

A Study of the Mediation and Moderation Effect on Financial Literacy

***Dr. Eaw Hooi Cheng**

****Dr. Rajagopalan Usha**

*KDU University

**Assistant Professor, JCC, KAU, Jeddah, KSA

Abstract

Personal bankruptcy filing in Malaysia has been increasing at an alarming rate where a total of 251,209 cases have been registered by Bank Negara Malaysia (BNM) as of September 2013 (The Star, 2013). The report also highlights that the bankruptcy cases are becoming more prevalent among younger generation influenced by personal psychology and lack of financial literacy for personal financial planning. Therefore, the aim of this research is to examine the mediation and moderation factors which influence personal bankruptcy in Malaysia.

The statistical analysis of the primary and secondary data presented the following findings: Financial Management outcome (Mediator) is fully mediated between Financial Numeracy and Personal Bankruptcy. Also, Moderator showed the Materialism, (P – Value 0.028) and Self Efficacy (P – Value 0.081) has significant influence on Financial Numeracy and Financial Management Outcome on the total sample size of 219 from the target group in Klang Valley, Selangor, Malaysia.

1. Introduction

Incidence of Personal Bankruptcy is alarming in Malaysia as the statistic shows a total of 107,306 cases are reported from AKPK, just in 4 months between January and April, 2015 (The star, 2015) as compared to a total of 251,209 cases as at 2013 (The star, 2013). Out of the 107,306 cases reported in 2015, around 948 cases are of young generation borrowers under the age of 35, who have claimed to be bankrupt. The survey suggests that about 47% of the sample say that they spend more than one third of their monthly income on servicing and or towards part payment of their debts. A majority of the sample population suggested that the main cause for their high level of debts is due to steadily increasing cost of living and high cost of fixed assets if they choose to buy, coupled with a very meagre increment to their salaries. As suggested by Lusardi & Mitchell, 2007; Mandell, 2006, the main cause for bankruptcy is due to moderate education levels of the individual resulting in low levels of financial literacy. Also, The Federation of Malaysian Consumers Association (FOMCA) has sounded a warning bell to have better financial education policy in order to tackle the growing bankruptcy of the younger generation.

1.1 Background of the study

The Malaysian Bankruptcy Act 1967, provides that an individual, if declares through set due legal process, that he is not able to pay his creditors of any amount from Malaysian Ringgit 30000 and above, is declared to be bankrupt. The recovery processing in Malaysian banking system is so strict that, even a default of a few months of payment or interest results in confiscation of assets by the banks and legal action is initiated against the borrower. In such scenario the incidence of default and subsequent bankrupt status is more common in Malaysia as the cost of any fixed/movable assets like building or cars/vehicles are easily more than RM30000 and any default results in bankruptcy. Sarajevo (2012), in his work suggests that the problem of bankruptcy would compound as the younger generation, who opt for sub-prime borrowings, are not aware of the actual interest burden and its effect on any loan repayment and/or its servicing. The incidence of low financial literacy of the sub-prime borrower group coupled with their not so serious attitude of prompt repayment/servicing of their debts ends up with higher unpaid debts. The attitude of impulsive purchase to which the sub-prime borrower group is skewed to also results in higher credit card usage and higher

unpaid debts towards credit card dues. Their impulsive attitude doesn't also help in understanding the higher and compounding interest charges for any unpaid credit card dues.

1.2 Significance of study

The significance of this study is to have a better understanding of the antecedents of personal bankruptcy via mediation and moderation factors and provide valuable suggestions to all the stake holders to correct this anomaly. As the incidence of individual bankruptcy cases have a cascading effect on the general economy of the country this issue gains more significance for a detailed study. As more and more individual creditors/institutional creditors/merchandise get affected by the incidence of bankruptcy, suffer huge financial losses, which in turn would affect the genuine borrowers for their genuine business or personal needs, as the credit out lay would suffer due to the bad experience of huge Non Performing assets and bankruptcy.

2.0 Literature Review

A research finding from Falahati and Piam (2011a) shows that individuals who are experienced in cash management abilities make better financial decisions, improving financial well-being. Mandell and Klein's (2007) research study states that people who trade in stock market have good financial literacy compared to those who have no experience in stock trading. Besides, Fitzmaurice (2008) suggests that individuals with materialism are in the habit of possessing valuable items by impulsive spending regardless of financial numeracy level. Dittmar and Bond's (2010) study shows materialism as part of a behavioural pattern in favour of using credit card facilities to satisfy the desire to possess materials which may cause over indebtedness and end up in poor financial management outcome. In addition to all these research findings, National Jump Start survey points out that those who have more experience with daily financial handling, will have self-efficacy and better financial literacy than those with little or no exposure.

