HOUSEHOLD DEBT DECISION: POVERTY OR PSYCHOLOGY?

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ABSTRACT

This study is motivated by the growing concern with the increase in the level of household debt, particularly in Malaysia. One of the debated issues is whether household borrowings are related to poverty factors or due to psychological factors. This study approaches this issue by taking into account the factors as proposed by conventional (Life Cycle Hypothesis) and heterodox (Relative Income Hypothesis) economic theories. The data presented is micro level data collected from a self- administered survey among urban working class in Klang Valley. We find no conclusive evidence supporting the conventional theory, since though age is statistically significant, yet future income expectations are not. The findings also suggested that household debt is not a poverty related phenomenon since the determinants are more "wants" rather than "needs". Thus, any policy intervention should include educating households on rational consumption decision making.

Keywords: Household Debt; Behavioral Economics; Social Comparison.
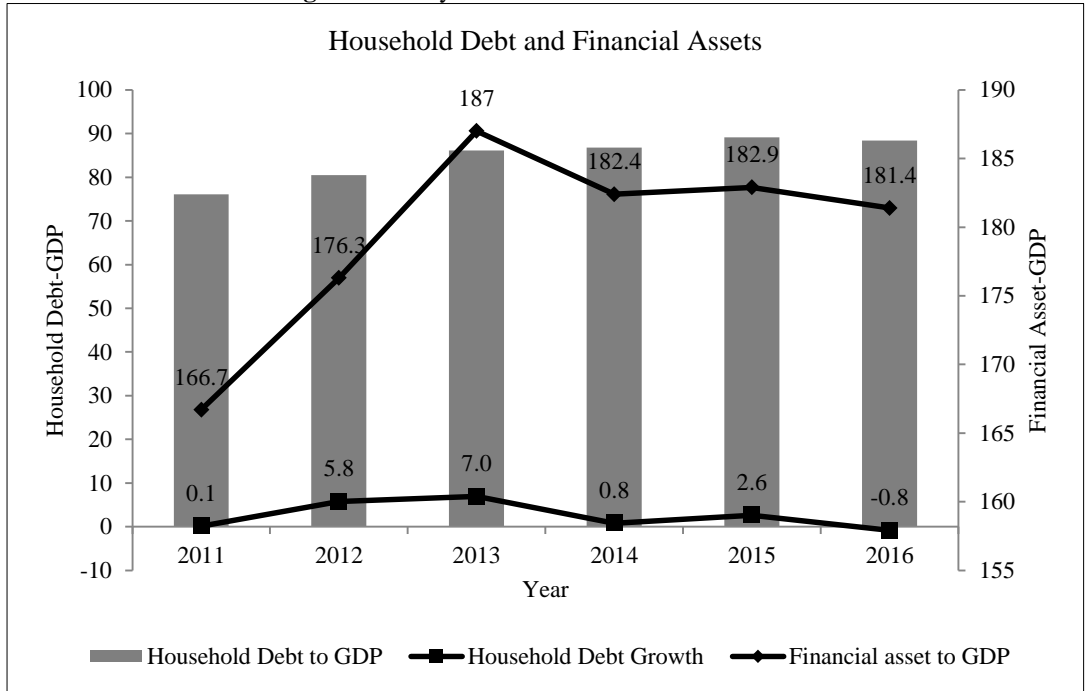
1. INTRODUCTION

In Malaysia, indicators of household debt are showing an increasing trend, triggering concerns on whether the development would pose any threat to economic stability as well as household welfare. As indicated in Figure 1, it is alarming to know that household debt to GDP ratio rose from 68.8% in 2006 to 76% in 2010, to 84.4% in 2016 (Bank Negara Malaysia, 2016). Year 2012 and 2013 indicate the highest growth of household debt with 5.8% and 7.0% respectively. On average, over the ten year period, household debt to GDP increased by 2.03% a year. Similarly, household financial assets-GDP rose by 12.1% from 166.7% in 2011 to 187% in 2013. Another indicator, ratio of household debt to disposable income displayed a similar trend. It stood at 136% in 2009 and increased to 138.2% in July 2010 (Ministry of Finance, Malaysia; 2011). Furthermore, the household debt service ratio is equally alarming since the ratio increased from 41.1% in 2007 to 43.5% in 2013; when the acceptable ratio is just 30%. On average, each Malaysian household take loan 1.4 times higher than their household income (www.consumer.org.my). Even worse, report shows increase in total bankruptcy number from 19,575 people in 2012 to 97,215 in September 2016 with 25,581 were youth aged between 25 to 34

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years old, personal loan and housing loans are the main reason for bankruptcy with 26,801, 22,153 and 18,819 cases respectively (Utusan Malaysia, Dec 7, 2016).

Figure 1: Malaysia: Household Debt 2011-2016

Source: Financial Stability and Payment Systems Report, Bank Negara Malaysia, Various Years.

All this would call for some attention on the household debt development. It is imperative to understand the reasons why households borrow and the factors that determine the level of their indebtedness, apart from the macro agenda such as whether household debt and its distribution pose any threat to financial stability. At the household level, the ongoing debate is whether households borrow to support living cost, and hence to maintain their standard of living or to improve one's living standard. In other words, whether households resort to debt, especially consumption or unsecured debt solely because of adverse economic circumstances or whether mostly due to psychological factors, such as being more tolerable towards debt and to keep up with the Joneses. Different underlying drivers of debt would call for different policy prescriptions to handle the problem of increasing household debt.   Therefore, understanding the reasons why households borrow and factors determine the level of debt are crucial for identifying appropriate policy responses.

With this in mind, this research is undertaken to examine the reasons households borrow. Specifically, this research will study factors that distinguish between households with debt and households without debt, as well the characteristics that differentiate the level of household indebtedness. The significant discriminators would then point to the factors that explain why households borrow.

2. LITERATURE REVIEW

In economics, explanations on household debt behavior are assumed to be embedded in the theories of consumption. According to the mainstream consumption theory, that is the life-cycle hypothesis, household debt is a result of utility maximization. Given future income expectations, households borrow accordingly to smooth consumption over the lifetime. This results in a relatively higher level of debt among younger individuals and will start to decrease as they grow older.

This theory hypothesizes that the level of debt could be determined by socio-economic factors such as age, future income expectations and number of children.

Nonetheless, heterodox theories claim that all this is not sufficient to explain household consumption and the dynamics of household debt. The assumption of a rationale economic man that underlies mainstream consumption theories, has led to the conclusion that consumption depends solely on income. Consequently, this has led to a very narrow explanation of why households borrow. Instead, heterodox theories argue that consumption decisions do not depend solely on one's own income. Rather, they are also influenced by other external factors such as other people's consumption patterns and personality traits.

