FINANCIAL LITERACY AND FINANCIAL HEALTH AMONG MALAYSIAN

By

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ABSTRACT

The aim of this research paper is to examine the level of financial literacy and financial health among Malaysian aged between 18 to 45 years old. This research carries out three objectives; (i) to analysis determinants of financial literacy among Malaysian, (ii) to explore strategies to enhance financial literacy among Malaysian and (iii) to examine the relationship between financial literacy and financial health in Malaysia. Primary data collection method, through a well-structured questionnaire is used to test the level of financial literacy and financial health among Malaysian. A total of 2500 respondents were randomly selected from Peninsular Malaysia to answer this questionnaire. This study further employed various research design namely, descriptive analysis, correlation analysis, Independent Samples T-Test, One-Way ANOVA and regression analysis using enter and stepwise method to test the level of financial literacy and financial health of individuals in Malaysia. The finding of this study revealed that saving management, investment skills, parent's characteristics and debt management have a significant correlation with financial literacy. In addition, this study also identified men aged between 18 to 25 years old as well as earn monthly income less than RM1500 are weak in terms of financial literacy. Moreover, results of this study also prove that, certificate holders as well as self-employed are financially illiterate and need to be given extra attention to these groups to enhance their financial literacy level. In this regards, this paper has suggested various strategies to improve the level of financial literacy among Malaysian. The enforcement of financial education start early at primary school level or at pre-school level is the best strategy to enhance the financial literacy of Malaysian. This is because; good financial literacy can save a person from debt burden and bankruptcies as well as help to improve their financial health overall.

Keywords: financial literacy, financial health, strategies, Malaysian.

ABSTRAK

Matlamat kajian ini adalah untuk menguji tahap kecelikan dan tahap kewangan yang sihat di Malaysia, terutamanya mereka yang berumur antara 18 hingga 45 tahun. Kajian ini mengandungi tiga objektif iaitu, (i) menganalisa penentu kecelikan kewangan di kalangan rakyat Malaysia, (ii) mengenal pasti strategi untuk meningkatkan tahap kecelikan kewangan di kalangan rakyat Malaysia dan (iii) memeriksa hubungan antara kecelikan kewangan dan kewangan yang sihat di kalangan rakyat Malaysia. Kaedah pengumpulan data adalah melalui penggunaan soal selidik. Borang soal selidik digunakan untuk menguji tahap kecelikan kewangan dan tahap kewangan yang sihat di kalangan rakyat Malaysia. Seramai 2500 responden telah dipilih secara rawak dari Semenanjung Malaysia untuk menjawab borang soal selidik ini. Kajian ini juga mengunakan pelbagai kaedah penyelidikan iaitu analisis deskriptif, analisis korelasi, “Independent Samples T-Test”, “One-Way ANOVA” dan analisis regresi untuk menguji tahap kecelikan dan tahap kewangan oleh responden. Dapatan kajian ini menunjukkan bahawa pengurusan penjimatan, kemahiran pelaburan, ciri-ciri ibu dan bapa dan pengurusan hutang mempunyai hubungan yang signifikan dengan kecelikan kewangan di Malaysia. Di samping itu, kajian ini juga mengenal pasti golongan lelaki yang berumur antara 18 hingga 25 tahun serta mempunyai pendapatan bulanan kurang daripada RM1500 adalah golongan yang lemah dari segi pengetahuan kewangan. Selain itu, hasil kajian ini juga membuktikan bahawa, pemegang sijil dan bekerja sendiri adalah golongan yang lemah dari segi kecelikan kewangan dan perlu diberi perhatian kepada kumpulan ini. Sehubungan dengan itu, kajian ini telah mencadangkan strategi untuk meningkatkan tahap pengetahuan kewangan di kalangan rakyat Malaysia. Penguatkuasaan pendidikan kewangan bermula di peringkat sekolah rendah atau di peringkat prasekolah adalah strategi terbaik untuk meningkatkan tahap kecelikan kewangan di Malaysia. Ini kerana, pengetahuan kewangan yang betul boleh menyelamatkan seseorang daripada beban hutang dan kebankrapan serta membantu untuk meningkatkan kesihatan kewangan individu secara keseluruhan.

Katakunci: kecelikan kewangan, kewangan yang sihat, strategi, rakyat Malaysia.

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CHAPTER ONE

BACKGROUND OF STUDY

1.1 INTRODUCTION

The present chapter contains the research background, definition, problem statement, objectives of the research, and research questions. The chapter also shed a light on the significance of the study, scope of the study and the final section explains the organization of the study.

In today's human societies the earning and spending of money has become one of the most important way we connect with one another. Individual must have enough money, because money has plays an extremely significant role in present world. In today's world, money is also the main cause of inhumane wars between the countries since the superpower nation exploits other countries through war solely due to the natural wealth of that country. Simmel (1997) in his book, The Philosophy of Money explain that money shapes the thinking of consumers both in their actions and in psyches. According to him, money plays significant sociological role in social and cultural interaction of a society. Money in general, is any items or verifiable record that is normally acceptable as a payment for goods and services. The main functions of money can be distinguished as store of value, unit of account, medium of exchange and sometimes standard of deferred payment. Any items or verifiable record that meets the function can be considered as money.

According to Susan (2001), international trade and the utilization of money has grown quickly since the end of the World War Two. Import and exported by countries has grown up at an average rate of 6 percent per year since 1950. International trade is the process of exchanging goods and services among countries and this led to an increase of world economy. Global trade also allows the wealthy countries to utilize their resources besides, give consumer and countries the opportunity to be exposed to goods and services that are not available in their countries. Joseph and Schuknecht (2000), proved that, international trade shown a positively significant relationship with financial sector competition and financial sector openness. It also leads a development of new financial products and services in finance market. Moreover, the world is now moving towards more sophisticated in term of digital and technology. Therefore, the needs and wants of the masses also will improve and change over time. The high digital living masses demanded, financial product and services that are highly innovated and efficient in the future. These phenomena resulted the banks and financial sectors are now competing to produce the product and services that are truly innovative and able to compete in an international market.

Although, the world and the masses proud of the new financial development, but it still result negative effect to the public. It is because, the globalization and innovation are increased the range and complexity of financial services on offer. Besides that, technological advance, new electronic delivery channels and integration of financial market have also increasing the range of services offered and the ways in which they are made available to the public. This cause a huge impact to the public in choosing the products and services that meet their needs and wants. On top of that, these scenarios make customers confused and facing dilemma to choose the best product and services that can truly fulfill their demands. Therefore, to avoid these situations, people should have basic financial literacy to meet their financial needs.

According to Lusardi (2013), financial literacy plays a crucial role in human life. It is proven that, people with good financial literacy will be financially healthy (Harnisch, 2010). Financial literacy helps people to process financial details and make an appropriate decision about financial planning, debt, wealth accumulation, and pensions. In saying so, individual with good financial literacy are able to earn above average expected returns. Therefore, an excellent financial literacy has an important implication for financial health and also to offers insights into the programs that aims to enhance the level of financial literacy towards a better financial health (Lusardi, 2009).

1.2 DEFINITION

Financial literacy is phenomena to be point out nowadays. The increased innovation and globalization in various fields including finance, urge the people to have basic financial literacy, which may help them to choose financial products and services that better fit them. In context of financial literacy, it is important that the terms must be properly defined. Different researchers and organizations defined financial literacy in various ways. The roots of the concepts of literacy refer to the individual's ability to read, write, speak, compute and solve a problem at levels of proficiency needed to function on the job. This viewpoint is broader than just an individuals' aptitude to reads and writes (Noor, Nurfadhilah, Ramesh and Mior, 2013). When applied the definition of literacy in finances or financial literacy, it means the ability to read, interpret and analyze, money management, examine financial position that affecting material well-being, compute, builds their own decision and take action resulting from those process in order to thrives in a complex and advance financial world (Vitt *et al.*, 2000). While United State Financial Literacy and Education Commission (Basu, 2005) define financial literacy as a capability of making informed judgments and to take effective efforts in regard to the current and future usage and management of money. Elements such as the ability to understand financial option, planning for the future, wise spending and preparation for retirement should be included in financial literacy. According to USA Council on Financial Literacy Report (2008), financial literacy is defined as the ability to apply knowledge and skills to handle financial resources effectively for a lifetime financial well-being. Garman and Forgue (1997), assets that financial literacy refer to an accurate knowledge on personal financing facts and also excellent practice on personal financial matters. Meanwhile, Graman and Gappinger (2008), defines financial literacy as one's knowledge of the facts, principles, concepts and tool, to being wise about money. According to Nurul and Sarah (2013), financial literacy refer to the ability to manage one's finances precisely by utilize the savings to gather the wealth, and continued by careful preservation of such wealth against value depreciation and losses and finally distribution of wealth at a stage of one's life. Moreover, Hilgert, Hogarth and Baverly (2003), defines financial literacy as financial knowledge whereas, Lusardi and Mitchell (2008), adding this knowledge essential to make a reasonable financial decision. On the other hand, according to Atkinson and Messy (2012), financial literacy is a mixture of being alert of financial knowledge, skills, behavior that act as a pre-requisite for making an appropriate financial decision and to achieve the goal of financial wealth.

An excellent financial literacy or financial skills contribute towards better financial net worth or financial health. Financial health understated simply as general happiness or normal satisfaction with the current financial position (Porter and Garman 1993). Strumpel (1976), elaborated that financial health goes beyond temporary satisfaction to encompass individuals' satisfaction with savings and income as well as perception of chances, ability to "make ends meet", sense of material security and sense of fairness of the reward distribution system. On the other hand, Jennifer Tescher (2000), defines financial health as having daily activities that help to build resilience and size opportunity, for an example buying a house. Meanwhile, Consumer Financial

Protection Bureau (CFPB) (2015), defines financial health as a condition in which a person can fully meets the current and ongoing financial obligation, feel safe with their financial future, and can make choices that enable the enjoyment of life. Furthermore, study by CFPB indicated that financial health comprised of four major elements; which are feeling in control of finances, having the ability to meet the financial reaction, being on target to achieve the financial goals and having the flexibility to make a correct choice for enjoyment of life. Drumhill (2013), define financial health as having a strong handle on the assets of a person and knowing whether they are positioned properly for achieve their goals. Moreover, Joo (2008), define financial health as living a financially healthy, happy, and free from worries and fear, which is based on the one's financial position. In other study, financial well being was evaluated through overall satisfaction with one's financial positions (Van Praag *et al.*, 2003).

1.3 PROBLEM STATEMENT

Although, Malaysia has achieved remarkable success in many fields, it still retreats in term of finance. As Malaysia's financial system has undergone a rapid transformation, banks and financial institution in Malaysia are now actively promoting a wider range of financial innovated products and services. Unfortunately, there are still a missing link between the active development in financial sector achieve by Malaysia and problems faced by Malaysian consumers. This can be proven when household debt to disposable income in Malaysia shows the highest percentage that is 140% compare with other five countries namely USA with 123%, Singapore with 105%, Korea at 101%, Thailand at 53% and Indonesia with 38% in the year of 2010 as shown in Figure 1.1

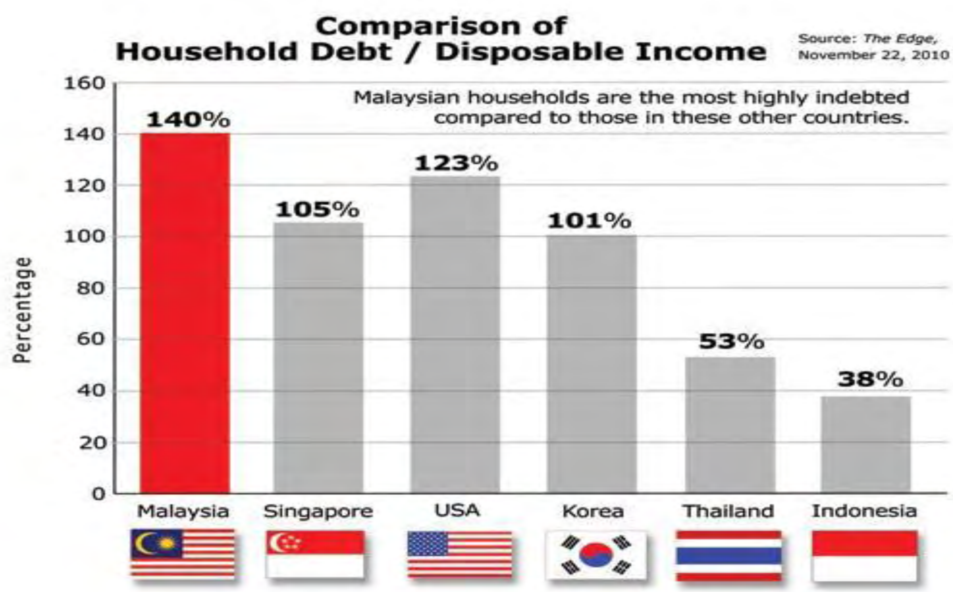

Figure 1.1
Comparison of Household Debt / Disposable Income
Source: The Edge, November 22, 2010

This scenario indicates a negative correlation between a person income and debt expenditure. A person with monthly income of RM100 will spent nearly RM140 to serve the debt. According to Dahlia, Rabitah and Zuraidah (2009), they express that consumer with lack of financial literacy have increase financial difficulties, had more negative option about finance and made more incorrect financial decision. Furthermore, Malaysia's bankruptcies rate showing an increasing trend. It increased from 9,685 in year 2000 to 22,305 in year 2015 (Insolvency Department, 2015). According to Counseling and Credit Management (AKPK), the main reason people fall into bankruptcy is due to poor knowledge in financial literacy according to figure 1.2

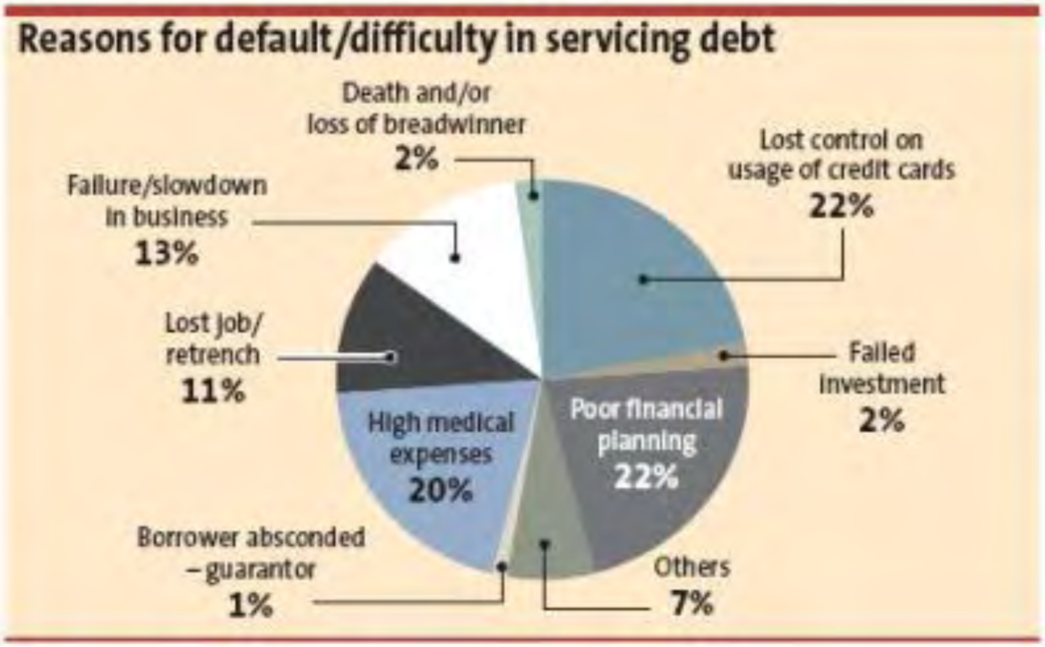

Figure 1.2
Reasons for Default / Difficulty in Servicing Debt
Source: AKPK

On the other hand, our nation's household debt to GDP also showing a sharp increasing trend. Malaysia household debt to GDP increase from 39.1% in year 2006 to 87.9% in year 2014 (Bank Negara Malaysia, 2014). Rising household debt to GDP is one of the warning signals for Malaysian economic because it has high potential to lead the country facing inflation. Azwani, Rahman and Alif (2013), expressed that, the main problem associated with low level of financial literacy is that individual may suffer credit problems that might lead to bankruptcy. Moreover, rising household debt is also certainly treated as a risk, which is often cited as a cause for concern for macroeconomic stability by policymakers, and keen observes (Athiphat, Phacharaphot and Parit, 2014). Futhermore, Malaysia Consumer Confidence Index (CCI) also showing declining trends. CCI is an indicator designed to measure consumer confidence, which is defined as the degree of optimism on the state of the economy that consumers are expressing through their activities of savings and spending. It has been decrease from 122.9 in year 2013 to 71.1 in year 2015 (MIER, 2015).