2.1 Independent variables

Financial numeracy is the ability of an individual to do simple and basic mathematical calculations required to take prudent financial decisions. The financial numeracy depends on various demographic variables like age, gender, education level, income, society etc. Financial numeracy is influenced by financial literacy and capacity (Huhmann and Mcquitty, 2009) of an individual. Willis, 2008, opined that more the financial experience and exposure an individual has, the more the financial efficiency and capacity he gains. Tannahill, 2012 opines that the working adults do have better financial numeracy than the teenagers due to their higher exposure to financial decision making.

2.2 Mediator

Financial management outcome is the ability of an individual to manage his personal finances including income, expenses, savings, borrowings and assets buildings. Individuals with greater financial numeracy are expected to have optimal financial management outcome by prudently managing their finances and constantly improving their net worth. In contrast, those with low financial numeracy may tend to take poor financial decisions resulting in poor financial management outcome due to poor savings and high borrowings resulting in lower or negative net worth (Delafrooz & Paim, 2011).

2.3 Dependent variables

Personal bankruptcy. Warren (1998) stated that bankruptcy filings have positive correlation with individual debts and have negative correlation with individuals' income. The more debts an individual have indicates the high possibility of bankruptcy filing. Similar finding from Zywicki (2005) found borrowing is the main cause of bankruptcy filings. Later, researchers, Brown and Taylor (2008) also applies debt to income and saving to income ratios to measure financial pressure, where the household probability shows negative net worth and eventually end up with bankruptcy filing.

2.4 Moderator

Richins (2004) describes **materialism** as individual attribute towards acquisition of material things to achieve the major goals in their life. This has proof in Fitzmaurice (2008) study which points out that individual with high level of materialism has less control in their spending resulting in more of impulsive purchase. The study found that the low-income group in South Africa has high level of materialistic attitude resulting in huge debts. Besides, Dittmar and Bond (2010) opines that those with high materialistic attribute are more likely to increase their credit card facilities in order to quench their materialistic desire. This group of people apply credit cards without being fully aware on how to sustain the debts that they have accumulated (Ottaviani & Vandone, 2011).

Slavec and Prodan (2012) state that those with high **self-efficacy** are more likely to apply more financial prudence and good at repayment of debts. Study by Xiao, Thang, Serido and Shim (2011) found that those with greater financial efficacy and self-control have greater control in using their credit cards, avoid impulsive purchases and are confident in managing their finances and plan their future debt accumulation prudently.

3.0 Research Methodology and Finding

The well-structured questionnaire were distributed among 720 individuals in the Klang Valley, Selangor, Malaysia from the data base of AKPK and MDI. From this total sample strength of 720 only 393 completed questionnaire were returned and out of this only 219 samples were full in all respect for the data analysis in AMOS structured equation modelling technique. Hence, the effective sample size is 219.

The following three relevant hypotheses were tested and results enumerated below.

H1: Financial numeracy significantly mediates financial management outcome and personal bankruptcy/ likely to be bankrupt.

H2: Materialism significantly moderates the financial numeracy and financial management outcome.

H3: Self-efficacy significantly moderates the financial numeracy and financial management outcome.

Table 1

Summary of direct and mediation effect

Mediator	Direct Effect	Indirect Effect			Result
		Direct	Path A	Path B	
Initial Step					
Direct	FEx-->PBan	0.001			Direct
2nd Step					
Financial Mgnt Outcome	FN-->PBan	0.975	***	***	Fully Mediated

The **Mediation result** showed in Table 1 indicates financial management outcome is fully mediated between variables financial numeracy and Personal bankruptcy. Whereas the test on direct effect without mediation returns significant value and hence the mediation effect is substantiated. On applying the score of bias-corrected percentile method on two tailed significance (BC) to measure the indirect effect also returned significant value. Thus it could be concluded that,

H1: Financial numeracy significantly mediates financial management outcome and personal bankruptcy/ likely to be bankrupt.

Table 2

Summary result for Interaction Moderation

	Estimate	S.E.	C.R.	P	Label
ZFMO <--- ZEFF_ZFN	-.140	.080	-1.747	.081	
ZFMO <--- Zmat_ZFN	.301	.137	2.195	.028	

For **moderation variables**, self-efficacy and materialism are found to have significant impact on financial numeracy (FN) and financial management outcome (FMO). Self-efficacy scored 0.081 (measurement in 90% confidential level) and materialism scored 0.028 signified in psychographic differences. Hence, the finding moderation variables had significant impact in endogenous variables and exogenous variables. Therefore the following hypotheses are also validated;

H2: Materialism significantly moderates the financial numeracy and financial management outcome.

H3: Self-efficacy significantly moderates the financial numeracy and financial management outcome.

