changes by issuing bank						