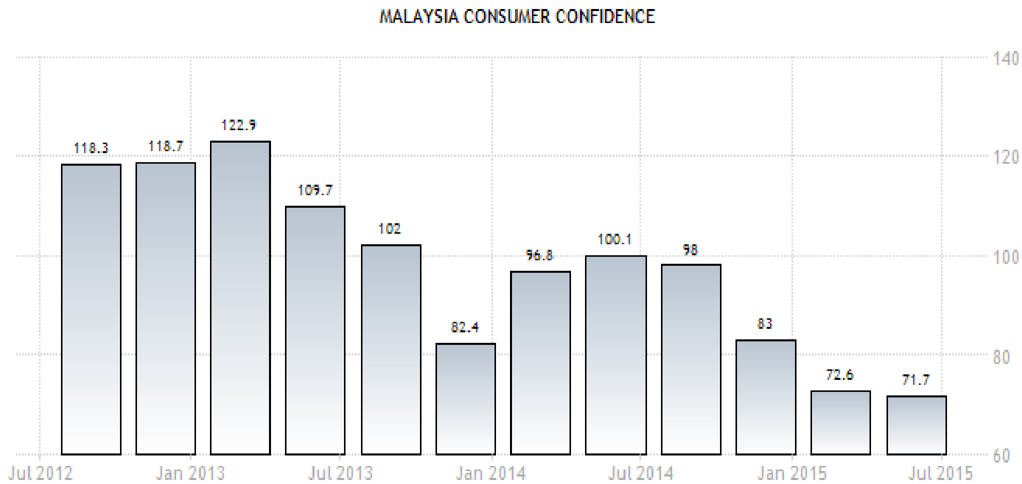

Figure 1.3
Malaysia Consumer Confidence Index
Source: Malaysian Institute of Economic Research

The index value above 100 indicates there were expected improvement in confidence, a value below 100 shows lack of confidences and 100 indicates neutrality. The decreasing Malaysian CCI explains that, consumers in Malaysia are does not have confidences on Malaysian economy. There are several factors that contributed to the falls of CCI to 71.7 in year 2015. Decreasing number of consumers experiencing financial deterioration, rising rate of unemployment, high inflation anxieties and less consumers spending robust in future are the key factors that cause CCI to decline.

Indeed this situation should not happen in our country. As Malaysia developing and compiling steps towards vision 2020, bankruptcies, household debt to GDP, household debt to disposable income and Malaysia CCI must show a good relationship in line with the country's development. This situation, wants us to think what is needed for the people and for our country. A genuine answer for this question will be a good knowledge in financial literacy. As previous study, highlighted, financial illiteracy has been found to be a widespread phenomenon at a global level and also in developing countries (Lusardi, 2010). Then this problem can be curb by giving adequate financial literacy to the masses. Challenges faced by consumers in enriching their financial literacy are information asymmetry, low knowledge in banking products, financial scams, more complex products and services and low level of transparency (Bank Negara Malaysia, 2014). Therefore, here is proven that, people financial well-being and nation's stability depend strongly on individual financial literacy. Based on above problem statement, we are motivated to undertaken this study.

1.4 RESEARCH OBJECTIVES

Based on above scenario and problem statement, the research objectives are,

1) To analysis determinants of financial literacy among Malaysian
2) To explore strategies to enhance financial literacy among Malaysian
3) To examine the relationship between financial literacy and financial health in Malaysia

1.5 RESEARCH QUESTIONS

On the basis of the aforementioned problem statement and the research objectives, the research attempts to answer the following research questions:

1) What is the determinant of financial literacy among Malaysian?
2) What is the strategy to enhance financial literacy level among Malaysian?
3) To what extent the relationship between financial literacy and financial health in Malaysia?

1.6 SIGNIFICANCE OF THE STUDY

Even though there are numerous literature that explains the importance of financial literacy, but still there is a gap between consumer and financial literacy. Therefore, this study in the topic of financial literacy and financial health helps to fill in the gap in the body of knowledge. Besides, research in financial literacy and financial health improve the understanding on the importance and strategy to enhance financial literacy and financial health. At the same time, this study add to the existing literature review in the field of financial literacy and financial health for the use of future research. Previous study expressed that, the study of financial literacy attract the attention of various stakeholders particularly at developed countries (Hussein and Al Anood, 2009).

Indeed industry players and academicians play an indispensable role to tackle the lacking of financial literacy problem in our nation. An industry player refers to the banks, finance companies or private companies that offer numerous types of financial products and services to the consumer. The finding of this study enlighten industry players and academicians to develop strategies that help to enhance the Malaysian financial literacy and financial health. As an example, industry players are accountable to deliver training and educations for their employees, especially to those who are directly in touch consumers, have the appropriate competencies and qualification to present in a clear and simple manner, the product they offer and act in the interest of the consumers. In addition, the industry players together with academicians be able to provide financial literacy education and significant activities to target audiences and youth in general.

On top of that, many household are unfamiliar even with the most fundamental economic concepts, which needed to make an appropriate investment decision and sensible savings. This has serious implication for retirement, saving, mortgage and other financial decision and it highlights a role for policy maker working to boost financial literacy and financial education among Malaysian. According to Lusardi (2007), policy makers are most concerned about the potential implication of financial illiteracy for economic behavior. Therefore, to avoid any unwanted economic crush, policy makers need to structure our national financial education and incorporate this knowledge as one of the important subject to our young generation. In additional, finding reveal, that financial knowledge is actually very low among high school students (Lusardi, 2007). Furthermore, policy maker may think strategies and restructure financial education policy by close advice, counseling, and consultation with various domestic and international stakeholders including industry players, academicians, NGO and consumers.

1.7 SCOPE OF THE STUDY

The scope of this research is to examine the level of financial literacy and financial health among Malaysian labor. The study also limited to Malaysian age between 18 to 45 years old. This academic work employed primary data. The data gather through questionnaire is used to measure the financial literacy and financial health of individuals in Malaysia. The study focus on Peninsular Malaysia with a sample size of 2500 respondents, which were selected randomly.

1.8 ORGANIZATION OF THE STUDY

The study is organized into five chapters. Chapter one discusses the introduction of the study which cover background of the study, definition, problem statement, research objective, research question, as well as significance of the study and scope of the study. The literature review was outlined in the chapter two. This chapter critically reviews the previous literatures, which relates to financial literacy. It also includes the prior empirical evidences that are related to the scope of the study.

Chapter three known as Methodology and this chapter describes the techniques and methods used in the study. It begins with explanations to the sampling; operational definitions to the variables used and present the hypothesis. The chapter also presents research design and regression equation model in order to answer the research questions of the study.

The chapter four shows the empirical results of Malaysian financial literacy and financial health levels, which were, test using various variables. The chapter also highlighted strategies and provides answers for research questions stated in chapter one. Moreover, the consistent and differences of the result in comparison with the prior empirical evidence are highlighted in this chapter.

Finally, chapter five is a conclusion of the research objectives carried out. This chapter highlighted, the contributions of the study and also explains limitations that should be noted. Furthermore, suggestions for future research are also presented.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter, we define some concepts, which related to this study such as: financial literacy, saving management, expenses management, debt management, investment skills, parents' characteristics, financial health, age, gender, income, education, employment, and marital status.

2.2 FINANCIAL LITERACY

According to Wachira and Kihiu (2012), both developed and developing economies still showed a keen interest in the issues of financial literacy. It has evoked great attention in the recent past with the fast changes in the financial landscape. Recent studies found that, the deficiencies of financial literacy is found to be a widespread phenomenon at a global level and is also distinctly proved in developed nations such as the United State (Lusardi and Mitchell, 2005), United Kingdom (Smith, 2005), as well in Japan and Australia (Smith, 2005). Studies conducted especially at developed economies prove that, financial literacy has become one of the major components of sound financial decision-making and provides significant implication to financial behavior (Emmanuel, 2010). For example, people with lack of financial literacy have high tendency to engage in debt problems (Lusardi and Tufano, 2009), tendency in stock market participation is relatively low (Van Rooij, Lusardi and Alessie, 2007), shows a less interest to participates and choose mutual funds although with lower fees (Hastings and Tejada-Ashton 2008,), less knowledgable to accumulate wealth and manage wealth effectively (Stango and Zinman 2007; Hilgert, Hogarth and Baverly, 2003), and unwise in planning for retirement (Lusardi and Mitchell 2006, 2007a, 2009).

Harnisch (2010), found that individuals should be empowered with the basis financial literacy as this allows them to make an accurate choices based on their basic needs and budget parameters. Meanwhile, Kidwell and Turrisi (2004), study indicated individuals who have greater financial knowledge keeps detailed financial records and have more access to credit opposed o their counter parts who does not keep any financial records and are financially illiterate. Financially illiterate person failed to make a perfect budget to meet the expenses, facing problem in identifying the financial products or services that can fulfill their needs and wants. Unsure on how to access independent financial advice and eventually have high tendency to fall victims of abusive and exploitative practices and scams (Emmanuel, 2010).

Moreover, research by Harnisch (2010), expressed that lack financial literacy result poor financial health, decrease quality of life and lead to lower levels of achivement. The cause of making poor financial decision and planning often shifted to the other members of the community, state and nation through the higher prices offered for a financial product, and the diversion of economic resources. Cole *et al*.,(2009), noted higher financial literacy is more significantly related with higher usage of banking services suggesting that financial literacy strongly influences banking behavior.

In additional, the market efficiency also depends strongly on financially literate consumer. Research has proved that, educated consumers are capable to create their own demands for products and services that can fulfill their short and long-term financial needs with suppliers who competing to come out with products that best respond to those demand. (Stephen, Denis and Irene, 2014). The Federal Reserve Chairman Ben Bernarke (2010), insists that financial literacy and consumer education, coupled with strong consumer protection, making the financial market place more efficient and effective, and helps the consumers to make a perfect decision.

Furthermore, consumers with low levels of financial literacy are disproportionately represents among the "unbanked" ie those lacking any kind of transaction account (Hogarth *et al*., 2005). It has been widely accepted that many consumers do not have sufficient financial literacy, which is relatively important make any major financial decision for their own interest. (Braunstein and Welch, 2002; Perry, 2008). Experts also generally agree that financial literacy appears to be directly correlated with self-beneficial financial behavior (Hilgert *et al*., 2003).

Recently, the result of various research studies shows that household with lack of financial literacy levels are not planning for their retirement, acquire fewer asserts (Lusardi and Mitchell, 2007b), borrow at the interest rate slightly higher and less participate in the formal financial system compared with their peers who are more financially literate. (Stango and Zinman, 2009).

2.3 SAVING MANAGEMENT

Study conducted by Hussein and Al Anood (2009), revealed Singaporean have a healthy attitudes and financially literate towards managing their savings and investments. Most of the Singaporeans active in making savings, always records their spending and always done some of the basic financial planning. While Ammar Askari (2010), examined America have low levels of financial knowledge, as well as insufficient saving and high indebtedness. Moreover, Clancy, Grinstein-Weiss and Schreiner (2001) and Schreiner, Clancy and Sherraden (2002) suggesting general financial literacy or financial education can increase the saving attitudes of individuals.

2.4 EXPENSES MANAGEMENT

Study by Marzieh, Zare, Seyyed and Abdoreza (2013), noted that financial illiteracy increased financial concern to fulfill the basic needs and prepare compatibility between earnings and financial expenditures. The finding by Wannie and Monyoncho (2011), showed most respondents that are financially literate able to detect all or part of their expenditures with a mean value of 3.67 compare with their counterparts who only recorded mean value of 2.00. Both categories however shows almost similar trend if compare the prices for all primary expenditures with the mean of 4.13 and 4.02 respectively. In additional, Peng *et al*., (2007), states that, universities students taking higher level of personal financial responsibility. These students face challenges in managing their expenses as they pay bills, used credit cards, working, saving, budgeting their monthly expenditures as well as managing the debt. Thus there is paramount important of financial literacy among college students. However, Dahlia *et al*., (2009), found that nowadays most of the students are unable to manage their earning in a appropriate way since if they have abundant of cash, they merely spend it for unnecessary purpose.

2.5 DEBT MANAGEMENT

Mandell (2009), study finds that currently, the lower levels of financial literacy contributes to the problems such as poor mortgage options and unsustainable high level of debt. According to US Federal Reserve, the debt to personal disposable income (household leverage) ratio rose from 55% in year 1960 to 65% by the mid-1980 and then increase drastically to 133% in year 2009. Presently, the household shows a drastic upward trends as the total household debt increased to 117% in year 1999 to its peak in early 2008 (Harnisch, 2010). The higher levels of debt increase the bankruptcy rate and cause relatively weak preparation for retirement (Taylor, 2013). Research by Lusardi and Tufano (2009), also indicates, ‘debt literacy’ is also low among respondents. It is because, only one-third of respondents are knowledgeable about the time it takes to double the debt if a person borrowed at an interest rate of 20%. In addition, Stephen, Denis and Irene (2014), prove that less financial literate people will face more challenges relates to debt management, savings, credit and also less likely to plan for their future.

2.6 INVESTMENT SKILLS

Lusardi and Mitchell (2007), found that those who are financially literate are much more like to plan for investment and retirement. While a similar study carried out by Van Rooij, Lusardi and Alessie (2009), prove that individuals who are financially sophisticated have high tendencies to invest in stocks. It has also been indentified that high literate investor will use a variety of different criteria when making investment decision compare to illiterate investors. High literate investors also much more prefers to use current financial publication materials when making investment decision while low literacy investor usually depends on advice from family members, friends and stockbrokers. Moreover, Peng *et al.*, (2007), insists that college students who have a bank account before age 18 years old have relatively high investment skills. This effect is even greater if savings accounts are opened at younger age (Sabri *et al.*, 2010). Calvet, Campbell and Sodini (2005), argue that households with high financial literacy and greater financial sophistication are much more likely to participate in riskiest asset market and invest more effectively.

2.7 PARENTS CHARACTERISTICS

Lusardi and Mitchell (2013), financial literacy has been proved have a significant correlation with parental education level (especially mother's education level) and whether their parents are holding stocks or retirement accounts. Mahdavi (2012), also found a link between parental background and financial literacy, and this study prove that father's education is significantly and positively correlated with financial literacy of their female children's. In other words, knowledge of financial literacy may get started from family; perhaps the children's might see their parents' habits of savings and investing or received financial education directly from their parents (Chiteji and Stafford 1999; Shim, Xiao, Barber and Lyons 2009). Furthermore, engagement with an important aspects of financial matters as well as experience about money management in a family further enhance the financial literacy among Malaysian students (Sabri *et al*., 2010). Moreover, as evidenced the more the parents communicate about financial matters with their children, the more knowledgeable their children will be in terms of money management. (Shim *et al*., 2009). Besides that, other study has proven parents have a strong influence on their children as they learn consumer behavior from their parents Lachance and Legault, (2007); and Logasvathi, (2014). Parents also act as the primary source of financial information for college students and teens (Pinto *et al*., 2005; Lyons *et al*., 2006; Peng *et al*., 2007). Lyons *et al*., (2006) asserts that most of the college students (76.7%) stated that they gain financial information from their parents. Bowen (2002), in a study of financial literacy among youth and parents, proved that teens learn about financial matters probably a combination of intentional or unintentional strategies by parents and other important adults in their lives. According to Ambre (2012), financial literacy starts from house itself where children are teach on how to handle money such as to save and spend wisely.

2.8 FINANCIAL HEALTH

Joo (1998), financial health conceptualized as the level of financial wellness. This include the satisfaction of material and also non-material aspects of one's financial position. Strumpel (1976), elaborate that financial health goes beyond temporary satisfactions which include the satisfaction of savings, income, ability to "make ends meet", perceptions of opportunities, sense of material security and sense of fairness of reward distribution system. According Lee and Ong (2001), highlighted that in obtaining the capacity living a financially healthy lifestyle, it is crucial that every individual continuously examine the effect of financial matters and also analyze the financial resources to support the desired status in future. Moreover, financial health is positively engage with education, age and income. Recent academic work on financial health of college students proved that ethnicity, gender, parental income and age (Xioa *et al*., 2009; Shim *et al*., 2010) significantly and positively correlated with financial well-being. On the other hand, research also found that financial literacy are able to enhance the financial health of individuals as well as their families (Taylor, 2013).

2.9 AGE

Research reveal that, majority of teens possess insufficient knowledge relate to financial literacy. For example, Lusardi and Mitchell (2009), measure financial literacy among the adolescent in USA with the help of the data obtain from 1997 National Longitudinal Survey of Youth and they point out that only less than one-third of youth possess the fundamental knowledge of inflation, risk diversification and interest rates. This suggested the financial literacy is still low among young people.

Furthermore, studies by Mandell (2014), using the Jump$tar Coalition Survey of high school revealed that, there were relatively low level of financial literacy among high school. According to that survey, the financial literacy among high school students has reduce to lowest level ever that is only an average score of 48%, a decrease from 57% in year 1997. The survey indicates that, most of the students are not aware of the fundamental concepts of finance and financial principles that are generally accepted, like the long-term rates of return of stocks, compound interest and saving accounts.

Moreover, studies also find that, the number of college students who have low levels of financial literacy are relatively high (Chen and Volpe, 1998; Henry *et al*., 2001; Murphy 2005; Lusardi *el al*., 2010). The lack of financial literacy level among college students is link with ineffective financial behaviors including low levels of saving (Sabri and MacDonald, 2010), poor record keeping (Chen and Volpe 1998), and high credit card debt (Norvilitis *el al*., 2006). Logasvathi (2013), expressed that undergraduates financial literacy in Malaysia were low. Additionally, research by Hussein and Al Anood (2009), express that foreign students were financially illiterate than the US citizents and US citizen age 50 plus are more financial literate, make too many financial decision and involved in various financial transactions over their lifetimes.

