

**DETERMINING FACTORS OF FINANCIAL LITERACY
AMONG SETTLERS IN FELDA BUKIT TANGGA, KEDAH**

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**MASTER SCIENCE IN FINANCE
UNIVERSITI UTARA MALAYSIA
August 2014**

**DETERMINING FACTORS OF FINANCIAL LITERACY AMONG SETTLERS IN
FELDA BUKIT TANGGA, KEDAH**

By

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**Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia,
In Fulfillment of the Requirement for the Degree of Master Science**

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ABSTRACT

The purpose of this study is to determine the level of personal financial literacy among the settlers of FELDA Bukit Tangga, Kedah. It also examines the factors that determine the level of personal financial literacy level among the FELDA settlers. A personal financial literacy test was developed and it comprises of 10 questions pertaining to various basic personal finance areas such as time value of money, risk and return, investment and inflation. In addition, a questionnaire consisting of 20 items was developed to examine the determinants of personal financial literacy level. This questionnaire contains several personal finance aspects, namely, parental factor, credit management, savings, investment, retirement planning, education, gender, age, income, and years of working. The average score of the financial literacy test for the FELDA sample is only 45.6%. Generally, the respondents scored badly on questions pertaining to inflation, risk and return, stocks and bonds, diversification and time value of money. The findings of the study revealed that generally the most significant problems faced by the FELDA Bukit Tangga settlers are that their education level is low, low and inconsistent income, limited scope of working experience and relatively low level of financial literacy. In the regression analysis findings, two variables that are found to be significant in determining the financial literacy level is credit management behaviour (CREDIT) and investment behaviour (INVEST). The findings have particularly implicated to the FELDA management and other relevant agencies that they can objectively assess the FELDA settlers' personal financial level as well as develop specific training programmes for them.

Keywords: personal finance, financial literacy, FELDA, retirement planning

ABSTRAK

Tujuan kajian ini adalah untuk mengukur tahap celik kewangan peribadi dalam kalangan para peneroka FELDA Bukit Tangga, Kedah. Kajian ini turut mengkaji faktor-faktor yang mempengaruhi tahap kecelikan kewangan peribadi dalam kalangan peneroka FELDA. Satu ujian celik kewangan peribadi telah dibina dan ia terdiri daripada 10 soalan yang merangkumi pengetahuan asas tentang kewangan peribadi seperti nilai masa wang, risiko dan pulangan, pelaburan serta inflasi. Selain itu, satu soal selidik lain turut dijalankan yang merangkumi 20 item bagi mengenal pasti faktor penentu kepada tahap celik kewangan peribadi. Soal selidik ini mengandungi beberapa aspek iaitu; faktor ibu bapa, pengurusan kredit, simpanan, pelaburan, perancangan persaraan, pendidikan, jantina, umur, pendapatan dan pengalaman bekerja. Purata markah bagi ujian celik kewangan bagi sampel peneroka FELDA adalah sebanyak 45.6%. Secara amnya, sebahagian besar daripada responden gagal menjawab dengan baik soalan-soalan tentang inflasi, risiko dan pulangan, saham dan bon, pelaburan dan nilai masa wang. Secara umumnya, dapatan kajian menunjukkan masalah utama yang dihadapi oleh para peneroka FELDA Bukit Tangga, Kedah adalah tahap pendidikan yang sangat rendah, pendapatan yang tidak mencukupi dan tidak menentu, skop dan bidang kerja yang amat terhad serta tahap kecelikan kewangan yang sangat rendah. Dapatan daripada analisis regrasi pula menunjukkan dua pembolehubah adalah signifikan dalam menentukan tahap celik kewangan peneroka FELDA iaitu pembolehubah pengurusan kredit (CREDIT) dan pembolehubah pengurusan pelaburan (INVEST). Dapatan kajian ini mempunyai implikasi terutamanya kepada pengurusan FELDA dan agensi berkaitan yang mana mereka boleh menilai tahap kewangan peribadi para peneroka serta boleh membangunkan program latihan khusus untuk para peneroka FELDA.