Renowned heterodox consumption theories are Veblen's Conspicuous Consumption Theory (1899) and Duesenberry's Relative Income Hypothesis (1949). Veblen (1899) highlights that due to human nature with unlimited wants, relative position matters. Where consumption is concerned, this is manifested in being envious of what others have and striving towards consuming at least what others are consuming or even something of a better standard. This leads to Veblen's effect or conspicuous consumption, an act of purchasing and using certain goods and services, not in order to survive, but rather to identify oneself with others that have superior wealth and social standing. The purpose of consumption is tilted towards display rather than serving the needs. This influence will vary with income inequalities in the society. As the richer spend more lavishly and extravagantly, it generates envy, increases the standard of consumption in the society and increases aspirations level of the society. This could lead to social exclusion for those who fail to meet the standard. This pressure leads some households to resort to borrowing to keep up with the Joneses rather than limiting spending according to their income level.

While Veblen's hypothesis stresses on the act of conspicuous consumption and aspiration level as factors that influence consumption, Duesenberry (1949) advances a theory that focuses specifically on stand on social comparison. Duesenberry (1949) submits that consumption is not based solely on own income, but rather it is based on "reference" income as a result of social influence of consumption by others. Consumption could be increased by contacts with superior goods that are consumed by others, such as colleagues, neighbors, relatives and even the people seen on television. Then, consumption standard is dictated by the consumption of those earning the average income in the society. Those households earning below than average income will strive to achieve that consumption standard. Here, households will borrow to meet the extra expenses required to achieve the level of consumption regarded as acceptable. The acceptable standard of consumption will be higher, the higher the level of per capita income in the society that one belongs to. Thus, the more demanding it is for those households earning relatively lower income, to keep up with the standard consumption level. Hence, the greater is the probability for low income households to borrow to meet their consumption needs.

Empirical studies on household debt are not new. In examining household debt decision, a consensus has emerged that household debt is not purely an economic phenomena. Instead it is equally important

to include psychological factors in understanding household debt decision. Even, some studies report that demographic factors have limited explanatory power of household debt compared with other psychological factors, (Lunt and Livingstone (1991), Wang et al (2011) and Cosma and Pattarin (2010).

As for the socio-demographic factors, different studies focusing on different societies, time periods and target groups often yield strikingly different results. While it is initially perceived that the level of debt should be negatively related to income, in most studies, debt is found to vary positively with income. This could be due to the evolution of debt from being a signal of poverty to a signal of prosperity instead (Katona, 1975). The higher is one's income, the lower the probability of default and hence the greater the ability to borrow higher amounts. Similarly, debt will not necessarily increase with the number of children. In fact, studies find that households with more children tend to have lesser debt, (Lunt and Livingstone, 1991). Findings on the relationship between debts and age are also mixed. Theoretical account suggests that for the working population, debt should decrease with age since households borrow when they are young and gradually will settle their debts over the years that follow. Empirically, studies by Lea et al (1993) and Lunt and Livingstone (1991) support this claim. However, Davies and Lea (1995) find that older people have a higher probability of being heavily indebted.

Psychologically, the change in the role of debt in household financial management is due to the change in society's attitude towards debt. Hence, attitude is expected as one of the major factors explaining the increase in the level of household indebtedness. Given similar economic situation, one that is more tolerant towards debt will have a higher probability to borrow, as opposed to one that is more negative towards debt. Nonetheless, findings on the role of attitude in influencing household debt decision are also mixed. Lunt and Livingstone (1991) and Lea et al (1993) find that debtors possess more permissive attitude towards debt. Findings of Cosma and Pattarin (2010), Davies and Lea (1995) and Lea et al (1993) consistently suggest that being more tolerable towards debt increases the probability of taking on higher debt. However, studies by Lea et al (1995) and Zhu and Meeks (1994) find that attitude does not matter in explaining household debt behavior. Another strand of research examine attitude from three facets, which are; affective, behavioral and cognitive. Hayhoe et al (1999) and Xiao et al (1995) report that although overall attitude towards debt is positive, behavioral aspect such as intention to use credit cards is not as positive. Wang et al (2011) find that behavioral and affective components of attitude raise the frequency of credit use but the cognitive aspect, which refers to having knowledge about the entire process of credit, including interest charges would deter the usage of credit.

Apart from attitude, social comparison and aspirations have also been taken into account. Lea et al (1995) find that those in debt indeed feel that they are inferior, feeling poorer than friends, relatives, colleagues and even the people they see on television, but this is not significant when other factors are controlled for. Bernthal et al (2005) show that those in debt are those who tend to express their identity through consumption. Another finding by Watson (2003) relates debt to the level of materialism. However, Lunt and Livingstone (1992) do not find any support for this hypothesis, claiming that it is most unlikely for those in debt to admit that they borrow to keep with the Joneses.

Where data collection is concern, since studies on household debt involve understanding household behavior, most of the studies rely on micro level data, collected from household surveys. Except for countries such as USA where data on household debt is available from Survey of Consumer Finances which is done on a regular basis at the nationwide level, studies on other countries rely on household survey that is done on a much smaller scale. In most cases, samples are selected from certain focus group that is deemed most appropriate to represent the population being studied. For instance, Cosma and Pattarin (2010) conduct the research among 2000 households and sampling is done in such way that

could reflect the debt attitude of the Italians. Watson (2003) chooses a group of residents in Pennsylvania, USA; divided between urban and non-urban to represent the composition of urban and non-urban US populations since the objective is to examine whether materialism influence household debt level. Wang et al (2011) select their respondents among credit card holders in Shanghai as their focus is on credit card borrowing in China.

In sum, the review highlights few gaps in research analyzing household debt behavior. Firstly, despite a lot of studies available, most are concentrated on the developed nations. Even then, there is no consistency in the findings, (Kamleitner and Kirchler, 2007). The strikingly different findings suggest that although burgeoning household debt is a universal phenomenon, the explanations, be they socio-demographic, economic or psychological are unique to each society. Hence, an exclusive study needs to be undertaken on each society to explain the phenomenon, especially where relevant statistics suggest household debt has reached a risky level. Secondly, apart from Lea et al (1995), there are not many studies that examine the roles of aspiration level and social comparison in explaining household debt, in accordance to the heterodox explanation for consumption, by Duesenberry (1949). We argue that greater mobility and greater social networking, these two factors are worth considering to be instigated in trying to understand household debt decisions. While Lea et al (1995) find these factors to be insignificant, the changes in values that take place in societies might have changed the pattern of relationship between the level of debt, on one hand and aspiration level and social comparison on the other. Hence in understanding the incidence of high household debt in Malaysia, the research framework should include socio-demographic, economic conditions as well as psychological factors.

3.   RESEARCH METHODOLOGY

The analysis is based on data collected from a self-administered survey conducted among household living in Klang Valley, Malaysia. The households were chosen to reflect the population of urban working class. The choice of this location is also dictated by the need to ensure that the respondents are subject to similar living costs and environment that could form the basis for social comparison and aspiration levels.