2.10 GENDER

Several researchers exploring financial literacy in the context of gender (Lusardi and Mitchell, 2008, 2011; Hsu, 2011; Brown, 2012; Fonseca, Mullen, Zamarro and Zissimopolous, 2012; Hung, Yoong and Brown, 2012; Bucher Koenen, Lusardi, Alessie and Vvan Rooij, 2012). The financial literacy levels by sex was examined in over a dozen of countries as different as the United States, Italy, Sweden, New Zealand and Russia as well as elsewhere (Atkinson and Messy, 2012). Most of the studies found out men are generally financially literate and knowledgeable compared to women. In addition, studies by Emmanuel (2010), conform male students have greater financial literacy, higher income, greater work experience, and lower aggregate risk preferences. Besides that, the same research also found that, women (under the age of 30) pursuing non-business careers and with little work experience have lower level of financial literacy. Other study conduct by Mahdavi (2012), and Harnisch (2010) stress that, women's level of financial literacy was found to be relatively very low compare to men.

2.11 INCOME

Research by Harnisch (2010), asserts there is still widespread financial illiteracy in America especially among low income and minority populations. Financial illiteracy are widespread phenomena throughout the United State and it is very common to individuals especially with low-income population and with those no postsecondary education. ACNielsen Research (2005), adding that lowest level of financial literacy was associated with those who have low-income distribution, unemployed or unskilled workers, and lower education, single and those both extremes. Lusardi and Mitchell (2007), argue that those with low level of financial literacy have low-income. In other research, they expressed that rational and well financial knowledgeable individual will consume less than the income even in times of high earnings and will save more to support consumption when income falls (example, after retirement) (Lusardi and Mitchell, 2013). Furthermore, Hussein and Al Anood (2009), concluded investor with high-income have extensive knowledge in investment than those with low income. On the other while, Athiphat, Phacharaphot and Pasit (2014), examined vulnerable households are households with low income because they have low financial literacy, financial access limit and heavy debt service burden.

2.12 EDUCATION

Hilgert *et al*., (2003) asserts that individuals with low levels of financial literacy may have low level of education, less interested in financial affairs, be poorer or have different discount rate. Evidence in literature also indicates that, individuals who are not educated or knowledgeable enough, unable to take an accurate financial choices and this will limit their credit accessibility. The level of financial literacy also varies widely across education groups; those who are highly educated are having high financial literacy (Lusardi and Mitchell, 2009). Moreover, financial literacy also relatively high to those who exposed to financial education programs in the workplace. Lusardi and Mitchell (2007), explained that financial literacy is closely linked with economies exposure at the school. Students who studied economics at high school, college or at higher level are more likely to display higher levels of financial literacy in future.

2.13 EMPLOYMENT

Lusardi and Tufano (2009), asserts financial literacy varies strongly with employment as well as by income. Financial literacy is generally high for employees than for the non-employed (Lusardi and Mitchell, 2011c). Moreover, the financial literacy also normally as high or even higher among the self-employed compared to the non-employed. This may due from the education program attend by the employees at their workplace. Since 1990, Department of Labor (DOL) has encouraged employer to provide financial education to help workers better understand their employer sponsored retirement plan (Garman, Kim Kratzer, Brunson and Joo, 1999). Besides that, Hussein and Al Anood (2009), found that those with little work experience had lower levels of financial literacy.

2.14 MARITAL STATUS

Lusardi and Mitchell (2013), found that married women only start to build their financial knowledge late in their life (close to widowhood). While research by Joo and Grable (2004), indicates that, there is no significant relationship between marital status and individual financial literacy. The lack of financial literacy also basis for mental illness, main reason for divorce and a variety of other unhappy experiences (Cleek and Pearson, 1985; Kinnunen and Pulkkinen, 1988), main cause of emotional stress, depression and low self-esteem (Wolcott and Hugher, 1999) and low level of productivity in the work place (Fletcher *et al*.,1997; Joo and Grable, 2000; Welsch, 1992).

Sporakowski (1979), noted financial literacy influences a person’s day to day function. Thus, a low level of financial literacy among masses will cause a major problem for nation’s economic well-being and personal well-being as concluded by (Morton, 2005).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The method used to conduct this study is described in this chapter. It discusses the sample size used in this research followed by the explanation on data collection method. This chapter also explain the variables used in this study as well as the development of hypothesis. Besides that, research design and regression equation model together with theoretical framework also presented in this chapter.

3.2 SAMPLING

The sample population involve in this study is the total labor force in Malaysia. The population of labor force in Malaysia in year 2014 was 13,931,600 people. However, for this study we only focus labors age between 18 years old to 45 years old. The Malaysia labor force age ranging from 18 years old to 45 years old in year 2014 are 9,819,100 workers as shown in Table 3.1.

Table 3.1:
Number of labor force by age group, Malaysia, 2010 – 2014

	NUMBER ('000)					
Year	**Total**	**18 - 24**	**25 - 29**	**30 -34**	**35 - 39**	**40 – 45**
2010	**12,303.9**	1,882.4	2,301.1	1,757.2	1,529.3	1,358.1
2011	**12,675.8**	1,833.5	2,371.5	1,874.3	1,570.1	1,392.8
2012	**13,119.6**	1,833.6	2,396.6	1,981.0	1,613.3	1,447.6
2013	**13,634.6**	1,856.7	2,414.8	2,125.6	1,677.7	1,509.3
2014	**13,931.6**	1,860.5	2,435.5	2,245.2	1,737.9	1,540.0

Source : Department of Statistics Malaysia

In order to estimate the sample size, this study used distribution theory method. Based on statistical distribution theory, the following formula is used to estimate the number of sample sizes required in this study.

$$n = \frac{Z^2pq}{E^2} = (1843)$$

With the value of Z = 2.575 at significant level p = 0.01, assuming a chance to be selected as respondents is 50% and the estimated error of 3% which the amount of error this study can tolerate, n is estimated as 1843. To reduce the error estimates, approximately 2500 respondents were selected. Moreover, this study also chooses the confidence level of 99% that is the amount of 1% uncertainty this study can tolerate. This indicates that 99% of the hypothetically observed confident level will hold the true value of the parameter.

This research used a total number of 2500 respondents randomly selected, which cover Peninsular Malaysia. The main reason this study used simple random and probability sampling because to generalized and represented the finding to the population. Meanwhile, the justification for focus on Peninsular Malaysia is due to limitation in time constraint. The unit of analysis in this study is individuals and this study used cross sectional analysis for the time frame of 2014.

3.3 DATA COLLECTION METHOD

In this study, the primary data will be gathered using questionnaire. Questionnaire can be describe as a pre-formulated written set of question in which respondents record their answers. Questionnaire is proven as an effective data collection technique, if the researcher knows what is exactly required and how to measure the variables of interest (Uma Sekaran, 2003). The questionnaire is conducted by personally pass and collected from the respondent by the enumerator.

3.3.1 QUESTIONNAIRE DESIGN

In order to measure the financial literacy of individuals, data gathered through questionnaire is used. There are a set of 12 questions were asked to measure the financial literacy in this study. Six questions to measure the basic level of individuals' financial literacy. The questions involved are fundamental knowledge on economic and financial conception such as basic numeracy, compound interest and time value of money. Moreover, this study adapted the work that had been used by Lusardi and Mitchell (2006, 2008) and Lusardi, Olivia, and Vilsa (2010) to develop questions that demonstrate the understanding of individuals' basic knowledge on financial literacy. Besides that, in order to determine the individuals' financial literacy, an advance level of questions also being asks. Six questions on advance financial literacy level were adapted from Lusardi and Mitchell (2007) and Tan, Hoe and Hung (2011). Separation into the fundamental and advance level of financial literacy gives us a strong platform to obtain good insights as to the individuals' performance in financial literacy (Tan, Hoe and Hung, 2011). The financial literacy questions scale in the survey form is an ordinal level index where each correct answer scored one point. The respondent may receive a maximum of one point for each correctly answers questions. Thus, with 12 questions, the index ranges from 0 to 12, with higher values representing greater financial literacy level.

Furthermore, questions for saving management (SM) consisted of 4 questions, expenses management (EM), comprised 4 questions, debt management (DM) with 7 questions, investment skills (IS) including 7 questions and parents characteristics (PC) with 4 questions. The question was developed based on Lusardi and Mitchell (2007); Lusardi, Mitchell and Vilsa (2010); Tan, Hoe and Hung, 2011; Wannie Nyamute (2011), Dahlia, Rabitah and Zuraidah (2009), and Chen and Volpe (1998). Above variables questions scale in the survey form is an interval-level index with five point Likert scale. The questions for SM, EM and PC the responses range from 1 to 5 with lower values indicating strongly agree in respective variable. Where else, the questions for DM and IS the responses range from 0 to 5. 0 will indicates not applicable in DM or IS questions. Respondents' responses range 1 to 5 with lower values representing most important. The SM, EM, DM, IS and PC index is created by averaging the results respectively.

The justification for saving management and investment skills are those who have competence in saving and investment to enable them to perform a variety of savings and investment strategy that suits their personal goals. A financially literate individual should be able to discuss the way saving contributes to financial health, describe how investment create wealth, assists to achieve the financial goals and asses investment alternatives. Meanwhile, people who have competence in expenditure and debt management enable them to retain their creditworthiness, borrow at favorable terms and can able to manage their debts. In addition, financially literate person is able to determine the cost and benefits of different types of credits, define the aim of credit record, determine the borrowers' credit report rights, identify ways on how to avoid or rectify debt problem and summarize the primary consumer credit rights.

Clarke *et, al* (2005) expressed that, children and adolescents learn financial skills from their parents at home rather than other sources outside the house. Moreover, Cude *et al* (2006) and Logasvathi (2013), found a significant roles play by their parents in their children's financial management practices. This is because, parents are the best and close example to the children and they serve as role models for their children.

Meanwhile, demography variable namely age, gender, marital status, income level, education and employment type are also tested in this study. The socio-economic scale in the questionnaire is a close-ended questions and answer is given for respondents to choose.

For financial health variable, 8 questions were asked. The questions are based from previous study such as Leila and Laily (2011), Hira and Mugenda (1999) and Porter and Garman's (1993). Financial health were measured by asking respondents the question to evaluate their level of satisfaction on a scale of one (overwhelming stress) to five (no stress at all) on six item including the amount and ability to save, financial situation, ability of purchasing, savings for emergency purpose, and skills to manage money. The financial health questions scale in the survey form is an interval-level index with five point Likert scale. The financial health index is created by averaging the results.

3.4 VARIABLES AND HYPOTHESIS

This section will describe the variables used and hypothesis development in this study. This study consists of three models, where each model has its own variables in accordance with the objectives of the study. The dependent variable used in this study for model 1 is financial literacy. Meanwhile the independent variables of model 1 are saving management, expenses management, debt management, investment skills, and parents' characteristics.

3.4.1 MODEL 1

Variables	**Operational Definition**	**Past Studies**
Dependent Variable		
Financial Literacy	Financial literacy is a combination of being aware of financial knowledge, skills, behavior that is pre-requisite for an excellent financial decision and to achieve the financial wealth. Financial literacy is	1) Wachira and Kihiu (2012) 2) Lusardi and Mitchell (2005) 3) Smith (2005) 4) Emmanuel (2010)

	measure based on respondents' knowledge on compound interest rate, risk diversification, time value of money, numeracy and finance and banking products.	5) Harnisch (2010)
<u>*Independent Variables*</u>		
1) Saving Management	Saving management, describe as additional cash left after income minus expenses.	1) Hussein and Al Anood (2009) 2) Ammar Askari (2010) 3) Clancy, Grinstein-Weiss and Schreiner (2001) 4) Schreiner, Clancy and Sherraden (2002)
2) Expenses Management	Expenses or expenditure management is an outflow of money to another party as a payment for an items, products or services. It is also known as the money we spent to fulfill our needs and wants.	1) Peng *et al* (2007) 2) Dahlia *et al* (2009) 3) Wannie and Monyoncho (2011) 4) Marzieh, Zare, Seyyed and Adboreza (2013)
3) Debt Management	Management of debt is an action that assists the borrower to pay back or manage their debt in better way.	1) Mandell (2009) 2) Harnisch (2010) 3) Taylor (2013) 4) Lusardi and Tufano (2009) 5) Stephen, Denis and Irene (2013)
4) Investment Skill	Investment skill is a purchase of financial and non-financial monetary assets with a hope, the property will give income in the future or its value will increase and can be sold for higher price.	1) Lusardi and Mitchell (2007) 2) Van Rooij, Lusardi and Alessie (2009) 3) Peng *et al* 2007) 4) Sabri *et al* (2010) 5) Calvet, Campbell and Sodini (2010)
5) Parents Characteristics	Parents characteristics define as the role-played by the parents or family to influence their children financial matters or financial behavior.	1) Mahdavi (2012) 2) Sabri *et al* (2010) 3) Shim *et al* (2009) 4) Bowen (2002) 5) Ambre (2012) 6) Logasvathi (2013) 7) Cude *et al* (2006)

3.4.2 HYPOTHESIS

3.4.2.1 FINANCIAL LITERACY

Financial literacy is a combination of being aware of financial knowledge, skills, behavior that is pre-requisite for an excellent financial decision and to achieve the financial health. Financial literacy is measure based on respondents' knowledge on compound interest rate, risk diversification, time value of money, numeracy and finance and banking products. Financially literate individuals can make effective use of financial products and services by evaluating associated risks and returns and finally choosing those products, which are best suited to them (Bhushan, 2014). At the other end, individuals may not fully utilize their "idle" money in profitable investment opportunity. Therefore, having a high level of financial literacy can ensure individuals to give more concern in organizing their spending and savings to achieve a satisfactory level of financial well-being (Lusardi and Mitchell, 2007).

3.4.2.2 SAVING MANAGEMENT

Saving management, describe as additional cash left after income minus expenses. Saving management will ensure a short-term setback does not turn into long-term financial crisis. Saving management also must become the cornerstone of one's financial plan to protect our financial future and achieve the long-term goals. The indicator for financial literacy is financial instability like low levels of savings, poor future planning and heavy liabilities (Kozup and Hogarth, 2008). According to Simon and Trunk (2013), financial literacy can assist the young children to better understand the value of money and teach them on how to manage money in a more proper way and encourage savings. Research by Bhushan (2014), asserts that individual with low level of financial literacy will encounter problems that relate to personal finance like savings and borrowings. Financial literacy deficiencies can influence an individual or family day-to-day money management and ability to save more for long-term goals such as buying a house, planning higher education for children or for retirement purpose. (Suwanaphan, 2013). Research has been proved that, the rate of personal savings in United States has been declining for a number of years. In 2009, the savings rate average was 5.8% and it dropped to 5.4% in 2010 (Bureau Economic Analysis, 2011). According to the 2012 Consumer Financial Literacy Survey, (SCF), only 59% of adults said they are savings. This is a 5% decrease from the year 2011. In 2012, SCF also revealed that two in five adults (40%) are saving less than they did in 2011, and the proportion of adults with zero savings (39%) has been rising for two years. This has proved that, financially literate people able to save more than their counterpart. Therefore, the hypothesizes for saving management is:

H1: Saving management has significant relationship with financial literacy.

3.4.2.3 EXPENSES MANAGEMENT

Expenses or expenditure management is an outflow of money to another person as a payment for an item, products or services. It is also known as the money we spent to fulfill our needs and wants. Research has shown that, there were significant relationship among financial literacy and expenditure management. It is because, financial literacy reduce the financial concerns that is, through a improved ability to meet and provide compatibility between income and expenses (Marzieh, Zare, Seyyed and Abdoreza, 2013). On the other hand, financial literacy also calls for spending more wisely that means, preparing a smart budget, tracking all the expenditure, paying bills on time and ensuring credit cards are paid in full each month (Wannie and Monyoncho, 2011). The same research proves that financially literate individuals are always prepared for any unexpected expenditure compare to those who are financially illiterate. Moreover, study by Simon S. and Trunk A. (2013), also expressed that there is a crucial needs for financial literacy to develop the underlying skills and knowledge for adjust the expenses with the income and monitor personal finances as well as financial planning. Thus, this study hypothesizes that:

H2: Expenses management has significant relationship on financial literacy.

3.4.2.4 DEBT MANAGEMENT

Management of debt is a strategy that assists the borrower to pay back or manage their debt in better way. Debt management also involves working with the creditor to re-structure the debt or assist the borrower to manage payments more efficiently. Debt management will help to reduce outstanding, unsecured debts over times and help the debtor regain control of finances. According to Wannie and Monyoncho (2011), debt, particularly consumption debt able to change negatively the course of some one's life. So, it is vital that from a young age, every individuals should receive financial education in personal financial management in order to reduce the effects and consequence of the mismanagement of personal finances and negligent handling of debt (Smit, 2005). Moreover, individual with lower levels of financial literacy also tend to have higher level of personal and household debts, at the same time not have minimum levels of literacy and skills to distinguish between products (Smaghi and Smit, 2005) resulting in an increased likelihood of transacting in higher debt (Jappelli, 2010). Azwadi, Rahman, and Alif (2013), expressed that the danger of poor financial literacy cause one may have more debt than the earnings, leading to the person owing to much debt and possibly going bankrupt. Hence, this study hypothesizes that:

H3: Debt management has significant effect on financial literacy

3.4.2.5 INVESTMENT SKILLS

An investment skill is a activity of purchasing financial and non-financial monetary asset with a hope, the asset will generate income in future or its value will appreciate and can be sold for higher price. Research also notice that, people with higher financial literacy level are more actively participate in financial planning, including investing in unit trust and purchasing of life insurance compare to people with low level of financial literacy (Mahdzan and Tabiani, 2013). Shafii and Abiddinand Ahmad (2009), also asserts that, increased financial literacy level bring about higher involvement of individuals in financial planning activities such as investing in mortgages, real estate and property. In additional, Tamimi and Kalli (2009), examined the effect of financial literacy towards financial decision. Their finding proved that, field of individual activity influence financial literacy level hence people who invest in the area of stock and banking have greater level of financial literacy. Another research by Tamimi and Kalli (2009) exposes that, there is exist a significant relationship between financial literacy and investment decision. Furthermore, studies about Indian behavior on investment preferences by Geetha and Ramesh (2010), found that people were not aware about all the investment options available to them and they financially illiterate about securities. Therefore, this study hypothesizes that:

H4: Investment skill has significant relationship with financial literacy.