4.0 Conclusion and Policy Implication

The findings as correlated to the hypotheses prove that financial numeracy, materialism and self-efficacy have significant influence on the financial management outcome of any individual and thus on the ultimate bankruptcy or otherwise. This is a significant information for the current younger generation who might have financial numeracy but may be materialistic and lack self-efficacy in life. As the rate of bankruptcy in Malaysia, especially in Klang Valley, which has been the area of our current dissertation, is alarming, the Government needs to act swiftly to change this trend. The education system at secondary/tertiary shall incorporate certain topics on bankruptcy, its menace and the ways and means to circumvent the situation. Also it is suggested that teaching on moral/personal attribute at Primary/Secondary level shall be introduced to mediate this alarming trend. Also the lending institutions either individuals or corporates shall educate the first time borrowers of the pros and cons of the liability they are likely to acquire. Also, they shall improve their pre-sanction verification process in order to avoid certain section of the borrowers who might be lacking self-efficacy and are materialistic in their approach. The background check and the credit score shall also include weightage to the likely financial numeracy of any prospective borrower and credit card applicant.

This research study is confined to the personal attribute variables. There is wider scope for further studies on other aspects like external and internal factors influencing bankruptcy. The area of study is limited and a wider research covering entire Malaysia might throw open more interesting facts for all the stake holders' benefit.

References

- Bearden, W. O., & Haws, K. L. (2012). How low spending control harms consumers. *Journal of the Academy of Marketing Science*, 40(1), 181-193.
- Brown, S. & Taylor, K. (2008), "Household debt and financial assets: evidence from Germany, Great Britain and the USA". *Journal of the Royal Statistical Society*, 171(3), 615-43.
- Delafrooz, N., & Paim, L. H. (2011). Determinants of Saving Behavior and Financial Problem among Employees in Malaysia. *Journal of Applied Sciences Research*, 7(7), 222-228.
- Dittmar, H., & Bond, R. (2010). I want it and I want it now: Using a temporal discounting paradigm to examine predictors of consumer impulsivity. *British Journal of Psychology*, 101(4), 751-776.
- Falahati, L., & Paim, L. H. (2011). Gender Differences In Financial Well-Being Among College Students. *Australian Journal of Basic & Applied Sciences*, 5(9), 1765-1776.
- Fitzmaurice, J. (2008). "Splurge purchase and materialism". *Journal of Consumer Marketing*. 25(6), 332-338.
- Huhmann, B.A. & McQuitty, S. (2009). A model of consumer financial numeracy. *International Journal of Bank Marketing*, 27(4), 279-293.
- Huhmann, B.A. & McQuitty, S. (2009). A model of consumer financial numeracy. *International Journal of Bank Marketing*, 27(4), 279-293.
- Lusardi, A., & Mitchell, O. (2007). Financial literacy and retirement preparedness: Evidence and implications for financial education. *Business Economics*, 42(1), 35-44.
- Mandell, L. & Klein, L.S. (2007). Motivation and financial literacy. *Financial Services Review*, 16(2) 105-116.
- Mandell, L. & Klein, L.S. (2007). Motivation and financial literacy. *Financial Services Review*, 16(2) 105-116.
- Mandell, L. (2006). Financial Literacy: Improving Education Results of the 2006 National Jump\$tart Survey. Washington, D,C,: Jumpstart Coalition.

- Ottaviani, C., & Vandone, D. (2011). Impulsivity and household indebtedness: Evidence from real life. *Journal of economic psychology*, 32(5), 754-761.
- Richins, M. L. (2004). The material values scale: Measurement properties and development of a short form. *Journal of Consumer Research*, 31(1), 209-219.
- Sarajevo H. (2012). Financial literacy and resultant stability of the financial system. *Зборник радова Економског факултета у Источном Сарајеву*. 1(6), 135-144
- Slavec, A., & Prodan, I. (2012). The influence of entrepreneur's characteristics on small manufacturing firm debt financing. *Journal for East European Management Studies*, 104-130.
- Slavec, A., & Prodan, I. (2012). The influence of entrepreneur's characteristics on small manufacturing firm debt financing. *Journal for East European Management Studies*, 104-130.
- Tannahill, B. A. (2012). The Role of Financial Literacy in Retirement Decision Making. *Journal of Financial Service Professionals*, 66(2), 32-35.
- The Star Online (2009). RM50 service tax for card holders. Retrieved 20 April 2013 from <http://thestar.com.my/news/story.asp?file=/2009/10/24/budget2010/4969248&sec=budget2010>
- The Star Online (2015). Becoming bankrupt before 35. Retrieved 5 July 2015 from <http://www.thestar.com.my/news/nation/2015/06/22/becoming-bankrupt-before-35-worrying-trend-of-about-25000-gen-y-msians-in-debt-over-the-last-five-ye/>
- Warren, E (1998). The Bankruptcy Crisis. *Indiana Law Journal*, 73(4), 1079-1110.
- Zywicki, T.J. (2005). An economic analysis of the consumer bankruptcy crisis. *Northwestern University Law Review*, 99(4), 1463-1541.