Greater Klang Valley is the heart of Malaysia with 38.7 percentage share of Malaysia's gross domestic product (GDP) in 2012 and residence for 5.7 million populations in 2010 (DOS). The greater Klang valley encompasses ten municipalities adjoining the state of Kuala Lumpur and Selangor includes; DB Kuala Lumpur (DBKL), Perbadanan Putrajaya, MB Shah Alam (MBSA), MB Petaling Jaya (MBPJ), MP Klang (MPK), MP Kajang, MP Subang Jaya (MPSJ), MP Selayang, MP Ampang Jaya (MPAJ) and MD Sepang (Economic Transformation Program, 2013). Therefore, in determining the sample size, according to Krejcie and Morgan (1970, p2), for a population of 5.7 million at a 95 percent confidence interval, a sufficient sampling size would be 384. In addition, especially in social science research, 1,200 sample is generally considered sufficient for generalization (Tittle, 2011, p293). Thus, we considered 1,200 sample is sufficient for this research.

The sampling was done using the stratified multi-stage sampling method to ensure that socio-economic and geographical considerations are taken into account to reflect the population. The respondents were approached at public places to fill up the questionnaire provided. 1,200 sets of questionnaires were distributed with a return rate of 96.8 percent, whilst 1,118 were used in actual analysis. A pilot test was conducted using convenient sampling with a sample size of 30. Based on the result of the pilot study, a modification was made to the questionnaire.

A binary logistic regression is conducted to distinguish factors discriminating households with debt versus households without debt. The dependent variable is determined by respondents' self-reported debt or ownership of credit cards. Respondents who reported having household debt greater than RM0 or admitted to owning a credit card or more are assigned the value of 1 or 0 otherwise. The output from the binary logistic regression is used in identifying the circumstances that contribute towards level of household indebtedness. The second logistic regression separates the debtors into low debt or high debt by assigning the value of 1 for respondents with low debt or 0 otherwise. The critical point that separates the two categories of households is set at the debt to income ratio of 30 percent, corresponding to the level of debt recommended by financial institutions.

While most recent studies limit their study to consumer credit, this study covers total debt to analyze whether the high level of household debt is undertaken to accommodate the increasing living cost or for lifestyle upgrading. Hence the need to include debt for housing, education and car aside from credit card debts since there is a possibility that most households incur debt to finance basic needs such as house, car and education.

The independent variables used for all regressions are divided into three categories, socio-demographic; economic and psychological, as reported in Table 1. Since psychological factors are not directly observable, they are measured using specific attributes. Confirmatory Factor Analysis (CFA) is conducted prior to the regression to test the reliability and validity of the attributes used.

3.1.   Measure of Constructs

(a)   Attitude towards Debt

The measurement of attitude towards debt follows Lea et al (1995), in measuring the general debt attitude and Chien and Devaney (2001) in measuring specific attitude. 16 attributes are used to gauge the level of tolerance towards credit, on a 5-point Likert Scale, with 1 strongly anti-debt and 5 pro-debt. The specific attitude was calculated using respondents' stand on using credit to purchase or accommodate five items, namely vacation trips, living expenses, fur coat or jewellery, car and education expenses; also on 5 Likert Scale, with 1 strongly pro-debt and 5 anti-debt. The responses were summed, giving an indication of the specific attitude, ranging from 1-25. The lower the measure, the more favorable one is towards debt.

(b)   Aspirations Level

The measure for aspirations follows Karlsson et al (2004), with the premise that aspiration level is determined by the degree to which households consider consumption of different goods and services to be necessary. Hence, the more households consider goods and services to be necessary, the higher their aspiration levels.

(c)   Conspicuous Consumption

Using respondents' frequency of buying visible and demonstrative goods, ranging from 1=never buy to 5=always, an indicator is constructed to measure the probability of households engaging in conspicuous consumption. The selection of branded apparels as visible demonstrative goods follows Charles et al (2009) who suggest that the item selected to represent conspicuous consumption must fulfill the following: the goods must be easily observable with the characteristic that greater consumption of them is generally associated with higher income.

Table 1: Variables Descriptions

Variables	Descriptions
Socio-demographic Variables	
Age	Age of head of household (years)
Employment Status	EmpStat = 1 for Payroll worker, 0 otherwise
	EmpStat1= 1 for Self employ, 0 otherwise
	EmpStat2= 1 for Unemployed, 0 otherwise
	EmpStat3 = 1 for otherwise, 0 otherwise
Marital Status	Marital = 1 for single, 0 otherwise
	Marital1= 1 for married, 0 otherwise
	Marital2= 1 for widow, 0 otherwise
	Marital3= 1 for divorcee, 0 otherwise
Economic Factors	
Income	Income = Monthly household income <=RM4000
	Income1 = RM4000<Monthly household income <=RM6000
	Income2 = Monthly income>RM6000
Number of Children	Number of children under age of 18
Saving Behavior	Savings = Do not save
	Saving1 = Save if there are balances at the end of the month or extra income, no specific planning
	Saving2 = Save consistently by putting aside monthly income for saving.
Psychological Variables	
Life Aspirations	Sum of 18 goods/services based on 5 likert scale (Karlsson et al, 2004)
Attitude towards Debt	Cognitive, Emotional, Behavioral (Lea et al,1995) and Specific Attitude (Chien and Devaney, 2001).
Social Position	Perspectives on Household Financial Standing Relative to 5 groups of people: friends, colleagues, relatives, neighbors and others. For each group, the positions are:
	0 = I am worst off and it disturbs me
	1 = I am worst off but it doesn't matter
	2 = I am better off and that makes me happy
	3 = I am better off but it doesn't matter
	4 = We are equal and I am satisfied
	5 = I don't care at all on my relative financial standing against others.
Future Income Expectations	fincome =1 for increasing, 0 otherwise
	fincome1 =1 for stable, 0 otherwise
	fincome2 =1 for decreasing, 0 otherwise
LC	Locus of control measured by 4 attributes based on 5 Likert Scale (Cosma and Pattarin, 2010)
	D17A: When I make plans I am almost certain that I can make them work
	D18A. What happens to me is my own doing
	D19A. Doing things the right way depends upon ability; luck has nothing to do with it
	D20A. Many of the unhappy things in people's lives are partly due to bad luck
CC	Conspicuous consumption measured by sum of score of 8 goods based on 5 Likert Scale.

(d)   Locus Control

Locus of control is measured following Cosma and Pattarin (2010). Initially, it was a six-item construct, using Likert's five grades scale. The index was then modified, guided by CFA modification indices,

that suggested only four items are valid to measure the locus of control. The attached score is higher if the individual is more external, that is the more strongly they believe that their economic position such as poverty and bad financial position is due to external reasons that are beyond their control.