3.4.2.6 PARENTS CHARACTERICTICS

Parents' characteristics define as the role-played by the parents or family to influence their children financial matters or financial behavior (Logasvathi, 2013). Parents believed to have more influence towards their children's financial knowledge, behavior and attitudes as opposed to work experience. Research has been proven parents play an important role in preparing their children to live independent live. They teach their children how to manage financial resources not only by directly instructing them (Danes 1994; Moschis 1987) but also by modeling appropriate behavior (Hayhoe, Leach, Turnes, Bruin and Lawrance, 2000 ; Joo *et al*., 2009). Several studies have suggested that parent's characteristic plays an important and significant role in consumer socialization (Bush, Smith & Martin 1999; Moschis & Moore, 1984). For example, findings indicated that most teens and young adults preferred to talk to their parents about money management rather than to other relatives, friends or teachers. While, the research findings shared at the National Research Symposium of Financial Literacy and Education (FLEX, 2008) revealed that, parents and families continue to be the primary context in which socialization about money occurs, followed by financial education programs and advertising. Thus, the hypothesizes are:

H5: Parents characteristics have significant impact towards financial literacy.

3.4.3 MODEL 2

There are also a number of variables used in model 2 in accordance with the objective of this study. The dependent variable for model 2 is financial literacy which is same as model 1. While, the independent variables are different for model 2. There are six independent variables used in model 2 namely, age, gender, marital status, income, education and employment.

Variable	**Operational Definition**	**Past Studies**
Dependent Variable		
Financial Literacy	Refer to model 1	Refer to model 1
Independent Variables		
1) Age	This independent variable refers to the respondents' age. This study only covers, respondents' age between 18 years old to above 45 years old.	1) Lusardi *et al* (2009) 2) Mandell (2014) 3) Sabri and MacDonald (2010) 4) Norvilitis *et al* (2006) 5) Chen and Volpe (1998)

2) Gender	Gender refers to the respondents' sex either male or female.	1) Mahdavi (2012) 2) Harnisch (2010) 3) Emmanuel (2010) 4) Atkinson and Messy (2012) 5) Hung, Yoong and Brown (2012)
3) Marital Status	Marital status refers to the respondents' status whether the respondent is single or married.	1) Lusardi and Mitchell (2010) 2) Joo and Gramble (2004) 3) Wolcott and Hugher (1999) 4) Cleek and Pearson (1985) 5) Kinnunen and Pulkkinen (1988)
4) Income	Income referring to the respondents' net monthly salary.	1) Harnisch (2010) 2) Lusardi and Mitchell (2007) 3) Lusardi and Mitchell (2013) 4) Hussein and Al Anood (2009)
5) Education	The independent variable of education in this study refers to the educational level of respondents' from certificate to PHD level.	1) Hilgert *et al* (2003) 2) Lusardi (2009) 3) Lusardi and Mitchell (2007)
6) Employment	Employment referring to the type of work conducted by the respondents'. Employment in this study is divided into 3 types namely private, government and self-employment.	1) Lusardi and Tufano (2009) 2) Lusardi and Mitchell (2011) 3) Garman, Kin , Kratzer, Brunson and Joo (1999) 4) Hussein and Al Anood (2009)

3.4.4 MODEL 3

Model 3 has its own variable where it differs from two other models. The dependent variable used in model 3 is financial health, which is totally different from model 1 and model 2. Meanwhile, the independent variables used in this model are financial literacy.

Variables	Operation Definition	Past Studies
Dependent Variable		
Financial Health	A person's personal financial position is described as financial health. There are many aspects to financial health, including a person's volume of savings, amount a person setting away for retirement purpose and amount a person spend for a fixed or non-discretionary expenses from his income.	1) Taylor (2013) 2) Joo (1998) 3) Lee and Ong (2001) 4) Strumpel (1976) 5) Xiao *et al* (2009) 6) Joo and Gamble (2004) 7) O'Neil *et al.,* (2000) 8) Lynos *et al.,* (2006)
Independent Variable		
Financial Literacy	Refer to model 1	Refer to model 1

3.4.5 HYPOTHESIS

3.4.5.1 FINANCIAL HEALTH

A person's personal financial position is described as financial health. There are many aspects to financial health, including a person's volume of saving, amount a person setting away for retirement purpose and amount a person spend for a fixed or non-discretionary expenses from his income. Research has been pointed that financial literacy significantly affects the financial health of individuals. For example, Joo and Grable (2004), expressed that financial literacy has a direct and strong impact on financial health. Other studies by O'Neill *et al*.,(2000), said if consumer have enough financial literacy in underlying personal finance they might be in a better position to manage their finances, thus resulting a better financial health. Moreover, according to Lyons *et al.,* (2006), financial literacy contributes towards financial health of young people to beginning their adults' lives in good financial shape, not under the burden of unmanageable debt, which may hinder them from getting an education, buying a house, or even being hired for a good job.

3.4.5.2 FINANCIAL LITERACY

Financial literacy also describe as the skills of understanding and analyzing the financial options, planning for the future and respond appropriately to events. Having these skills may influence the conditions of life, work and might be helpful in forecasting the future as well as increasing the human financial health (Marzieh *et al*., 2013). Moreover, research by Tamimi and Kalli (2009), proved that, there were a positive effect of financial literacy on financial health. Financial literacy allows successful participation of individuals in economic activities through increased savings, accurate purchasing power, excellent investment skills, proper asset management and enhances the individual financial health. Hence, this study hypothesizes that:

H7: There are significant relationship between financial literacy and financial health.

3.5 RESEARCH DESIGN

Burns and Grove (2003), defined research design as "a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings". This study employed various techniques to collect and analyze the data.

3.5.1 MISSING DATA

Missing data or more known as incomplete data arise in almost all-serious statistical analysis. It occurred when any of the data on any variable from any participant is not present or in simple words, no data value is stored for the variable in an observation. Missing data can be identified during the data screening process. It is a common occurrence and can have a significant effect on the conclusion that can be drawn from the data. In survey, missing data may occur for many reasons. Respondents may refuse to answer a question because of privacy issues, the person taking the survey does not understand the question, the respondent wound have answered but the answer was not one of the option presented, the respondent wasn't enough time to complete the questionnaire or the respondent just lost interest. Every survey question without an answer is a missing data point. In this study, missing data are treated by checking back the questionnaire to identify the missing value or delete the case if more than 30% questions are not answered by the respondent. Hair (1998), expressed that, missing data below 5% of the total required data is allowed for further analysis. In this study, 12 missing value is found, in which 10 missing value are corrected and the value is found from the questionnaire. While, 2 cases are deleted due to insufficient answer given by the respondents. The values for deleted cases are replaced with other two questionnaires. Therefore, this study not violated the missing data assumption.

3.5.2 OUTLIERS

Outliers define as any value that is numerically distant from most of the other data points in a set of data. There are several causes lead to outliers. For example, human error in data entry or data collection, participants intentionally reporting incorrect data, sampling error, measurement error or experimental error. If it is determined that an outliers is due to some type of error such as human error, measurement error or experimental error than it is not a problem to exclude the data point from analysis. However if the outliers was due to chance or some natural process of the construct that is being measured, it should not be removed. Researcher can spot outliers by using histograms, scatter plots, number lines and also the interquartile range. In this study, outliers are detect using scatter plots.

3.5.3 RELIABILITY

Any significant outcome that should be more than one finding and inherently repeatable is known as reliability. In a research, the researcher must make sure to conduct precisely the same experiment under the same condition and generate the same findings. These will further strengthen the results and ensure the broader scientific community will accept the hypothesis.

Without the replication of statistically significant findings, the experiments and research will not achieved all of the requirements of testability. There are some factors affecting the reliability such as misunderstandings. In the study, the reliability analysis is examined by using Cronbach's alpha.

3.5.4 VALIDITY

Validity defines as the extent in which a concept, conclusion or measurement is well founded and correspond accurately to the real world. According to Joppe (2000), validity determines whether the research truly measures what is intended to measure or how truthful the research findings are. Researchers normally find out validity by asking a set of question and will often look for the answer in the research of others. Validity divided into internal validity and external validity. Internal validity is the validity of the measurement and test itself, while external validity defined as the ability to generalize the results to the target population. In this study, validity test in analyze the meaningfulness usefulness and appropriateness of research study are in accordance because of the questions asked in the questionnaire was based on the past studies. (Refer section 3.3.1)

3.5.5 FACTOR ANALYSIS

The key concept of factor analysis is a method to take a huge data and divided it into a smaller data set, which is easy to manageable. It can be a useful tool for complex sets of data involving psychological studies, socioeconomic status and other involved concepts. Factor analysis divided into exploratory and confirmatory. Exploratory occur when the researcher do not have a pre-define ideas of the structure or how many dimension are in a set of variables. Meanwhile, confirmatory occur when the researcher decided to test a specific hypothesis about the structure or the number of dimension underlying a set of variable. The primary purpose of factor analysis is to reduce the number of variable and to detect structure in the relationship between variables that is to classify variables. Therefore, factor analysis applied in this research is exploratory factor analysis (EFA).

3.5.6 NORMALITY

A normality test is a statistical process employed to examine whether a sample or any series of data fits a standard normal distribution. Normality test can be done either mathematically or graphically. Main purpose of normality test is to check the fitness of data before running multiple regression analysis. In this study, normality test is measured using skewness and Kurtosis value from the explore anlaysis dialogue box under descriptive statistics menu in SPSS. This study choose normality plots, skeness and kurtosis check box. In this study, normal distribution is based on skewness and kurtosis ratio between +2 to -2 (Hair 1998) at 0.05 alpha values range. The data set in this study is in normal range as shown in Table 4.11.

3.5.7 LINEARITY

The next step in this research is linearity analysis. Linearity analysis is a statistical terms applied to describe the relationship between the variable and constant. Linearity analysis can be presented in a graphical format in which the variables and the constant are connected through a straight line or in a mathematical format in which the independent variable is multiplied by a slope coefficient, plus the constant, which determines the dependent variables. The main purpose for linearity testing is to examine the linear relationship between variables. This is because, correlation value will be affected by non-linear factor that are not represented in the analysis. This study used SPSS software to draw scatter plot from the plots sub dialogue box under linear regression dialogue box. Normal P-P plot graph in this study shows that linearity assumption has been not violated. (Refer Figure 4.2)

3.5.8 HOMOSCEDASTICITY

Homoscedasticity assumption is significant to the linear regression models. Homoscedasticity mean, the variance of error is the same at all levels of the independent variables. If the variance of error varies at different values of the independent variables, then heteroscedasticity is indicates. The effects of heteroscedasticity is that, the OLS estimator are unbiased and consistent in the presence of heteroscedasticity, but they are also not efficient and the estimated standard errors are inconsistent, so the statistics test using the standard error does not valid. This study use scatter plot and Levene's test to measure homoscedasticity and this assumption has been not violated as shown in Figure 4.3 and Table 4.13.

3.5.9 MULTICOLLINEARITY

Multicollinearity is a condition in which one or more independent variable are highly correlated (0.80 or greater) with other independent variable. It is a type of disorder in the data and can cause the data may not be reliable. There are several causes for multicollinearity occurrences. For example, it may happen due to inaccurate use of dummy variables, the inclusion of variable that is computed from other variables in the data set also may result from the reiteration of the same kind of variable or occurs when the variables are extremely correlated to each other. Multicollinearity may result certain problems like the partial regression coefficient due to multicollinearity may not be estimated accurately or the standard errors are likely to be high. Multicollinearity also can be detected with the help of tolerance and its reciprocal called variance inflation factor (VIF). If the tolerance value is less than 0.2 or 0.1 and simultaneously and the value of VIF 10 and above, then the multicollinearity is problematic. In this study, multicollinearity test was done using VIF and the highest VIF value shown in this study is 1.367.

3.5.10 REGRESSION ANALYSIS

Regression analysis examine the relationship between variables especially the relationship between dependent variable and one or more independent variable. It employed for various purposes like predicting, forecasting and finding the causal effect of one variable on another. The importance use of regression analysis in studies are to test the hypothesis, to handle multiple co-related predictor variables, to address unknown parameters and to study the effect of one predictor variables on a dependent variable. There are also a number of statistical software solution that provide different kind of regression techniques such as linear regression, least squares method and non-linear regression. In this research, regression analysis using enter and stepwise method are used to test objective 1 and 3.

3.5.11 INDEPENDENT SAMPLES T-TEST

An independent samples t-test evaluates the different between the means of two independent or unrelated groups. That means, to determine if the mean for two independent groups are significantly different from one another. According to Satterthwaite, (1946) independent samples t-test is usually refer as one of the design and can be used to analyze a control and experimental groups. The purpose of independent samples t-test is to test the statistical differences between the mean of two groups, to test the statistical differences between the mean of two interventions and to test the statistical differences between the mean of two change scores. Moreover, the independent samples t-test can only compare the mean for two (and only two) groups. It cannot make comparisons between more than two groups. If the researcher wish to compare the mean across more than two groups, than the researcher must run an ANOVA.

3.5.12 ONE-WAY ANOVA

Analysis of variance or one-way ANOVA is a common technique for testing the sample data relationship. This technique allows the difference between two or more sample of mean to be analyzed and achieved by subdividing the total sum of squares. The purpose of using one-way ANOVA is to examine the significant differences between class mean and this is done by analyzing the variances. This study employ Independent Sample T-Test and One-Way ANOVA to answer objective 2.

3.6 REGRESSION EQUATION MODEL AND THEORITICAL FRAMEWORK

As previously stated, there are three models used in this study. Regression equation model used in this study is as shown below.

3.6.1 OBJECTIVE ONE:

Model 1

$$FL_{it} = B_0 + B_1 SM_{it} + B_2 EM_{it} + B_3 DM_{it} + B_4 IS_{it} + B_5 PC_{it} + \in_{it} \ldots (i)$$

Where,

- FL = Financial literacy
- SM = Saving management
- EM = Expenses management
- DM = Debt Management
- IS = Investment skills
- PC = Parents characteristics

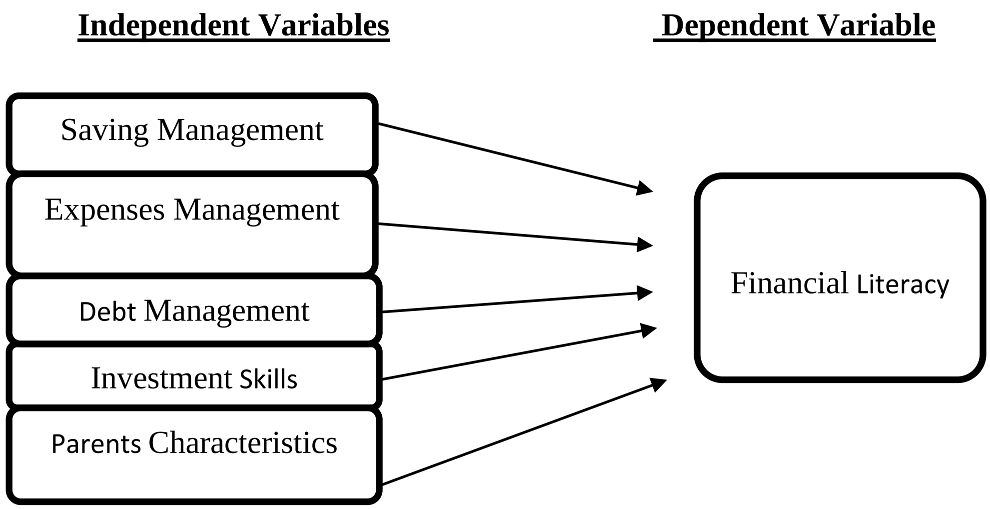

Figure 3.1:
Theoretical framework of Model 1

3.6.2 OBJECTIVE THREE:

Where,

- FH = Financial health
- FL = Financial literacy

Model 3

$FH_{it} = B_0 + B_1 FL_{it} + \in_{it}$ ... *(ii)*

Below is the expected theoretical framework for Model 2:

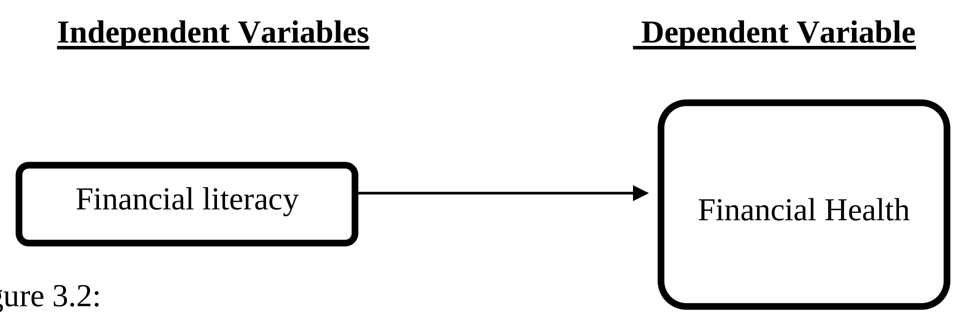

Figure 3.2:
Theoretical framework of Model 2

CHAPTER FOUR

FINDINGS

4.1 INTRODUCTION

The current chapter assigned to present the findings of the study. In this study, IBM SPSS version 19 used to analyze the data using some of the statistics analyses in order to achieve the research objectives.

4.2 DIAGNOSTIC ANALYSIS

Diagnostic analysis is a technique to development whereby the analysis of existing (identified) problems leads to the identification of the source of constraints. Diagnostic analysis is also the basis form for the search for solutions to decrease or to eliminate the problem by taking away or solving the causes.

4.2.1 MISSING VALUE

As previously stated, missing value indicates that, no data value is stored for the variable in the study. Even, this is a usual phenomenon but it generates trouble when using the remaining data to predict any certainty the futures affiliated with the data. It is also called missing data. This study shows that, 12 missing value is found, in which 10 missing value are corrected and the value is found from the questionnaire. While, 2 cases are deleted due to insufficient answer given by the respondents. The values for deleted cases are replaced with other two questionnaires. Therefore, further analysis can be conducted. For missing value, refer Table 4.1.

Table 4.1:
Missing Value

ITEMS	N	Minimum	Maximum
	Statistic	Statistic	Statistic
SM1	2500	1	5

SM2	2500	1	5
SM3	2500	1	5
SM4	2500	1	5
EM1	2500	1	5
EM2	2500	1	5
EM3	2500	1	5
EM4	2500	1	5
DM1	2500	0	5
DM2	2500	0	5
DM3	2500	0	5
DM4	2500	0	5
DM5	2500	0	5
DM6	2500	0	5
DM7	2500	0	5
IS1	2500	1	5
IS2	2500	1	5
IS3	2500	1	5
IS4	2500	1	5
IS5	2500	0	5
IS6	2500	0	5
IS7	2500	0	5
PC1	2500	1	5
PC2	2500	1	5
PC3	2500	1	5
PC4	2500	1	5
FL1	2500	0	1
FL2	2500	0	1
FL3	2500	0	1
FL4	2500	0	1
FL5	2500	0	1
FL6	2500	0	1
FL7	2500	0	1
FL8	2500	0	1
FL9	2500	0	1
FL10	2500	0	1
FL11	2500	0	1
FL12	2500	0	1
FH1	2500	1	5
FH2	2500	1	5
FH3	2500	1	5
FH4	2500	1	5

FH5	2500	1	5
FH6	2500	1	5
FH7	2500	1	5
FH8	2500	1	5
Valid N (listwise)	2500		

4.2.2 OUTLIERS

As mentioned previously, an outliers point is any value that is distant from other observations. Outliers can occur by chance in any distribution, but they often indicate either human error, measurement error or experimental error. Outliers in this study have been treated by checking back the questionnaire and re-entering the incorrect data. Hence, outliers in this study has been restored therefore, this data fit for further analysis. This study have found outliers as shown in Figure 4.1.

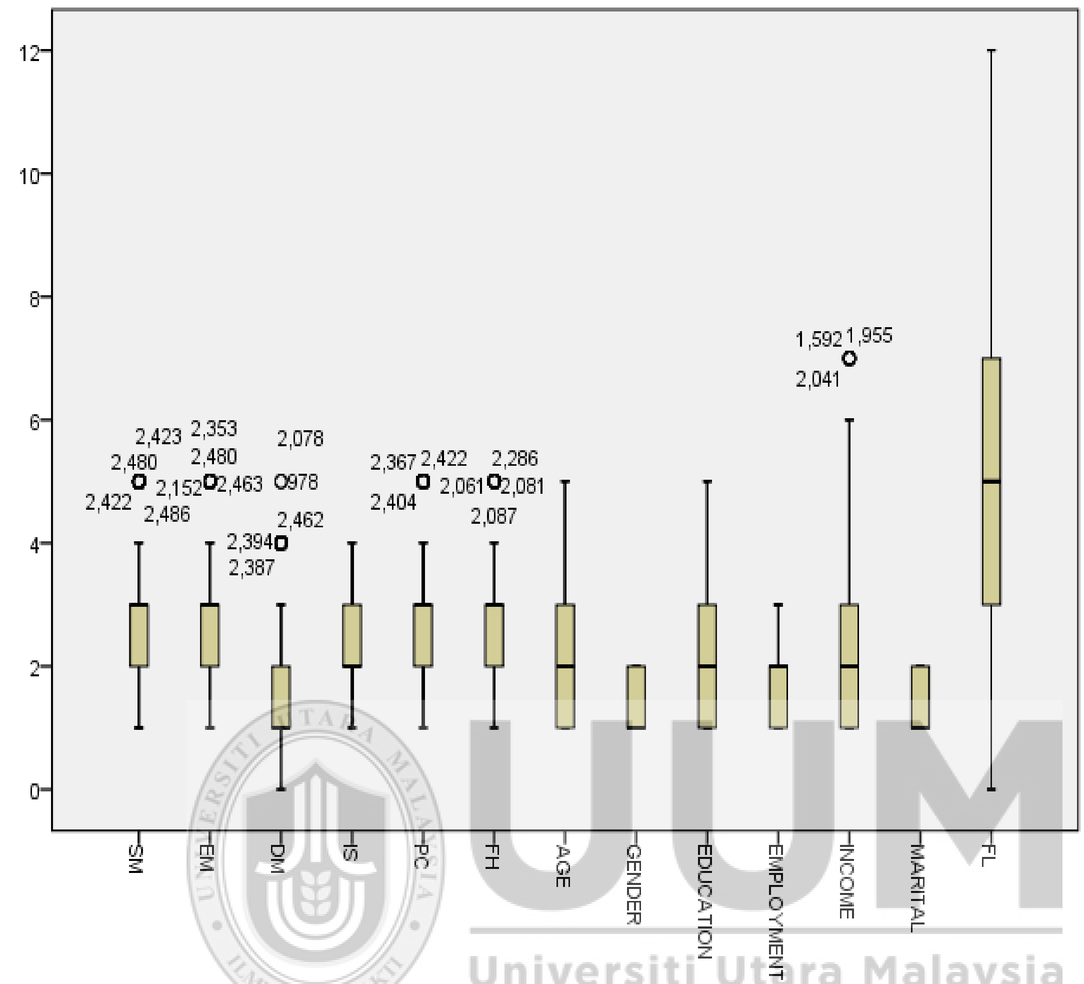

Figure 4.1: *Outliers*

4.2.3 FACTOR ANALYSIS

In this study, we run exploratory factor analysis (EFA) to identify and compile the variable according to each category. There are seven categories of factor analysis identifies in this study. The next process to be done in this research is to identify each category fall into which variables. According to the past studies variables, category 1 defines as expenses management and category 2 describe as debt management. While, category 3 and category 4 identified as financial health and saving management respectively. Moreover, the variable of financial literacy, investment skills and parents characteristics classified into category 5, category 6 and category 7 respectively.

Table 4.2:
Rotated Factor Matrix

	Factor						
	1	2	3	4	5	6	7
Q9							.725
Q7							.692
Q8							.677
Q2				.643			
Q17	.516						
Q15	.511						
Q14	.562						.567
Q10							
Q20		.735					
Q21		.667					
Q22		.633					
Q23		.586					
Q19		.574					
Q24		.504					
Q26					.695		
Q18		.660					
Q25					.642		
Q27					.632		
Q31			.727				
Q30			.712				
Q36			.688				
Q32			.618				
Q29			.566				
Q33			.555				
Q34			.508				
Q35			.527				.344
Q12				.689			
Q13				.673			
Q11				.666			
Q16	.646						
Q4					.671		
Q6					.558		

Q5	.305				.557		
Q3					.544		
Q48						.680	
Q38						.646	
Q45						.601	
Q41						.662	
Q40						.651	
Q42						.626	
Q37						.601	
Q47						.643	
Q43						.784	
Q39						.611	
Q46						.550	
Q44						.690	

Extraction Method: Principal Axis Factoring.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 7 iterations.

Furthermore, in order to accepting the sample adequacy, KMO and Bartlett's Test is conducted. In this study, the KMO or Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic used to identify the proportion of variance in the variables that may be caused by fundamental factors. KMO with higher values that is almost close to 1.0 normally indicating that the factor analysis might be useful with the data. Besides that, the aim of Bartlett's test of sphericity is to tests the hypothesis that the correlation matrix is an identity matrix, which could indicates that the variables are unrelated and therefore not suitable for the detection structure. The small value, which is less than 0.05 of the significant level, indicates that the factor analysis may be useful with the data. The finding of this study stated that, the result of factor analysis is valid and therefore can be used for further analysis.

Table 4.3:
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.807
Bartlett's Test of Sphericity	Approx. Chi-Square	31690.268
	df	1035
	Sig.	.000

4.2.4 RELIABILITY ANALYSIS

As stated in chapter three, the main purpose of reliability analysis was to examine the overall consistency of the item used to define a scale. In this study, we used Cronbach's Alpha model to test the reliability. In Cronbach's Alpha test, the result of 0.7 and above indicates that the variables are highly reliable. While, 0.5 to 0.6 was reported as sufficient for research (Nunnally, 1978).

Based on the reliability test, Cronbach's Alpha for saving management is 0.705. This result indicates that, saving management variable is highly reliable. Therefore, further analysis can be conducted.

Table 4.4:
Reliability Statistics of Saving Management

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.705	.699	4

The result of Cronbach's Alpha for expenses management shows 0.570. This value shows that, although expenses management is not in highly reliable category but it is still in the range of acceptable level. Hence, further examination can be proceeded to achieve the objectives of this study.

Table 4.5:
Reliability Statistics of Expenses Management

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.570	.572	4

The Cronbach's Alpha result for debt management is 0.792. This outcome stipulated that, debt management is in range of highly reliable. Therefore, further analysis can be conducted to accomplish the objective of the study.

Table 4.6:
Reliability Statistics of Debt Management

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.792	.793	7

Furthermore, for investment skills, the result of Cronbach's Alpha is 0.710. This indicates, further analysis is allowed to be carried out since, the investment skills is highly reliable.

Table 4.7:
Reliability Statistics of Investment Skills

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.710	.528	7

Parents' characteristics also fall in the group of highly reliable because, the Cronbach's Alpha for parents' characteristics is 0.747. Due to this reason, further examination can be conducted to achieve the objective of this study

Table 4.8:
Reliability Statistics Parents Characteristics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.747	.759	4

Cronbach's Alpha shows that, for financial literacy the result is 0.784. This make financial literacy categorized into highly reliable group and further analysis can be carried out in order to accomplish the objective of the study.

Table 4.9:
Reliability Statistics of Financial Literacy

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.784	.580	12

Finally, financial health also fall in the group of highly reliable since it achieved the Cronbach's Alpha of more than 0.7 that is, 0.820. One of the highest Cronbach's Alpha values in this study. This indicates, further analysis can be conducted in order to achieve the objection of the study.

Table 4.10:
Reliability Statistics of Financial Health

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.820	.821	8

4.3 ASSUMPTIONS

An assumption is defined as a statistical practice and normality, which used for comparison of data and a source of design. Assumption test in this study are normality, linearity, multicollinearity, and homogeneity.

4.3.1 NORMALITY

Normality test is an evaluation of the normality of data and also act as precondition for many statistical test as normal data is the fundamental assumption in parametric testing. According to Uma Sekaran (2003), skewness and kurtosis value in the range of ± 2 are considered normal data. This study describes normality analysis result in Table 4.11. Based on the result, this research achieves normality assumption. Therefore, further analysis can be conducted.

Table 4.11:
Descriptive Statistics of Normality

n=2500	Minimum	Maximum	Mean	Std. Deviation	**Skewness**		**Kurtosis**	
	Statistic	Statistic	Statistic	Statistic	**Statistic**	Std. Error	**Statistic**	Std. Error
SM1	1	5	2.41	1.031	**.257**	.049	**-.707**	.098
SM2	1	5	2.97	1.163	**.043**	.049	**-.704**	.098
SM3	1	5	2.87	1.138	**.091**	.049	**-.728**	.098
SM4	1	5	2.93	1.084	**.072**	.049	**-.459**	.098
EM1	1	5	2.71	.987	**.134**	.049	**-.260**	.098
EM2	1	5	2.48	1.024	**.379**	.049	**-.370**	.098
EM3	1	5	2.98	1.046	**.029**	.049	**-.551**	.098
EM4	1	5	2.55	1.054	**.278**	.049	**-.479**	.098
DM1	0	5	1.41	1.109	**.446**	.049	**-.265**	.098
DM2	0	5	1.36	1.222	**.657**	.049	**-.155**	.098
DM3	0	5	1.32	1.197	**.639**	.049	**-.283**	.098
DM4	0	5	1.38	1.200	**.470**	.049	**-.578**	.098
DM5	0	5	1.39	1.216	**.626**	.049	**-.172**	.098
DM6	0	5	.94	1.258	**1.005**	.049	**-.229**	.098
DM7	0	5	1.15	1.268	**.832**	.049	**-.140**	.098
IS1	1	5	2.73	.966	**.050**	.049	**-.341**	.098

IS2	1	5	2.97	.977	**.036**	.049	**-.318**	.098
IS3	1	5	2.97	1.082	**.116**	.049	**-.590**	.098
IS4	1	5	3.05	1.069	**.016**	.049	**-.534**	.098
IS5	0	5	1.31	1.246	**.690**	.049	**-.281**	.098
IS6	0	5	1.00	1.214	**.918**	.049	**-.189**	.098
IS7	0	5	1.43	1.267	**.406**	.049	**-.749**	.098
PC1	1	5	2.62	.998	**.237**	.049	**-.309**	.098
PC2	1	5	2.55	1.025	**.264**	.049	**-.431**	.098
PC3	1	5	2.52	.935	**.142**	.049	**-.296**	.098
PC4	1	5	2.52	1.186	**.347**	.049	**-.715**	.098
FL1	0	1	.68	.465	**-.790**	.049	**-1.377**	.098
FL2	0	1	.71	.455	**-.915**	.049	**-1.163**	.098
FL3	0	1	.29	.453	**.939**	.049	**-1.119**	.098
FL4	0	1	.44	.497	**.235**	.049	**-1.946**	.098
FL5	0	1	.40	.489	**.427**	.049	**-1.819**	.098
FL6	0	1	.28	.447	**1.007**	.049	**-.986**	.098
FL7	0	1	.31	.464	**.800**	.049	**-1.361**	.098
FL8	0	1	.28	.451	**.956**	.049	**-1.086**	.098
FL9	0	1	.42	.493	**.334**	.049	**-1.890**	.098
FL10	0	1	.29	.453	**.935**	.049	**-1.127**	.098
FL11	0	1	.39	.489	**.438**	.049	**-1.810**	.098
FL12	0	1	.45	.498	**.187**	.049	**-1.967**	.098
FH1	1	5	2.35	.966	**.521**	.049	**.121**	.098
FH2	1	5	2.74	.903	**.034**	.049	**-.042**	.098
FH3	1	5	2.76	.887	**-.046**	.049	**.012**	.098
FH4	1	5	2.73	.878	**.114**	.049	**-.074**	.098
FH5	1	5	2.96	.955	**.076**	.049	**-.179**	.098
FH6	1	5	3.04	.975	**.226**	.049	**-.328**	.098
FH7	1	5	3.01	.877	**.110**	.049	**.298**	.098
FH8	1	5	2.77	.902	**.158**	.049	**.116**	.098
Valid N (listwise)								

4.3.2 LINEARITY

As assert in chapter three, linearity analysis used to identify the relationship between the variables. Linearity analysis does not aim to test whether the data is linear or otherwise, but it is used to finds the slope and the intercept with the assumption, that the relationship between the independent variable and dependent variable can be best explained by straight-line. In other words, linearity assumes a straight-line relationship between the variables used in the study. This research employed Normal P-P Plot of Regression Standardized Residual to indicate the linearity analysis in this study. Figure 4.2 indicates the result of linearity assumptions of this study. The graph in figure 4.2 shows a liner line. This proves that, the data used in this research is linear and has not violated linearity assumptions. Therefore, further test can be proceeded to achieve the objective of the study.