4.   RESULT

The sample presented by almost equal proportion of respondent by gender with 49 % them are male. The distribution of respondent by ethnicity is 57% Malay, 29% Chinese, and 14% Indian. Most of them are payroll worker (68%). Since majority of respondent are Malay, then most of the respondent are Muslim (60%). The mean age was 33 years old with a standard deviation of 11.7 years. Three-quarters of respondents were in their 40s or younger. Only 2.4% of them never had formal education. Majority of them (58%) had a greater than high school level of education (e.g. certificate, diploma, bachelor or graduate). The majority of respondents (77%) had household income less than RM5000 per month. Most of them (75%) had medium household size with six household members including four members aged less than 18. The proportion of respondent reporting to be in debt is 67%.

The CFA concludes that the hypothesized model to measure life aspiration, attitude towards debt and locus of control is usable. Evaluation on the assumptions of multivariate normality and linearity was done through IBM SPSS Statistics 19. Using Mahalanobis distance, no univariate or multivariate outliers were observed in the data.

The initial model of the analyses is shown in Figure 2. A post-hoc modification was done for Life Aspiration. The CFA of the hypothesized life aspiration modeling was initially linking the life aspiration as the latent variable with four observed variables. Most of the indicators assessing the fitness conclude to reject the null hypothesis. Based on the modification indices, the initial model was modified. This modified model was found to be a better model. Four observed variables were also used to test the hypothesized attitude towards debt and locus of control modeling. Several fit indexes for each hypothesized CFA model shown in Table 2. It suggests that the models show excellent goodness of fit with relative chi-square, RMSEA, NFI, RFI, IFI, TLI and CFI for all constructs; Life Aspiration, Attitude Towards Debt and Locus Control, respectively. The RMSEA value indicates below of the threshold 1.0, whilst all the baseline comparison exceeded 0.9 their threshold indicates and are within the ranges recommended by Hair et al. (2011) and Holmes-Smith (2006).

Standardized Regression Weights estimates are provided in Figure 3. The squared multiple correlation values are also provided at the upper right of each observed variable; Cognitive (.70) and Special Attitude (.16) have the highest and lowest, respectively. This indicates that attitude towards debt accounts 70 percent of the variance in Cognitive.

4.1.   *Factors Discriminating Household with and Without Debt*

The estimates of the binary logistic regression are shown in Table 3. A test of the full model against a constant only model was statistically significant based on chi-square test ($\chi^2 = 74.43, df = 47$). Hosmer-Lemeshow goodness of fit (p-value>0.05) indicates that the observed and predicted probabilities are closely matched. The model correctly predicts 84 percent of the respondents exhibiting household with debt and 55 percent of the respondent exhibiting household without debt. The model misses 16 percent and 45 percent of the respondents who are not predicted to be in the group of household with debt and without debt, respectively. Nagelkerke (Max rescaled) R squared suggest that

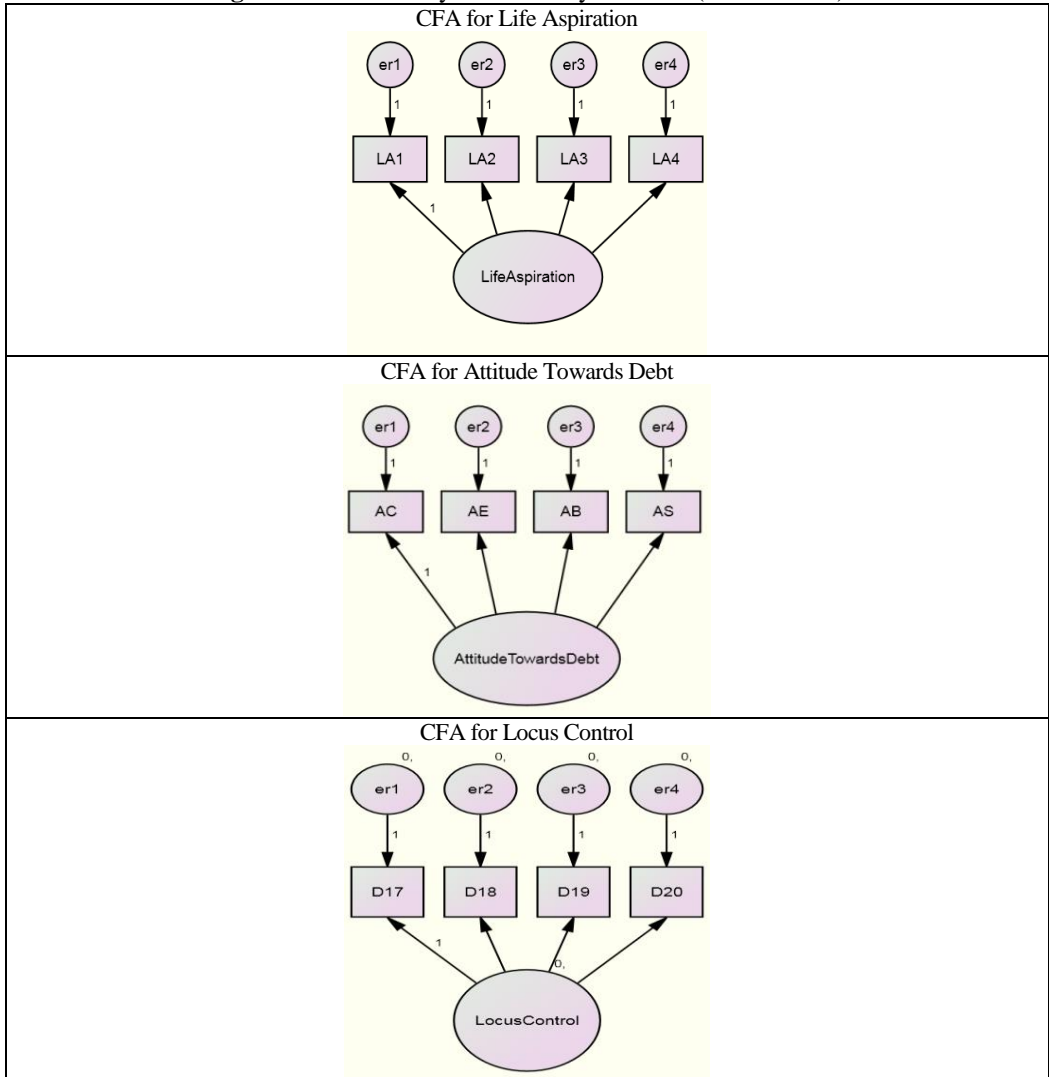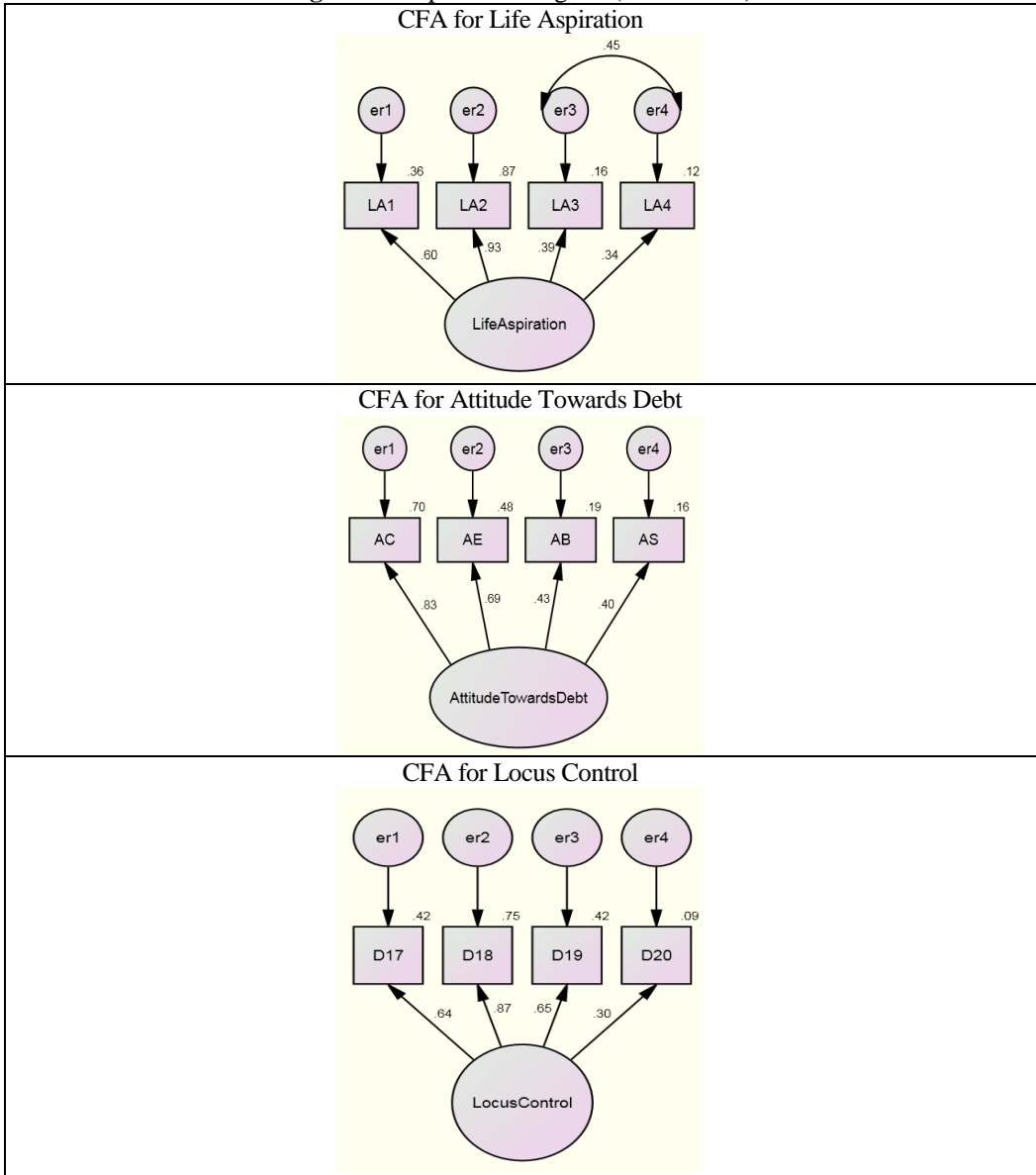**Figure 2**: Confirmatory Factor Analytic Model (Initial Model)