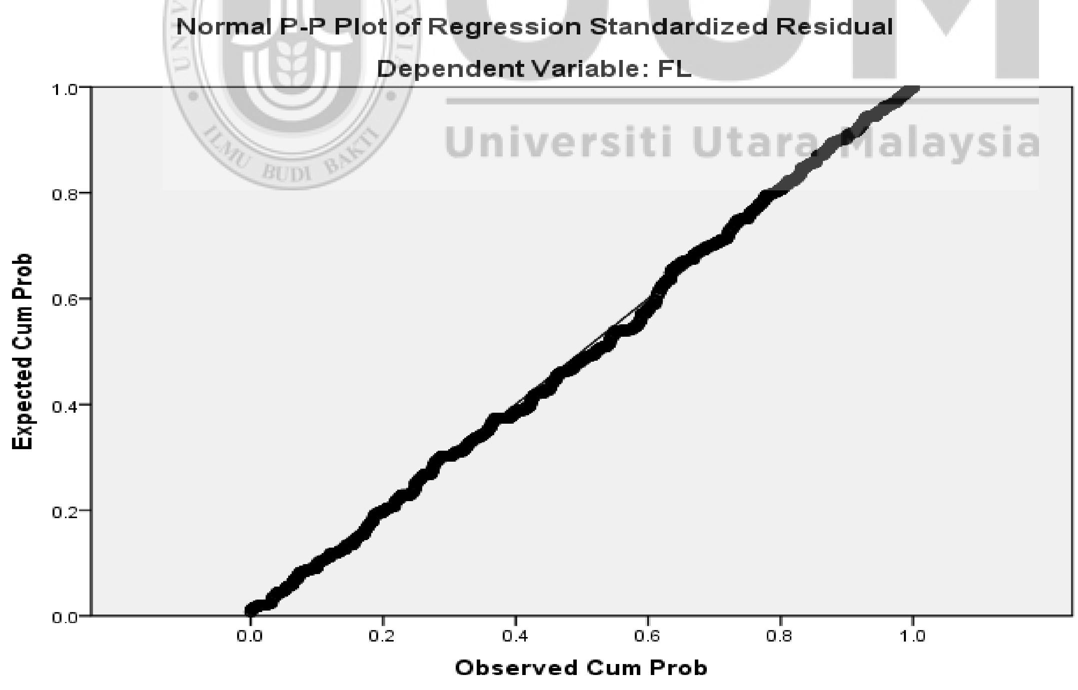

Figure 4.2:
Linearity Graph

4.3.3 MULTICOLLINEARITY

When two or more of the independent variable in a multiple regression model is highly correlated then multicollinearity will occurs. The overestimation of the standard deviation of the regression coefficients is the major problems of multicollinearity among predictors. The tolerance above 0.1, and the Variance Inflation Factor (VIF) value below 10 indicates no major multicollinearity issues.

(VIF) is used to examine how much the variance of the estimated regression coefficients are inflated as compared to when the predictor variables are not linearly related. In other words, it is used to measure how much multicollinearity (correlation between predictors) exists in a regression analysis. Multicollinearity is also troublesome because it can rise the variance of the regression coefficients and making them unstable as well as hard to interpret.

The following guideline is used to interpret VIF value (Hair *et al*., 2006)

VIF	Status of predictors
VIF = 1	Not correlated
1 < VIF < 5	Moderately correlated
VIF > 5 to 10	Highly correlated

Multicollinearity test using VIF shows that, the VIF value for independent variable is below 1.367 (refer Table 4.12). This indicate that, all the independent variables are correlated but in a very small and acceptable range. Hence, assumption for multicollinearity has not be violated. Therefore, further examination is allowed to be carried out.

Table 4.12:
Collinearity Statistics

Variables	Tolerance	VIF
Parents Characteristics	.743	1.346
Investment Skills	.903	1.107
Saving Management	.732	1.367
Expenses Management	.696	1.240
Debt Management	.731	1.070

4.3.4 HOMOGENEITY

Homogeneity refers to a condition, where all the variables employed in a sequence have the limited variance or limited finite. If homogeneity of variance is determined to hold true for the statistical model, then a simple statistical or computational approach to analyzing the data may be used due to low level of uncertainty in the data.

Scatter plot is used in this research and it indicates that our data is homogeneity. Further statistical analyses are done to test homogeneity using Levene's test. Levene's test shows, all independent variables significant value are $p > 0.05$. When $p > 0.05$ we can confirm that are homogeneity. Figure 4.3 shows scatter plot and table 4.13 shows Levene's test results.

Table 4.13:
Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Saving Management	.143	11	2487	.550
Expenses Management	.966	11	2487	.130
Debt Management	.346	11	2487	.847
Investment Skills	.237	11	2487	.982
Parents Characteristics	.233	11	2487	.324

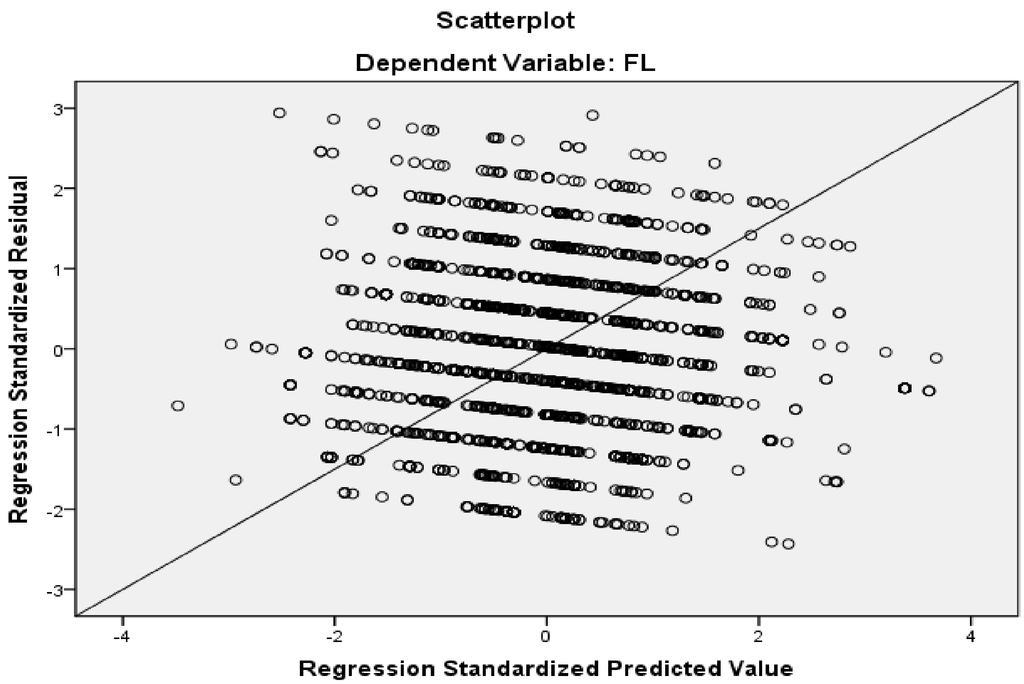

Figure 4.3:
Scatter Plot

4.4 OBJECTIVE 1

4.4.1 INTRODUCTION

This subsection analyzes the objective one of the study. To recall, the first objective of this research is, to analysis determinants of financial literacy among Malaysian.

4.4.2 DESCRIPTIVE ANALYSIS

Descriptive analysis was employed to understand the overall profiles of respondents. It involves the transformation of raw data into a form that will give more details to delineate a set of factors in a situation. Descriptive analysis also frequently employed to provides analysis for the data transcription errors and also distribution patterns. Besides that, descriptive analysis also helps to provide description of the basic characteristics of the samples obtain from the survey forms.

Table 4.14:
Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Financial literacy	0	12	4.94	2.395	2500
Saving management	1	5	2.90	.851	2500
Expenses management	1	5	2.81	.732	2500
Debt management	1	5	1.27	.894	2500
Investment skill	1	5	2.20	.624	2500
Parents characteristic	1	5	2.65	.858	2500

Table 4.14 reports the result of respondents financial literacy levels. According to the table, six variables are used to measure the 2,500 respondents' financial literacy levels. Financial literacy act as dependent variable while, saving management, expenses management, debt management, investment skills and parents characteristics are categories as independent variables. The dependent variable financial literacy achieved the mean value of 4.94 (SD=2.395). This indicates the respondents financial literacy levels are below average. Financial literacy with 0 indicates

respondent could not answer any questions correctly while, 12 indicates respondents able to answer all 12 question correctly. Meanwhile, based on the table independent variable saving management achieve the highest mean value that is 2.90 (SD=0.851) followed by expenses management with 2.81 (SD=0.732), parents characteristics which is 2.65 (SD=0.858) and investment skills at 2.20 (SD= 0.624). This indicates that, the respondents are almost in the category of unsure about their financial decision. Moreover, debt management state the lowest mean value, that is 1.27 (SD=0.894) and this explain that, the respondents are strong agree financial literacy effect their debt management. The minimum value 1 in table 4.14 explains respondents are strongly agree while the maximum value 5 shows that respondents are strongly disagree.

4.4.3 CORRELATION ANALYSIS

Correlation analysis is used to notice the nature direction and importance of the bivariate relation of the variables employed in the study. A Pearson Correlation matrix gives this information, by indicates the direction, strength and importance of the relationship in the study.

Table 4.15:
Correlation Analysis

		Saving Management	Expenses Management	Debt Management	Investment Skill	Parents Characteristic
Financial Literacy n=2500	Pearson Correlation	.010	-.008	-.003	**.051***	**-.111****
	Sig. (2-tailed)	.628	.685	.866	**.010**	**.000**
Saving Management n=2500	Pearson Correlation	1	.376**	.043*	.281**	.492**
	Sig. (2-tailed)		.000	.032	.000	.000

Expenses Management n=2500	Pearson Correlation		1	.092**	.229**	.364**
	Sig. (2-tailed)			.000	.000	.000
Debt Management n=2500	Pearson Correlation			1	.253**	.059**
	Sig. (2-tailed)				.000	.003
Investment Skill n=2500	Pearson Correlation				1	.254**
	Sig. (2-tailed)					.000
Parents Characteristic n=2500	Pearson Correlation					1
	Sig. (2-tailed)					

**Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

Table 4.15, indicates the result for correlation analysis. The result highlights a significant relationship only in two of the independent variables with financial literacy. The finding shows that, financial literacy only correlated with investment skills and parents characteristics. While, savings management, expenses management and debt management are found to be insignificant in explaining the variation with financial literacy. Based on the results, investment skills are positively correlated with financial literacy at 0.051 and significant at 5% level. Meanwhile, parents characteristics is negatively correlated with financial literacy at -0.111 and significant at 1% level. This means, investment skills and parents characteristics has effect on financial literacy. For example, financially literate people have high investment skills and will actively participate in assets markets and invest more efficiently compare to counterparts (Lusardi and

Mitchell, 2007). Moreover, the negative correlated variable explains that, the children will have more financial literacy if their parents are poor in money management. This scenario happen because, poor family situation may motivate the children to know better on financial matters. This result contradict with Lusardi and Mitchell, 2007; Van Rooij, Lusardi and Alessie, 2009; Peng *et al*., 2007 and Sabri *et al*., 2010, that argued financial literacy positively correlated with parents characteristics.

4.4.4 MODEL SUMMARY

Table of model summary shows the result about the specification used to construct the model and the resulting model. Usually the regression result consists of three tables in addition to the coefficient analysis. This research proceeds with model summary before explaining the other results. Model summary table also provides details about the regression line's ability to account for the total variation in the dependent variables. Besides that, the regression method used in this study is Stepwise Method.

Table 4.16:
Model Summary[a]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.354[b]	.125	.122	2.244	1.488

a. Dependent Variable: Financial Literacy
b. Predictors: (Constant), Income, Education, Employment, Gender, Parents Characteristics, Saving Management, MARITAL, Investment Skills, Debt Management

Based on table 4.16, the R-square shows 0.125. The value of R-square indicated how much the total variation in the dependent variable able to be explained by independent variables. In this study, 12.5% can be explained which is at acceptable range. While, the adjusted R-square shows that 12.2% significant independent variables explain the dependent variable of this study.

Moreover, the value of Durbin-Watson that is 1.488 was confined to the acceptable range (1.5 to 2.5). It indicates that, this model has no serial correlation.

4.4.5 ANOVA

Table 4.17 shows the output of the ANOVA analysis. The sig value in this finding is $p<0.01$, with F value = 39.621, indicates there is a statistically significant effect of predictors used in this study on financial literacy.

Table 4.17:
ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1796.359	9	199.595	39.621	.000[i]
	Residual	12543.576	2490	5.038		
	Total	14339.934	2499			

a. Dependent Variable: Financial literacy
b. Predictors: (Constant), Income, Education, Employment, Gender, Parents Characteristics, Saving Management, Marital, Investment Skills, Debt Management

4.4.6 COEFFICIENTS ANALYSIS

In a simple or multiple linear regressions, the size of coefficient for every independent variable gives the size of the effect or consequence that variable is having on dependent variable. In addition, the sign on the coefficient either positive or negative provides the direction of the effects

Table 4.18:
Coefficients[a]

Variables		Standardized Coefficients Beta	t	Sig.
	(Constant)		9.444	.000
	Income	.222	9.847	.000
	Education	.144	6.788	.000

Employment	-.099	-5.219	.000
Gender	.094	4.963	.000
Parents Characteristics	-.128	-5.802	.000
Saving Management	.090	4.080	.000
Marital	-.064	-3.124	.002
Investment Skills	.073	3.512	.000
Debt Management	-.057	-2.886	.004

a. Dependent Variable: Financial Literacy

According to the coefficient table 4.18, parents characteristics is negatively correlated with financial literacy at the beta value of -0.128 (t-statistic = -5.802 and $p< 0.01$). This indicates parents' characteristics negatively affected financial literacy. The justification for Malaysia context that the parents who are poor in money management, the higher the financial literacy level of their children. The financially illiterate family background may motivate these children to known better about financial matters. This study show result that is contradict with Peng *et al*., 2007, Lyons *et al*., 2006 and Ambre, 2012

Meanwhile, saving management positively correlated with financial literacy at the beta value of 0.090 (t-statistics = 4.080 and $p<0.01$). This explains that saving management positively and significantly affected the financial literacy levels. According to Lusardi and Mitchell (2008), financially literate individual will tend to save more than the counterpart. Moreover, the work of Bernheim, Garrett and Maki (2001), shows that children who been exposed to financial education in high school save more later in life.

On top of that, investment skills also show a positive correlation with financial literacy. The beta value for investment skills is 0.073 (t-statistic = 3.512 and $p<0.01$). This proves that investment skills is significant and has positive impact on financial literacy. This result explains that, the higher the financial literacy levels of individual, the higher the involvement of individual in investment activities. Van Rooji, Lusardi and Allessie (2007), found that individuals who are not financially knowledgeable are unable to make a sound investment decision on the stock market. Moreover, Hilgert, Hogarth and Baverly (2003), asserts financial illiteracy is the primary cause of low budgets, poor investment and living hand to mouth in old age.

Moreover, debt management correlated negatively with financial literacy. The beta value for debt management is -0.057 (t-statistic = -2.886 and $p<0.01$). This result expressed that debt management is negatively yet significantly affected financial literacy. A person with higher financial literacy will have the tendency to have more debt commitment. This is because, financially literate person actively involved in wealth accumulation and this lead to more debt commitment mortgage loan since buying of property involve debt. In Malaysia, buying more than one house is become a trend for investment purpose (real estate investment). Therefore, applying mortgage loan for more than one house is a normal environment in Malaysia. Hence, more consumers nowadays stuck in high mortgage loans in the name of investment. In additional, investment in unit amanah is another example of investment using debt. Under the unit amanah skim, the investor able to borrow money from bank and invested in unit amanah. This study shows a contradict results with Sabri *et al.,* (2010) and Calvet. Campbell and Sodini, (2005)

4.4.7 SENSITIVITY TEST

Sensitivity analysis used to examine how a study's result would be affected and how responsive or sensitive those results would be, to change in the values of specific method.

Sensitivity test comprised of model 1 (Stepwise Method) and model 2 (Enter Method). Stepwise regression is a semi-automated process that used to build a model by successively add or remove variables used based solely on the t-statistics of their estimated coefficient. Stepwise regression also able to achieved either by trying one independent variable at a time and by including in the regression model if it is statistically significant or by including all potential independent variables in a model and eliminate those that are not statistically significant or by a combination of both methods. Meanwhile, the standard method of entry is simultaneous all independent variable are entered into the equation at the same time. This is consider an appropriate analysis whenever dealing with a small set of predictors and whenever the researcher does not know which independent variable will create the best prediction equation.

Table 4.19:
Sensitivity Analysis

Variables	Model 1 (Stepwise)			Model 2 (Enter)		
	Adjusted R^2	F-value	t (p-value)	Adjusted R^2	F-value	t (p-value)
	0.122	39.621***		0.125	33.577***	
Saving Management			4.080***			3.513***
Expenses Management			1.116			1.115
Debt Management			-2.886***			-3.055***
Investment Skills			3.512***			3.547***
Parents Characteristics			-5.802***			-5.670***
Age						3.187***
Gender			4.963***			5.158***
Income			9.847***			8.615***
Education			6.788***			7.269***
Employment			-5.219***			-5.389***
Marital			-3.124***			-4.329***

***correlation is significant at the 0.01 level (2 tailed)
**correlation is significant at the 0.05 level (2 tailed)
*correlation is significant at the 0.1 level (2 tailed)

Based on the sensitivity analysis in table 4.19, this study finds that, the result between the Stepwise Method and Enter Method indicate the same result. This proves that, our models are robust.

4.5 OBJECTIVE 2

4.5.1 INTRODUCTION

This subsection analyzed the objective two of this study. To recall the objective two of this research is to explore strategies to enhance financial literacy among Malaysian.