CFA for Life Aspiration

CFA for Attitude Towards Debt

CFA for Locus Control

Table 2: Selected Amos Output for Factor Analytic Model

Latent Variable	Observed Variables	χ^2	df	RMSEA	Baseline Comparisons				
					NFI	RFI	IFI	TLI	CFI
Life Aspiration	LA1, LA2, LA3, LA4	14.75	9	0.114	0.984	0.906	0.985	0.912	0.985
Attitude Towards Debt	Cognitive, Emotional, Behavioral, Special Attitude	14.13	2	0.075	0.981	0.943	0.984	0.951	0.984
Locus of Control	D17A,D18A, D19A,D20A	6.886	2	0.047	0.993	0.964	0.995	0.974	0.995

Note: χ^2=Chi-square, df=degree of freedom, RMSEA= Root mean square error of approximation, NFI= Normed fit index, RFI= Relative fit index, IFI=Incremental fit index, TLI= Tucker-Lewis coefficient, CFI= the comparative fit index. The index selection is based on Bentler and Bonnet (1980), Hu and Bentler (1999) and Yu (2002).

Figure 3: Output Path Diagram (Final Model)

49 percent of variations in the outcome variable is explained by this logistic model. Out of 55 variables tested in the model, three were statistically significant at 1 percent significance level, four at 5 percent and four at 10 percent. Cohen (1992) provides a power analysis indexed in explaining the magnitude of effect size in behavioral science researches. He suggests a benchmark includes, R squared of 0.1 = small effect, 0.3 = medium effect and 0.5 = large effect. Thus, our result fall in medium towards large effect size category with this index (0.49 and 0.31 as shown in Table 3 and 4). Despite, the nature of our data

(cross sectional) will always shows lower R squared because in cross-sectional analysis, with heterogeneous objects of investigation, the proportion of variance that cannot be explain is usually higher compared to time series of pooled data (Reisinger, 1997, p5).

While most studies on household debt decision suggest that socio-demographic factors are important discriminators between debtors and non-debtors, this study found only employment status differs between the two groups, with pay roll workers have a higher probability to be a debtor, while pensioners have a lower tendency to be one. Other socio-demographic and economic variables are not significantly different for household with debt and without debt.

Psychological factors such as attitude towards debt, future income expectation and social comparison differs between debtors and non-debtors. For instance, debtors are those who are positive that their income will be increasing in future.

This concurs with the theoretical account of Life Cycle Hypothesis where households borrow to smooth consumption over the lifetime and to finance large lifetime expenditures, with the anticipation that their income will increase in future, hence debt is undertaken to allow them to consume now rather than later.

As for attitude, the findings are in line with other studies that demonstrate being debt tolerant increases the probability of having high debt, (Cosma and Pattarin, 2010 and Lea et al., 1993) this study also found that households with high debt are associated with having positive attitude towards debt. On a further note, although descriptive statistics on attitude towards debt demonstrated both debtors and non-debtors possess positive attitude towards debt, implying that generally households are debt tolerant, yet debtors are those who consider using debt to purchase things and services such as vacation and jewelleries, as something acceptable.

The findings on social comparison lend support to the heterodox theoretical predictions. Social comparison appears to be a factor that distinguished debtors from non-debtors. Theoretically, those who do not care about others would have lower probability to be a debtor since most possibly, their consumption would not be influenced by others. It is the households who feel inferior that tend to have a greater tendency to be a debtor, in their effort to catch up with the Joneses.

According to the findings, the probability to be a debtor increases for households who admitted that they feel inferior compared to their neighbors' and other people's (people seen on media) financial position; and it bother them. Meanwhile households who admit that they do not care at all about their friends' and neighbors' financial position have lower probability to be a debtor. Similarly for those who consider that they are either better off or at par with their neighbors. All these associations between relative position and probability to be a debtor are consistent with Duesenberry's Relative Income Hypothesis, (1949).

However, results on comparison with colleagues and relatives and its association with probability to be debtors, are contradictory with theoretical predictions. Theoretically, households who are better off or at par with those they compared themselves with is expected to have a lower probability to be a debtor. Yet, in this case, probability to be a debtor is higher among those who consider themselves at par with their colleagues and claim that they are satisfied with that; and claim they don't care about relatives' financial position but considered themselves to be superior. A possible explanation would be due to their relativist attitude. The fact that they care to rate their financial position relative to the compared

groups, is some indication of them being relativists that is what others consume matter to them. They become debtors most probably due to the need to maintain their perceived superiority position.

Table 3: Logistic Model 1: Household with And Without Debt

Variable	β	E(β)	Variable	β	E(β)	Variable	β	E(β)
Constants	6.54	NA						
Socio-demographic Variables								
Age	-0.02	0.98	EmpStat^					
Marital			EmpStat1	-1.62	0.20			
Marital1	-3.13	0.04	EmpStat2	-2.14	0.12			
Marital2	-3.00	0.05	EmpStat3^	-2.61	0.07			
Marital3	-2.98	0.05						
Economic Variables								
Income			Saving			# children <18	-0.04	0.96
Income1	0.27	1.31	Saving1	-0.50	0.61			
Income2	-0.10	0.91	Saving2	-0.49	0.61			
Psychological Variables								
Life aspirations	-0.13	0.88	Colleagues			Neighbors*		
Attitude towards debt :			Colleagues1	0.61	1.84	Neighbors1	0.31	1.37
Cognitive	0.05	1.05	Colleagues2	0.36	1.43	Neighbors2	-0.68	0.51
Emotional	-0.08	0.93	Colleagues3	0.91	2.49	Neighbors3**	-3.80	0.02
Behavioral	0.05	1.05	Colleagues4^	1.45	4.25	Neighbors4*	-2.49	0.08
Special Attitude^	-0.07	0.94	Colleagues5	0.96	2.61	Neighbors5**	-2.64	0.07
social position:			Relatives			Other people*		
Friends			Relatives1	0.61	2.61	Other people1	-0.20	0.82
Friends1	-0.93	0.39	Relatives2	-0.06	0.00	Other people2	0.47	1.60
Friends2	0.16	1.17	Relatives3*	1.96	1.84	Other people3	1.02	2.78
Friends3	0.82	2.27	Relatives4	0.81	0.94	Other people4	0.97	2.64
Friends4	-0.44	0.64	Relatives5	0.74	7.10	Other people5**	2.37	10.73
Friends5^	-1.16	0.31	LC	-0.19	0.83	fincome^		
			CC	0.02	1.02	fincome1	0.77	2.16
						fincome2	0.05	1.05

Notes: β=Estimated Coefficient, Hosmer-Lemeshow Goodness-of-fit test ($\chi^2 = 9.469, df = 8, p = .304$); Cox and Snell R squared = .369; Nagelkerke (Max rescaled) R squared = .494; NA=Not applicable; ^ significant at 10%, *significant at 5%, ** significant at 1%.

Another contradictory association is between those claim that they do not care at all about other people's financial position and the greater tendency to be a debtor. Surprisingly, this contradictory association is the one with the highest odd value, 10.73; suggesting that for household who claim that they do not care at all, the odds of a household to be in debt increase by 10.73 times.

A possible explanation for this theoretically contradictory finding could be the unconsciousness of social media influence. In this study, other people refer to people seen from television or in the advertisement. This element might significantly influence households' consumption and financial position, without the households realizing it. Hence, the strong association between the probability to be a debtor and self-declaration of how others are doing do not bother them.

4.2. *Factors Discriminating Households with High and Low Level of Debt*

The estimates of the binary logistic regression are shown in Table 4. A test of the full model against a constant only model was statistically significant based on chi-square test ($\chi^2 = 65.59, df = 47$).

Hosmer-Lemeshow goodness of fit (p-value>0.05) indicates that the observed and predicted probabilities are closely matched. The model correctly predicts 88 percent of the respondents exhibiting household with high debt and 69 percent of the respondent exhibiting household with low debt. The model misses 12 percent and 31 percent of the respondents who are not predicted to be in the group of household with high debt and with low debt, respectively. Nagelkerke (Max rescaled) R squared suggest that 31 percent of variations in the outcome variable is explained by this logistic model. Out of 55 variables tested in the model, six were statistically significant at 5 percent significance level and eight at 10 percent.

The second set of regressions look at the factors that differentiate households with different levels of debt. Interestingly, the socio-demographic and economic factors that discriminate households with different level of debt is in stark contrast with the discriminants between household with and without debt.

Where the socio-demographic factors are concerned, this study found only age differs between the two groups in such a way that the younger households have higher probability to belong to the high debt category. As for the economic factor, households belonging to the lowest income category have a lower probability to fall in the high debt group. On the other hand, it is households with higher income level (the middle income class) that have a greater tendency to fall into the high debt category. To a certain extent, this is consistent with the proposition that household borrowings are motivated by the availability and accessibility of credit. The middle income households, earning higher income, hence have easier access to financing facilities, increased the probability for over borrowing. This offers support to the notion that urban household borrowings in Malaysia is not much because of poverty. Otherwise, the lowest income group should have a greater level of debt.

Findings on psychological factors that distinguish households with high and low level of debt echo the findings on factors that explain the difference between indebted and debt free households. With the exception of future income expectation, social comparison and attitude towards debt (specific) are found to be significant. However, the peer groups that are important in influencing debt level decision are limited to only neighbors and others such as people households see on television, or in magazines and advertisements. The results show that the probability to have high debt level is lower for households that consider themselves superior as compared to other people, and for households that claim other people's financial standing does not matter to them. This is consistent with theoretical account that those who considered themselves as better off would have a lower possibility to emulate others' consumption. Instead, their consumption would be based on their own income level, hence the lower the need to submit themselves to a high debt level.