4.5.2 DESCRIPTIVE ANALYSIS

Table 4.20 reports the results of respondents' financial literacy level. Based on the result male shows a lower mean value compare to female that is 4.75 (SD= 2.323). At the same time in term of age and education, those who are in the age group of 18 to 25 years old and higher school or certificate holders indicate low level of financial knowledge than the others that is 4.69 (SD= 2.406) and 4.03 (SD= 2.475) respectively. Moreover, those monthly income of less than $1500 and self-employed state low mean value that is 4.19 (SD= 4.19) and 4.26 (SD=2.538) respectively. This indicate male, those in the age group of 18 to 25 years old, certificate holders, those income below $1500 and self-employed are currently poor in term of financial literacy in Malaysia and need to give more attention to these target group to enhance their financial literacy level. Furthermore, marital status in Malaysia does not give any impact to the financial literacy level

Table 4.20:
Descriptive Statistics

n=2500		**Mean**	**Std Deviation**
Gender	Male	4.75	2.323
	Female	5.16	2.455
Marital	Single	4.95	2.432
	Married	4.93	2.339
Age	18 to 25	4.69	2.406
	26 to 30	5.13	2.368
	31 to 35	5.18	2.277
	36 to 40	4.36	2.257
	41 to 45	5.73	2.545

Education	Higher School / Certificate Holder	4.03	2.457
	Diploma	5.10	2.315
	Bachelor	5.53	2.157
	Master	5.38	2.319
	PhD	5.20	2.687
Income	Below $1500	4.19	2.342
	$1501 to $3000	5.19	2.386
	$3001 to $5000	5.36	2.097
	$5001 to $8000	6.30	2.365
	$8000 to $10000	5.70	2.663
	$10001 to $15000	6.70	2.627
	Above $15000	5.38	1.847
Employment	Private	5.08	2.417
	Government	5.13	2.218
	Self-employed	4.26	2.528

4.5.3 CORRELATION ANALYSIS

Table 4.21:
Correlation Analysis

		Age	Gender	Education	Employment	Income	Marital
Financial Literacy	Pearson Correlation	**.069******	**.085****	**.240****	**-.105****	**.240****	-0.004
n=2500	Sig. (2-tailed)	**0.001**	**.000**	**.000**	**.000**	**.000**	0.824
Age	Pearson Correlation	1	-.070**	-.055**	.111**	.376**	.604**
n=2500	Sig. (2-tailed)		.000	0.006	.000	.000	.000
Gender	Pearson Correlation		1	.064**	0.003	-.107**	-0.01
n=2500	Sig. (2-tailed)			0.001	0.895	.000	0.61
Education	Pearson Correlation			1	-0.008	.402**	-.051*
n=2500	Sig. (2-tailed)				0.698	.000	0.01

Employment	Pearson Correlation				1	.049*	.065**
n=2500	Sig. (2-tailed)					0.015	0.001
Income	Pearson Correlation					1	.321**
n=2500	Sig. (2-tailed)						.000
Marital	Pearson Correlation						1
n=2500	Sig. (2-tailed)						

*The mean difference is significant at the 0.05 level.
** The mean difference is significant at the 0.01 level.

Table 4.21 reports the result of correlation analysis. Based on the result, financial literacy which act as dependent variable is highly and positively correlated with education and income at the value of 0.240 (significant at the level of 0.01) followed by gender at 0.085 (significant at the level of 0.01) and age at 0.069 (significant at the level of 0.01). Whereas, employment shows negative correlation yet significant with financial literacy at -0.105 (significant at the level of 0.01). While, the finding for marital status indicate insignificant relationship with financial literacy.

4.5.4 INDEPENDENT SAMPLE T-TEST AND ONE WAY ANOVE

4.5.4.1 AGE

Table 4.22, 4.23, 4.24 and 4.25 shows the result of age factor. Based on the finding, Levene's test in table 4.23 shows the probability of greater than 0.05. Thus, this allows us to assume that the population variances are relatively equal. Therefore, we are allow to use the t-value, degree of freedom and two-tail significant for the equal estimation to determine whether differences between ages are exits or otherwise. The two-tail significant for age indicate that $p < 0.05$ and it is significant. Moreover, Tukey HSD post-hoc test was conducted to identify where the differences in age lie. According to Tukey HSD post-hoc test, financial literacy level for age group can be divided into five groups. The age group of 41 to 45 years old has better financial literacy level compare with other age groups. This followed by age group of 31 to 35 years old. While, the age group of 26 to 30 years old consider getting lower financial literacy level according to the Tukey HSD post-hoc test. Moreover, this study finds a limitation in accessing the level of financial literacy among 36 to 40 years old because 75% of respondents in this age group are from low education background. Therefore, the result from Tukey HSD post-hoc test can be generalized for 36 to 40 years old but not comprehensively. Finally, those who are in the age group of 18 to 25 represented a weak in financial literacy. This has also been proven by Mandell (2004), Lusardi *et al.,* (2010) and Henry *et al.,* (2001) Thus, Malaysian who are in the age group of 18 to 25 needs to be given more financial literacy attention.

Table: 4.22

Descriptive Statistic

Financial literacy

	N	Mean	Std. Deviation	Std. Error
18 to 25	985	4.69	2.406	.077
26 to 30	789	5.13	2.368	.084
31 to 35	361	5.18	2.277	.120
36 to 40	198	4.36	2.257	.160
41 to 45	167	5.73	2.545	.197
Total	2500	4.94	2.395	.048

Table: 4.23

Test of Homogeneity of Variances

Financial literacy

Levene Statistic	df1	df2	Sig.
.902	4	2495	.462

Table: *4.24*

ANOVA

Financial literacy

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	279.491	4	69.873	12.399	.000
Within Groups	14060.444	2495	5.635		
Total	14339.934	2499			

Table: 4.25

Multiple Correlations

Financial literacy

Post Hoc Test – Tukey HSD

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.
18 to 25	26 to 30	$-.433^{**}$	.113	.001

	31 to 35	-.487**	.146	.008
	36 to 40	.335	.185	.367
	41 to 45	-1.037**	.199	.000
26 to 30	18 to 25	.433**	.113	.001
	31 to 35	-.053	.151	.997
	36 to 40	.768**	.189	.000
	41to 45	-.604*	.202	.024
31 to 35	18 to 25	.487**	.146	.008
	26 to 30	.053	.151	.997
	36 to 40	.821**	.210	.001
	41 to 45	-.550	.222	.096
36 to 40	18 to 25	-.335	.185	.367
	26 to 30	-.768**	.189	.000
	31 to 35	-.821**	.210	.001
	41 to 45	-1.372**	.249	.000
41 to 45	18 to 25	1.037**	.199	.000
	26 to 30	.604*	.202	.024
	31 to 35	.550	.222	.096
	36 to 40	1.372**	.249	.000

*The mean difference is significant at the 0.05 level.
** The mean difference is significant at the 0.01 level.

4.5.4.2 GENDER

Table: 4.26
Group Statistics

Gender		N	Mean	Std. Deviation	Std. Error Mean
Financial literacy	Male	1304	4.75	2.323	0.064
	Female	1196	5.16	2.455	0.071

Table 4.27:
Independent Samples Test

Financial literacy	Levene's Test for Equality of Variances		t-test for Equality of Means						
					Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
	F	Sig.	t	df				Lower	Upper
Equal variances assumed	.230	.631	-4.259	2498	.000	-.407	.096	-.594	-.220
Equal variances not assumed			-4.249	2448.810	.000	-.407	.096	-.595	-.219

Table 4.26 and 4.27 provide results on gender. The finding prove that, Levene's test has a probability higher than 0.05. This allows us to presume that the population variances are equal. Hence, we can use the t-value, degree of freedom and two-tail significant for the equal variances estimation to examine whether differences between genders are exist. The two-tail significant for gender indicates that $p < 0.05$ and it is significant. Besides that, the result also shows female has relatively higher mean value than male. This revealed that, women in Malaysia relatively are more financially literate compare to men in Malaysia. This is also contradict with Mahdavi

(2012) and Harnisch (2010) who stress that, women's financial literacy was found to be very low compare to men. However, men are encourages to attend financial education programs at their workplace or any other workshop or courses that related to finance or money management to increase their financial literacy knowledge.

4.5.4.3 INCOME

Furthermore, there is also a significant relationship between financial literacy and income based on Table 4.28, 4.29. 4.30 and 4.31. The result of Levene's test also shows a probability that is greater than 0.05, so we can presume that the population variance are relatively equal. In additional, the two-tail significant for income level shows $p < 0.05$ and thus it is significant. To identify where the differences in income level lie is, this study perform Tukey HSD post-hoc test. The result illustrated that financial literacy level for income level groups can be divided into 3 categories. Income level below RM1500 indicates lower level of financial literacy knowledge followed by income level from RM1510 to RM5000. While, the income level from RM5001 to above RM15000 shows a good range in mastering the financial literacy knowledge. This has been proven by Lusardi and Mitchell (2013) and Hussein and Al Anood (2009). Thus, strategic and planning need to be carried out to boost the financial literacy level among who are in category of below RM 1500 income earner per month.

Table 4.28:
Descriptive Statistics
Financial literacy

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Below $1500	923	4.19	2.342	.077	4.04	4.34	0	11
$1501 to $3000	831	5.19	2.386	.083	5.03	5.36	0	11
$3001 to $5000	539	5.36	2.097	.090	5.19	5.54	0	12
$5001 to $ 8000	156	6.30	2.365	.189	5.93	6.68	2	11
$8001 to $10000	33	5.70	2.663	.464	4.75	6.64	0	11
$10001 to $ 15000	10	6.70	2.627	.831	4.82	8.58	2	11
Above $15001	8	5.38	1.847	.653	3.83	6.92	3	9
Total	2500	4.94	2.395	.048	4.85	5.04	0	12

Table 4.29:
Test of Homogeneity of Variances
Financial literacy

Levene Statistic	df1	df2	Sig.
2.085	6	2493	.052

Table 4.30:
ANOVA
Financial literacy

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1007.946	6	167.991	31.413	.000
Within Groups	13331.988	2493	5.348		
Total	14339.934	2499			

Table 4.31:

Multiple Comparisons

Financial literacy

Post Hoc Tests - Tukey HSD

(I) Income	(J) Income	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
below $1500	$1501 to $3000	-1.003**	.111	.000	-1.33	-.68
	$3001 to $5000	-1.172**	.125	.000	-1.54	-.80
	$5001 to $ 8000	-2.110**	.200	.000	-2.70	-1.52
	$8001 to $10000	-1.505**	.410	.005	-2.71	-.30
	$10001 to $ 15000	-2.508*	.735	.012	-4.68	-.34
	above $15001	-1.183	.821	.779	-3.61	1.24
$1501 to $3000	below $1500	1.003**	.111	.000	.68	1.33
	$3001 to $5000	-.169	.128	.843	-.55	.21
	$5001 to $ 8000	-1.106**	.202	.000	-1.70	-.51
	$8001 to $10000	-.502	.410	.885	-1.71	.71
	$10001 to $ 15000	-1.505	.736	.386	-3.68	.67
	above $15001	-.180	.822	1.000	-2.60	2.24
$3001 to $5000	below $1500	1.172**	.125	.000	.80	1.54
	$1501 to $3000	.169	.128	.843	-.21	.55
	$5001 to $ 8000	-.938**	.210	.000	-1.56	-.32
	$8001 to $10000	-.333	.415	.985	-1.56	.89
	$10001 to $ 15000	-1.336	.738	.541	-3.51	.84
	above $15001	-.011	.824	1.000	-2.44	2.42
$5001 to $ 8000	below $1500	2.110**	.200	.000	1.52	2.70
	$1501 to $3000	1.106**	.202	.000	.51	1.70
	$3001 to $5000	.938**	.210	.000	.32	1.56
	$8001 to $10000	.604	.443	.821	-.70	1.91
	$10001 to $ 15000	-.399	.754	.998	-2.62	1.83
	above $15001	.926	.838	.927	-1.55	3.40
$8001 to $10000	below $1500	1.505**	.410	.005	.30	2.71
	$1501 to $3000	.502	.410	.885	-.71	1.71
	$3001 to $5000	.333	.415	.985	-.89	1.56
	$5001 to $ 8000	-.604	.443	.821	-1.91	.70
	$10001 to $ 15000	-1.003	.835	.894	-3.47	1.46

	above $15001	.322	.911	1.000	-2.37	3.01
$10001 to $ 15000	below $1500	2.508**	.735	.012	.34	4.68
	$1501 to $3000	1.505	.736	.386	-.67	3.68
	$3001 to $5000	1.336	.738	.541	-.84	3.51
	$5001 to $ 8000	.399	.754	.998	-1.83	2.62
	$8001 to $10000	1.003	.835	.894	-1.46	3.47
	above $15001	1.325	1.097	.891	-1.91	4.56
above $15001	below $1500	1.183	.821	.779	-1.24	3.61
	$1501 to $3000	.180	.822	1.000	-2.24	2.60
	$3001 to $5000	.011	.824	1.000	-2.42	2.44
	$5001 to $ 8000	-.926	.838	.927	-3.40	1.55
	$8001 to $10000	-.322	.911	1.000	-3.01	2.37
	$10001 to $ 15000	-1.325	1.097	.891	-4.56	1.91

*. The mean difference is significant at the 0.05 level.
** The mean difference is significant at the 0.01 level

4.5.4.4 EDUCATION

The next variable is education. There also found variance in financial literacy in the education level as shown by $p < 0.05$ in ANOVA test. Hence, the homogeneity of variance assumption has been violated ($p < 0.05$) and thus any differences must be undertaken with carefully. The Tukey HSD post-hoc test was conducted for identify where the differences in financial literacy lie. The result shows that, respondents with bachelor degree have better financial knowledge compare with diploma holders and certificate holders. While, respondents with lowest financial literacy level are the certificate holders. Studies by Hilgert *et al.*, (2003) and Lusardi (2007) also revealed that, individual with lower levels of financial literacy may have lower level of education. Therefore, strategic and efforts should be carry out in order to enhance the financial literacy knowledge of the certificate holders in Malaysia. Furthermore, this study finds a limitation in accessing the level of financial literacy among master and PhD holder. This is because respondents with master and PhD qualification are limited. Therefore, the result from Tukey HSD post-hoc test cannot be generalized for master and PhD holder due to respondents sample size only at 3.79% and 0.8% respectively. Results for education factor can be refer in Table 4.32, 4.33, 4.34 and 4.35.

Table 4.32:
Descriptive Statistics
Financial literacy

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Higher school / Certificate	764	4.03	2.475	.090	3.86	4.21	0	11
Diploma	706	5.10	2.315	.087	4.93	5.27	0	11
Bachelor	916	5.53	2.157	.071	5.40	5.67	0	12
Master	94	5.38	2.319	.239	4.91	5.86	0	11
Phd	20	5.20	2.687	.601	3.94	6.46	0	9
Total	2500	4.94	2.395	.048	4.85	5.04	0	12

Table 4.33:
Test of Homogeneity of Variances
Financial literacy

Levene Statistic	df1	df2	Sig.
7.187	4	2495	.000

Table 4.34:
AVONA
Financial literacy

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	991.943	4	247.986	46.353	.000
Within Groups	13347.991	2495	5.350		
Total	14339.934	2499			

Table 4.35:
Multiple Correlations
Financial literacy
Post Hoc Test – Tukey HSD

(i) Education	(j) Education	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Higher school / Certificate	Diploma	-1.065**	.121	.000	-1.39	-.74
	Bachelor	-1.504**	.113	.000	-1.81	-1.19
	Master	-1.352**	.253	.000	-2.04	-.66
	PhD	-1.169	.524	.169	-2.60	.26
Diploma	Higher school / Certificate	1.065**	.121	.000	.74	1.39
	Bachelor	-.439**	.116	.001	-.75	-.12
	Master	-.287	.254	.791	-.98	.41
	PhD	-.104	.524	1.000	-1.54	1.33
Bachelor	Higher school / Certificate	1.504**	.113	.000	1.19	1.81
	Diploma	.439**	.116	.001	.12	.75
	Master	.152	.251	.974	-.53	.84
	PhD	.335	.523	.968	-1.09	1.76
Master	Higher school / Certificate	1.352**	.253	.000	.66	2.04
	Diploma	.287	.254	.791	-.41	.98
	Bachelor	-.152	.251	.974	-.84	.53
	PhD	.183	.570	.998	-1.37	1.74
PhD	Higher school / Certificate	1.169	.524	.169	-.26	2.60
	Diploma	.104	.524	1.000	-1.33	1.54
	Bachelor	-.335	.523	.968	-1.76	1.09
	Master	-.183	.570	.998	-1.74	1.37

*The mean difference is significant at the 0.05 level.
**The mean difference is significant at the 0.01 level.

4.5.4.5 EMPLOYMENT

In table 4.36, 4.37, 4.38 and 4.39 the Levene's test result for employment shows that it has a probability almost 0.05. This allows us to assume, the population variances are relatively equal. Therefore, this study can use the t-value, degree of freedom and two-tail significant for the equal variances estimation to determine whether differences between employment are exits or otherwise. The two-tail significant for employment indicate $p < 0.05$ and significant. This indicates that there is a differences exit in employment factor. Besides that, Tukey HSD post-hoc test was conducted and it point out that, financial literacy level for employment group can be divided into two groups. Respondents work in government and private sector indicate good financial literacy knowledge, while else respondents work as self-employed shows lower level of financial literacy knowledge. To curb this problem, Malaysian government and industry players need to rethink a strategy that can help the self-employee to enhance their financial literacy level.

Table 4.36:
Descriptive Statistics
Financial literacy

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Private	1220	5.08	2.417	.069	4.94	5.21	0	12
Government	824	5.13	2.218	.077	4.97	5.28	0	11
Self-employed	456	4.26	2.528	.118	4.02	4.49	0	11
Total	2500	4.94	2.395	.048	4.85	5.04	0	12

Table 4.37:
Test of Homogeneity of Variances
Financial literacy

Levene Statistic	df1	df2	Sig.
3.032	2	2497	.048

Table 4.38:
ANOVA
Financial literacy

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	264.072	2	132.036	23.423	.000
Within Groups	14075.863	2497	5.637		
Total	14339.934	2499			

Table 4.39:
Multiple Correlations
Financial literacy
Post Hoc Tests - Tukey HSD

(I) Employment	(J) Employment	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Private	Government	-.048	.107	.895	-.30	.20
	Self-employed	.820**	.130	.000	.51	1.13
Government	Private	.048	.107	.895	-.20	.30
	Self-employed	.868**	.139	.000	.54	1.19
Self-employed	Private	-.820**	.130	.000	-1.13	-.51
	Government	-.868**	.139	.000	-1.19	-.54

*The mean difference is significant at the 0.05 level.
** The mean Difference is significant at the 0.01 level.

4.5.4.6 MARITAL STATUS

Table 4.40:
Group Statistics

Marital		N	Mean	Std. Deviation	Std. Error Mean
Financial literacy	Single	1515	4.95	2.432	0.062
	Married	985	4.93	2.339	0.075

Table 4.41:
Independent Samples Test

Financial literacy	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	.952	.329	.223	2498	.824	.022	.098	-.170	.214
Equal variances not assumed			.225	2159.850	.822	.022	.097	-.169	.213

Table 4.40 and 4.41 provide information on marital status. Based on the findings, Levene's test shows a probability that is higher than 0.05, thus we can presume that the population variances are equal. Therefore, we are allow to use the t-value, degree of freedom and two-tail significant for the equal variances estimation to identify whether differences between marital status are exist or otherwise. The two-tail significant for marital status shows that $p > 0.05$ and thus it is not significant. Moreover, the two groups between single and married also indicate there is no differences between them. This proves that, neither single nor married, financial literacy

knowledge essential for everyone. Their mean value also almost same at 4.95 for female and 4.93 for male. This results support Joo and Grable (2004), where they denied marital has relationship with financial literacy.

4.6 STRATEGIES

One of the most important skills in today's time and age is the ability to understand financial literacy and money management. There are several strategies can be implement to enhance the financial literacy level among Malaysian. Based on the findings of this research, male gender shows a lower level of financial literacy than female in Malaysia. To curb this problem, the study suggests the policy maker especially Ministry of Education (MOE) can introduce techniques of budgeting and savings management as one of the core subjects at primary school level. This is because; budgeting allows one to see all income and expenditures in compact form. Budgeting do change with increase in come or expenditure but should never be consistently in the negative of the income. On top of that, savings build in to the budget allow for rare fluctuations. A budget will allow one to save for the future and for unforeseen expenditures. So education on budget and savings can prepared the students especially male to live under their means. Besides that, Bank Negara Malaysia (BNM) must equip teachers with financial management skills, so that they are able to teach effectively. These trainings can be done via POWER Programme by AKPK partnership with teachers training institutes. Moreover, in higher education level, BNM can working closely with Malaysia Ministry of Higher Education (MOHE) to initiate Personal Finance Course as a core subject in all government and private colleges and universities. Under this course, the tertiary level students may explore on mortgages, budgets and investment, which may help them for their future life and help to build a strong foundation in financial knowledge.

Finding of this study also shows that respondent with income below RM1500 indicate low level of financial literacy. To solve this problem the industry player such as employer can arrange program or courses that relate to financial literacy and financial knowledge to their staff who earn monthly income below RM1500. Other than that, The Adult Financial Capability Program introduced by BNM can be customized to low income earner especially below RM1500. Under this program an accurate workshop, training and counseling session can be provide to them in order to avoid them from burden of crushing debt. Moreover, as we know the Federation of Malaysia Consumer Association (FOMCA) together with BNM play a significant role by publishing Ringgit Magazine with a mission to improve the consumer awareness on financial issues to a higher level and hope this magazine will provide comprehensive, meaningful and useful information to the consumer. This study propose issue on consumer protection and consumers rights can be included in the Ringgit Magazine and provide it free to low income earner. Besides that, people with low income also will be shy or embarrass to counsel about their financial matters with anyone including with AKPK until they faced financial distress that cannot be avoided anymore. A strategy via smart partnership between BNM and Employees' Provident Fund (EPF) together with Inland Revenue Board of Malaysia (LHDN) could delivery roundtable discussion, forums, talks, face to face or group counseling sessions regarding savings, investment, retirement and taxation issues to Malaysian in their workplace are believed to assist and benefit them directly.

Since the finding of this study proved that Malaysian from 18 to 25 years old need to pay extra care due to low level of financial literacy compare with other age group thus magical role played by social media is undeniably important. This study suggest that, Ministry of Science, Technology and Innovation (MOSTI) may help by allowing advertisement of financial education using social networks such as facebook, twitter, linkedIn and other to enhance the financial literacy level among youth in Malaysia. Moreover, BNM also actively promoting consumer education website and mobile application to encourage a better financial literacy among Malaysian especially those who are age between 18 to 25 years old. In addition, this research paper also recommended to utilize the mass media including television advertisement, radio casting and newspaper articles to highlight financial knowledge in more fun and efficient way, perhaps using cartoon characters. Furthermore, BNM can collaborate with National Film Development Corporation Malaysia (FINAS) to publish a tele-movie or tele-drama on the importance of financial literacy. This strategy help the knowledge on financial literacy can be spread more productively. Meanwhile, the industrial players particullay banks can come out with smart strategic by launching competition such as CIMB ASEAN Stock Challenge and Maybank Go Ahead Challenges to individuals, universities and college students to participate and increase their financial literacy knowledge. Besides that, each state in Malaysia must initiate Financial Club mainly for youth to strengthen their financial position.

On top of that, this study indicates certificate holder shows low level of financial literacy. To overcome this problem, BNM can joint hand with MOHE to undertake a college adoption program. BNM must urged every commercial banks that operate in Malaysia either domestic or foreign bank must adopt one college such as college communities or polytechnics to make the students aware of financial matters. Furthermore, the involvement of Ministry of Human Resources Malaysia (HRM) highly encouraged. HRM can provide activities such as workshop, in-house training, webinar and e-learning courses that incorporate financial education element to those with lower education qualification. This strategy is helpful for those who are unable to further their studies at higher level. HRM also encouraged to provide certification and accreditation system regarding financial literacy education in order to inspire and motivate participants in learning financial literacy knowledge that can protect and enhance their financial health.

In term of employment type, self-employment shows low level of financial literacy. To help Malaysian self-employed to be more financially literate, Small Medium Enterprise (SME) group can organized workshop, training and roadshows to increase their understanding on financial matters. Other than that, program on budget and saving management are fit for them especially the budget program allow them to keep track all their monthly expenses as well as keep a watchful eye on the inflow and outflow of their income. This academic work also proposed industry players such as bank can provide financial literacy corner in their branches equip with financial education materials, tools and also consultation services to walk-in customer particularly self-employed to make them positive steps towards financial literacy or financial knowledge.

Finally, although marital status does not give any effect on financial literacy, but strategies still need to be taken because, studies shows that financial problems often become the basis for mental illness, divorce and also the basis for a variety of other unhappy experiences (Kinnunen and Pulkkinen, 1998 and Wolcott Hugher, 1999). Therefore, this study suggest a smart partnership can be done by BNM with Malaysian Islamic Development Department (JAKIM) and association that handle marriage preparation course to include financial literacy education in order to highlights the importance of financial literacy before and after marriage life in the marriage preparation course syllabus. This strategic may help the marriage couple to prevent themselves from debt burden. Once again, Malaysia government and industry player need to think a strategy that can help the Malaysian to be financially independent and able to take a sensible decision on financial matters.

4.6 OBJECTIVE 3

4.6.1 INTRODUCTION

This sub-section analysis third objective in this study. To recall, the objective three of this study is, to examine the relationship between financial health and financial literacy in Malaysia.

4.6.2 DESCRIPTIVE ANALYSIS

Table 4.42 display the results of respondents understanding levels on financial literacy and financial health. The dependent variable of this model is financial health and it achieved the mean value of 2.81 (SD=0.666). This indicates the respondents are in the level of moderately stress on financial health where 1 indicates overwhelming stress while, 5 indicates not stress at all. Moreover, financial literacy which act as independent variable in this model reach the mean value of 4.94 (SD=2.395). It shown that, the respondents are in range of below average in financial literacy level. Financial literacy with 0 indicates respondents could not answer any questions correctly while 12 indicates respondents able to answer all 12 questions correctly.

Table 4.42:
Descriptive Statistics

	Mean	Std. Deviation	N
Financial health	2.81	.666	2500
Financial literacy	4.94	2.395	2500

4.6.3 CORRELATION ANALYSIS

According to the table 4.43, the result shows a positive and significant relationship between the independent variable that is financial literacy and dependent variable, financial health. Based on the findings, financial literacy is positively correlated with financial health at 0.147 at 1% significant level. This means, financial literacy has significant impact on financial health. Financially literate individual will live a healthier life in term of finance compared to their counterparts. Studies by Taylor (2013), Xioa *et al*., (2009) and Shim *et al.,* (2010) prove that, financial literacy positively related to financial well-being and can improve the financial health of an individuals.

Table 4.43:
Correlation Analysis

n=2500		Financial Health	Financial Literacy
Pearson Correlation	Financial health	1.000	.147
	Financial literacy	.147	1.000
Sig (1-tailed)	Financial health		.000
	Financial literacy	.000	

4.6.4 MODEL SUMMARY

Based on the result, R-square shows 0.022 that means, 2.2% of the total variation of dependent variable can be explained by the independent variable. Meanwhile, the adjusted R-square shows 2.1% independent variable able to explain the dependent variable in this study. Furthermore, the Durbin-Watson shows the value of 1.584 which confined to the acceptable range (1.5 to 2.5) and it prove that, there is no serial correlation in this model

Table 4.44:
Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.147[a]	.022	.021	.659	1.584

a. Predictors: (Constant): Financial Literacy
b. Dependent Variable: Financial Health

4.6.5 ANOVA

Table 4.45 shows the results of the ANOVA test. The sig value shown is $p < 0.01$ that means F value =55.477. This indicates that, there is a statistically significant effect of predictor used in this study on financial health.

Table 4.45:
ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	24.067	1	24.067	55.477	.000[a]
	Residual	1083.697	2498	.434		
	Total	1107.764	2499			

a. Predictors: (Constant): Financial Literacy
b. Dependent Variable: Financial Health

4.6.6 COEFFICIENTS ANALYSIS

According to the coefficients table 4.46, financial literacy is correlated positively with financial health at the beta value of 0.147 (t-statistic= 7.448 and $p < 0.01$). This proves that financial literacy significantly and positively affected the financial health. A person with good financial literacy would be able to achieved a healthier lifestyle in term of financial. Research by Taylor (2013), prove that, financial literacy can improve the financial health of individuals and their families.

Table 4.46:
Coefficients[b]

Model		Standardized Coefficients	t	Sig.
		Beta		
1	(Constant)		86.412	.000
	Financial literacy	.147	7.448	.000

a. Dependent Variable: Financial Health

4.6.7 SENSITIVITY TEST

Table 4.47 shows the sensitivity test comprised of Model 1, Model 2 (Enter Method) and Model 3 (Stepwise Method). Based on the sensitivity test done, this academic work finds that, the result between Model 1, Model 2(Enter) and Model 3(Stepwise) indicate the same result. This proves that, our model or findings of this study are robust. Sensitivity analysis based on table 4.47, shows that adjusted R^2 in model 1 is 2.1% (F-value= 55.477). meanwhile, adjusted R^2 in model 2 using enter method and include dummy variables namely age, gender, income, education, employment and marital status is 5.7% (F-value= 22.613). The adjusted R^2 for model 3 is 5.6% (F-value= 50.692) with stepwise method and also with the involvement of dummy variables. To prove the robustness of two results, this study refers to coefficient analysis. Coefficient analysis based on table 4.47 highlights that financial literacy in model 1, model 2 and model 3 has a significant at 1% level and positively impact on financial health. Past studies reveal that financial literacy has significant impact on financial health (Strumpel, 1976). Moreover Joo (1998), asserts that a good financial well-being of an individual depends strongly on financial level of those individual. Other significant variables under model 2 are income level, education and marital status. Meanwhile, in model 3 are income and marital status.

Table 4.47:
Sensitivity Test

	Model 1			**Model 2 (Enter)**			**Model 1 (Stepwise)**		
	Adjusted R^2	F-value	t (p-value)	Adjusted R^2	F-value	t (p-value)	Adjusted R^2	F-value	t (p-value)
Variables	0.021	55.477***		0.057	22.613***		0.056	50.692***	
Financial Literacy			7.448***			5.135***			5.729***
Age						1.28			
Gender						0.866			
Income						4.623***			6.410***
Education						2.026**			
Employment						-0.166			
Marital						3.570***			4.774***

***correlation is significant at the 0.01 level (2 tailed)
**correlation is significant at the 0.05 level (2 tailed)
*correlation is significant at the 0.1 level (2 tailed)

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter concludes the finding in this study. In addition this chapter, also discuss limitation of the study, contribution of the study as well as suggestion for the future research.

5.2 OBJECTIVE 1

(Hilgert *et al.,* 2003) expressed that, the 21st centuries financial system has been growing with rapid, advance and also becoming much more complex all over the world. Thus, people's individual responsibilities towards their financial affairs also increasing to ensure their life are more secure in future. According to the first objective, the finding of this study report that, out of five variables, four variables shows a significant correlation with financial literacy. Saving management and investment skills indicate positive correlation with financial literacy. As clearly said, high level of financial literacy, lead the people to save more for their future and also make them active in investment activities. While parents characteristics and debt management shows a negative relationship with financial literacy. As discuss in chapter four, parents' attitudes towards money management strongly influence their children's financial behavior. Based on the finding, children will be more financially literate if their parents are poor in money management. The poor family background may motivate this children's to gain better financial knowledge. Moreover, higher financial literacy also leads to debt burden. This is because; financially literate people usually will be more foresight for their future and will be active in wealth accumulation. This lead to more debt commitment since property purchasing one of the trendy investment in Malaysia nowadays which involves debt. Thus, we can conclude that, all the variables savings management, investment skills, parents' characteristics and debt management are proven as an important indicator and play essential role in improving the level of financial literacy among Malaysian.

5.3 OBJECTIVE 2

The dynamic and ever changing technology caused people's financial decision changed over time (Greenspan, 2005). The advance technology also resulted people with lack of financial literacy facing problems in choosing the perfect financial products and services that truly fit them. Objective two of this research paper has identified groups that are weak in term of financial literacy in Malaysia and proposed strategies to increase the financial literacy level of that target groups. Finding revealed that, Malaysian male are financially illiterate compare to Malaysian Female. Besides that, in term of employment type, self-employment and those incomes below RM1500 reported low level of financial literacy. On top of that, certificate holder as well as those who are age between 18 to 25 stated poor financial literacy. Although several strategies have been proposed as set out in chapter four, financial education is seen as a leading and most important strategy to tackle the financial literacy problem in Malaysian. The policy maker need to start financial education early at primary school level by close advice and consultation with various stakeholder including industry players, academicians and consumers in order to improve the nation's financial literacy levels.

5.4 OBJECTIVE 3

Rather than that, the result for objective three prove that, financial literacy play a crucial role towards financial health. Therefore, education on financial literacy is indispensable to enable the Malaysian achieved an excellent financial health. In other words, it can be conclude that, financial literacy is precondition to Malaysian in order to be healthy in financial matters. Indeed the strategies highlighted for objective two in chapter four also point out that, all the accountable parties, such as policy makers as well as industry players and academicians need to join hands together to increase the financial literacy level among Malaysian in order to make the Malaysian financially healthy and prepare them to accomplish Vision 2020.

5.5 LIMITATION OF THE STUDY

On top of that, this academic work also found a limitation in data collection for the respondents' age 36 to 40 years old where most of them in these age groups are low education backgrounds. Moreover, this research paper also found a limitation in accessing the level of financial literacy among master and PhD holders. This is because, the respondents size with master and PhD qualification are limited. The other limitation faced by researcher in completing this study is time constraint which are the main, cause this study cover Peninsular Malaysian.

5.6 CONTRIBUTION OF THE STUDY

Since financial decision are becoming complex and contextual, prudent strategies emphasized the role of policy makers, industry players and academicians in shaping consumer's knowledge and attitudes towards money is essential. Thus, the findings of this study may contribute the strategies that may help the parties involve to enhance the Malaysian financial literacy levels. Foremost this study would be able to fill the gap of body of knowledge on financial literacy and financial health topic.

Next, this study helps the policy makers to focus and build better financial education, as a step to preparing the younger generation to encounter Vision 2020 that full of financial and economic challenges. Besides that, the policy makers' partnerships with domestic and international bodies are meaningful in strengthening co-ordination, information exchange and activities involved in financial literacy and financial health agenda. The collaboration would be able to widen alertness of financial literacy, financial health and good practice in handling financial issues.

Finally, this research also can help the industry players to identify the vulnerable groups in terms of financial literacy and build strategies or conduct programs to enhance target group's financial literacy levels. Moreover, the private sectors as well as public stakeholders have a primary responsibility in financial education by organizing round table dialogues, conferences, campaigns, symposiums, education fairs and more activities to improve the nation's financial literacy levels.

5.7 SUGGESTION FOR FUTURE STUDY

Suggestion for future researcher can be done on more variables including peers evaluation, financial behavior, psycho modes that influence financial literacy. Moreover, future researcher also could expand to Sabah and Sarawak with more respondents' participation. By doing so, it will help to further fill the gap by understanding the importance of financial literacy and financial health overall.

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