The case is different when it comes to neighbors. The odds ratios suggest that perceptions on neighbor's relative position have the strongest impact on increasing the probability of a household to be in the high debt category. Households who have the tendency to have high debt are those who show some inclination to compare how they are doing as compared to their neighbors. For instance, those that claim they do not care but somehow position themselves as either worst off or better off than their neighbors. This is consistent with other findings such as Grinblatt et al. (2008) who finds that neighbor purchases do influence a consumer's purchasing decision.

However, in the case of those who considered themselves better off, this contradicts theoretical prediction which state those who are better off most probably do not have the need to borrow since they do not have the "catch up with the Joneses" pressure. Nonetheless, most probably these households face the need to "keep up with the Joneses", that is to maintain their social position, hence the high debt

level that they possess. The probability to fall into high debt category also increases when households reported that they think they are superior and they are happy with it. This suggests that the households who borrow are those that find considering themselves as superior to others as something enjoyable. Relative standing matters to them and this strongly increase their probability of falling into high debt group. Borrowing by this group most probably could be due to an effort to maintain their perceived superiority position.

Similarly, those who claim that they do not care at all. Theoretically, they should be the ones with lower debt. However, the estimation suggests that they are the ones with higher probability to be in the high debt category. This could be due to the asymmetric problem in the willingness of admitting their social standing consciousness, as suggested by Lunt and Livingstone (1992) in explaining their findings, that the importance to keep up with the Joneses is negatively related to the amount of debt. Nonetheless, we would interpret this following Lea et al (1995) who claim that debtors have the least possibility of admitting that they borrow due to the pressure to emulate others. Hence, it is highly likely that debtors are in a state of denial. Despite the claim that others' well-being is immaterial to them, they are conscious about their relative social standing, and would try to keep up with the Joneses and all this contribute to the higher probability of being in debt.

Table 4: Logistic Model 2: Household with Low and High Level of Debt

Variable	β	E(β)	Variable	β	E(β)	Variable	β	E(β)
Constants	-2.00	NA						
Socio-demographic Variables								
Age*	-0.07	0.93	EmpStat					
Marital			EmpStat1	2.86	17.45			
Marital1	0.46	1.58	EmpStat2	2.94	18.97			
Marital2	0.25	1.29	EmpStat3	1.55	4.73			
Marital3	-0.76	0.47						
Economic Variables								
Income^			Saving^			# children <18^	0.35	1.41
Income1^	2.21	9.11	Saving1*	-2.68	0.07			
Income2	0.22	1.24	Saving2	-0.67	0.51			
Psychological Variables								
life aspirations	0.03	1.03	Colleagues			Neighbors		
attitude towards debt :			Colleagues1	-1.93	0.14	Neighbors1*	5.84	345.02
Cognitive	-0.02	0.98	Colleagues2	-1.33	0.27	Neighbors2*	6.09	441.97
Emotional	0.17	1.19	Colleagues3	0.29	1.33	Neighbors3^	5.28	197.16
Behavioral	0.14	1.15	Colleagues4	-0.78	0.46	Neighbors4	3.43	31.00
Special Attitude^	-0.19	0.82	Colleagues5	-6.26	0.00	Neighbors5*	5.58	264.92
social position:			Relatives			Other people		
Friends			Relatives1	0.20	0.00	Other people1	0.71	2.04
Friends1	-2.19	0.11	Relatives2	-0.30	0.00	Other people2^	-3.83	0.02
Friends2	1.09	2.96	Relatives3	-1.41	1.23	Other people3^	-3.66	0.03
Friends3	-0.87	0.42	Relatives4	0.14	0.74	Other people4	-2.29	0.10
Friends4	-1.02	0.36	Relatives5	0.02	0.24	Other people5	-2.07	0.13
Friends5	2.07	7.89	LC	-0.01	0.99	fincome		
			CC	0.00	1.00	fincome1	-0.53	0.59
						fincome2	-0.85	0.43

Notes: β=Estimated Coefficient, Hosmer-Lemeshow Goodness-of-fit test ($\chi^2 = 11.82, df = 8, p = .160$), Cox and Snell R squared = .232, Nagelkerke (Max rescaled) R squared = .314, NA=Not applicable, ^ significant at 10%, *significant at 5%, ** significant at 1%

Findings from both set of regression imply that household indebtedness phenomenon among urban households is as explained by Life Cycle Hypothesis and Relative Income Hypothesis. The significance of age in differentiating households with different level of debt and the evidence that the probability of a household to be a debtor increase for those who anticipate that their future income will be increasing; indicate that household indebtedness is an act of optimizing their consumption possibilities.

Meanwhile, the significance of relative position to others suggests the possibility of debt being assumed as a means to support consumption beyond what is allowed by one's income. As explained by Duesenberry (1949), being concern about social positional status leads households to a situation where their consumption and financial decisions do not depend solely on internal factors such as own income and consumption needs, instead depend heavily on social arrangements. In other words, consumption and household financial decision is based on what others have and what others consume, and not what they need and what they can afford.

More importantly, the findings consistently suggest that the prevalent of household debt in the urban community in Malaysia is not poverty related. As postulated by Lea et al (1995), household debt phenomenon is poverty related if debt position is determined by income group, such that lower income group is associated with high debt level since the lower income group have to borrow to accommodate basic living expenses; or by the number of children such as the probability to be a debtor increases with the number of children. In this study, factors that measure household needs such as number of children and head of household employment status too are found to be not important in determining household debt position. Income, although it is significant in the second regression, yet the association is the probability of a household to fall in the high debt category is higher for the middle income group and lower for the low income group. If debt is undertaken to accommodate basic needs, then the lowest income group should be the one with the higher probability to fall in the high debt category.

All the findings offer some insights into measures for curbing the burgeoning household debt issue. Given that debt is not a poverty phenomenon, measures such as subsidy, food coupons and so on, would probably not work in curbing household debts.

Collectively, the findings offer some insights into measures for curbing the burgeoning household debt issue. We would like to note that this study only looked at the amount of debt and not the reasons for resorting to debt. Hence, our interpretation for policy implication is limited to the assumption that since debt are relatively easily accessible, households have the tendency to take debt not only to finance basic purchases such as house and car; but also, to finance luxury consumption such as more luxurious homes, more expensive cars as well as other luxury consumption items such as furniture, kitchen appliances, health equipment and jewelries.

Firstly, the findings suggest that debt is not a poverty phenomenon, implying that households who secure debt or belonging to the high debt category are not who are at social and economic disadvantage such as being in the lowest income category; single mother or having large number of children and dependents. In this case, most probably among the urban households, measures such as giving subsidy and other direct cash handouts would probably not work in curbing the increasing household debt.

At the same time, attitude towards debt is the distinguishing factor between households with and without debt. Relativist position, or being conscious with what others have is another factor that distinguish both households with and without debt as well as low and high debt household. In this case, relevant policy would be to provide education to the society on financial management that include debt and its

consequences as well as making rational consumption decision. This requires them to understand issues such as need and wants and how consumption is capable of generating negative externalities such as envy that could lead to overspending and enormous debt. Society needs to be educated that while access to debt is good in the sense that would allow them to finance basic needs such as house and car, yet excessive debt could lead to irrational spending and increase in financial burden in future.

In short, awareness should be cultivated among the urban working class to create a proper attitude and understanding on debt given that debt is easily accessible to them. This could be done by introducing financial education at the school level; either as a subject on its own or by embedding it in other mandatory courses continuously throughout the schooling years to gradually instill the right perspective on debt and consumption.

5.   CONCLUSION

This paper is aimed to studying the economics of household debt decision, in an effort to understand the phenomenon of rapidly increasing household debt in a country such as Malaysia. The economic and psychological factors considered are based upon established economic theories, both conventional and heterodox, namely age, income, stand on relative social standing, life aspirations and conspicuous consumption. Attitude and locus of control is included as control factors.

Using micro level data from urban working households, the study showed that urban household debt behavior conformed to economic theories. This implies that household borrowing is an act of preserving "wants" rather than meeting "needs" since factors that explain household debt position are an individual's propensity to use credit such as attitude, and social comparison. Meanwhile, needs indicator such as income, number of children and employment status are not the main determinants. Hence, the prevalence of household debt among urban households is not an indication of economic sufferings. Based upon those findings, the relevant policy recommendations to curb the rise of household debt would be to educate households on rational consumption.

REFERENCES

Bank Negara Malaysia. (2016). *Financial Stability Report* BNM: Kuala Lumpur.

Bentler, P. M., & Bonett, D. G. (1980). Significance Tests and Goodness of Fit in the Analysis of Covariance Structures. *Psychological Bulletin*, *88*(3), 588–606.

Bernthal, M. J., Crockett, D., & Rose, R. L. (2005). Credit Cards as Lifestyle Facilitators. *Journal of Consumer Research, 32*(1), 130–145.

Charles, K. K., Hurst, E., & Roussanov, N. (2009). Conspicuous Consumption and Race. *The Quarterly Journal of Economics, 124*(2), 425-467.

Chien, Y. W., & Devaney, S. A. (2001). The Effects of Credit Attitude and Socioeconomic Factors on Credit Card and Instalment Debt. *Journal of Consumers Affair, 35*(1), 162-179.

Cohen, J. (1992). A Power Primer. *Psychological Bulletin*, *112*(1), 155-159.

Cosma. S., & Pattarin, F. (2010). *Attitudes, Personality Factors and Household Debt Decisions: A Study of Consumer Credit*. Retrieved from http://ssrn.com/abstract=1685765

Davies, E., & Lea, S.E.G. (1995). Student Attitudes to Student Debt. *Journal of Economic Psychology, 16*(4), 663–679.

Duesenberry, J. S. (1949). *Income, Saving, and the Theory of Consumer Behavior.* Cambridge, MA: Harvard University Press.

Grinblatt, M., Keloharju, M., & Ikaheimo, S. (2008). Social Influence and Consumption: Evidence from the Automobiles Purchases of Neighbors. *The Review of Economics and Statistics*, *90*(4), 735 – 753.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice, 19*(2), 139–151.

Hayhoe, C. R., Leach, L., & Turner, P. R. (1999). Discriminating the Number of Credit Cards Held by College Students Using Credit and Money Attitudes. *Journal of Economic Psychology, 20*(6), 643–656.

Holmes-Smith, P. (2006). *School socio-economic density and its effect on school performance*. Australia: New South Wales Department of Education and Training.

Hu, L.T., & Bentler, P. M. (1999). Cutoff Criteria for Fit Indices in Covariance Structure Analysis: Conventional Criteria versus New Alternatives. *Structural Equation Modeling*, *6*(1), 1–55.

Kamleitner, B., & E. Kirchler, (2007). Consumer Credit Use: A Process Model and Literature Review. *Revue Européenne De Psychologie Appliquée*, *57*(4), 267–283.

Karlsson, N., Dellgran, P., Klingander, B, & Garling, T. (2004). Household Consumption: Influences of Aspiration Level, Social Comparison and Money Management. *Journal of Economic Psychology, 25*(6), 753-769.

Katona, G. (1975). *Psychological Economics*. New York: Elsevier.

Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, *30*(3), 607-610.

Lea, E. G., Webley, P., & Levine, R. M. (1993). The Economic Psychology of Consumer Debt. *Journal of Economic Psychology, 14*(1), 85-119.

Lea, E. G., Webley, P., & Walker, C. M. (1995). Psychological Factors in Consumer Debt: Money Management, Economic Socialization and Credit Use. *Journal of Economic Psychology, 16*(4), 681-701.

Lunt, P. K., & Livingstone, S. M. (1991). Psychological, Social and Economic Determinants of Savings: Comparing Recurrent and Total Savings. *Journal of Economic Psychology*, *12*(4), 621-641.

Lunt, P. K., & Livingstone, S. M. (1992). Predicting Personal Debt and Debt Repayment: Psychological, Social and Economic Determinants. *Journal of Economic Psychology, 13*(1), 111-134.

Ministry of Finance Malaysia (2011). *Economic Reports.* Kuala Lumpur: Ministry of Finance.

Reisinger, H. (1997). The Impact of Research Designs on R2 in Linear Regression Models: An Exploratory Meta-Analysis. *Journal of Empirical Generalisations in Marketing Science*, *2*(1), 1-12.

Tittle, P. (2011). *Critical Thinking: An Appeal to Reason.* New York: Routledge.

Utusan Malaysia (2016, December 7). *AKPK Selesaikan Masalah Kewangan RM476.6j.* Retrieved from https://www.akpk.org.my/news-archive/201612.
Veblen, T. (1899). *The Theory of the Leisure Class: An Economic Study of Institutions.* New York: Macmillan.

Wang, L., Lu, W., & Malhotra, N. K. (2011). Demographics, Attitude, Personality and Credit Card Features Correlate with Credit Card Debt: A View from China. *Journal of Economic Psychology*, *32*(1), 179-193.

Watson, J. J. (2003). The Relationship of Materialism to Spending Tendencies, Saving and Debt. *Journal of Economic Psychology, 24*(6), 723-739.

Xiao, J. J., Noring, F. E., & Anderson, J. G. (1995). College Students' Attitudes towards Credit Cards. *Journal of Consumer Studies and Home Economics, 19*(2), 155–174.

Yu, C. Y. (2002). *Evaluation of Model Fit Indices for Latent Variable Models with Categorical and Continuous Outcomes* (Unpublished doctoral dissertation). University of California, Los Angeles.

Zhu, L. Y., & Meeks, C. B. (1994). Effects of Low Income Families' Ability and Willingness to Use Consumer Credit on Subsequent Outstanding Credit Balances. *The Journal of Consumer Affairs, 28*(2), 403–422.