Kata kunci: kewangan peribadi, kecelikan kewangan, FELDA, perancangan persaraan

ACKNOWLEDGEMENTS

First of all, *In the name of Allah SWT Most Gracious, Most Merciful* for blessing, guiding and bestowing me with great strength, and patience to complete this thesis. My highest and most sincere appreciation to my lovely mother Hajah Che Atun Binti Haji Mahmud and the pure spirit of my father Haji Abdul Aziz Bin Yahya and all my family members. I would like to impress my thanks for their moral supports, encouragements, understandings, patience and providing financial throughout the journey.

I would like to express my heartfelt millions thanks to my supervisor, Dr. Haji Ahmad Rizal Bin Haji Mazlan , who helped, motivated and gave me full support, advised and ideas for this thesis to be completed. I feel very proud and pleased to be under her supervision and without his inspiration, stimulating suggestions, guidance, and active participation in the process of my thesis; I would never have finished this thesis.

I also want to extend my special thanks and gratitude to Universiti Utara Malaysia, FELDA, Othman Yeop Abdullah Graduate School Of Business, College Of Business, my reviewers, the speaker, and all the administrative members.

Finally, to all my colleague and friends at Tradewinds College, Ambank, CIMB, and those I have not mentioned, please accept my thanks. May Allah bless all of you. Thank you so much.

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LIST OF ABBREVIATIONS

FELCRA	Federal Land Consolidation and Rehabilitation Authority
FELDA	Federal Land Development Authority
FESSB	Felda Engineering Services Sdn. Bhd.
FGVH	Felda Global Ventures Holdings
GDP	Gross Domestic Product
GNP	Gross National Product
ICT	Information Communication Technology
KEJORA	Southeast Johor Development Authority
MADA	Muda Agricultural Development Authority
RISDA	Rubber Industry Smallholder's Authority
SPSS	Statistical Package for the Social Sciences
UDA	Urban Development Authority
U.S	United States of America
UUM	University Utara Malaysia
UUMKL	University Utara Malaysia Kuala Lumpur

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

As Malaysia is moving towards achieving a developed nation status by the year 2020, the government has put a lot of effort to raise the level of income of its population. The current Prime Minister also is instrumental in elevating Malaysians' Gross Domestic Product (GDP) per capital level to that of a developed country. This is evidenced by the introduction of the National Transformation Program (NTP) specifically aimed to increase the income level of Malaysians. The main agenda of this program is to strengthen the key economic areas of the country so that the GDP per capita of Malaysians will increase to that of developed countries by the year 2020. However, in so doing, the government is also serious in raising the income level of the poor and those who live in rural areas. Several programmes have been established to specifically help increase the income of poor rural population through agricultural activities. To date, one particular program or mechanism which has been in existence for more than half of a century is the Federal Land Development Authority (more commonly referred to as FELDA) program.

FELDA is a Malaysian government agency that was initially founded to handle the resettlement of rural poor Bumiputera population by relocating them to various newly developed areas turned into farms for growing cash crops. FELDA was established on 1st July 1956 under the Land Development Ordinance 1956 and allocated under the Act Amendment 1991. Its functions are as follows:

- To carry out and implement development projects.

- To develop, facilitate and implement development, management and economic, social, agricultural, settlement, industrial and commercial services as well as other related activities in areas where FELDA has been granted the authority to implement land development projects or in areas owned by FELDA and its companies.
- To implement activities which can help modernize the agricultural sector in areas where FELDA has been granted the administrative authority especially in activities which are related to production, processing and the marketing of agriculture and livestock product.
- To assist, guide, advice, manage and coordinate social, settlement, agriculture, industrial and commercial activities in FELDA areas.

These FELDA settlers are involved in agricultural activities in a move to elevate their economic status and also to eradicate poverty and redistribute wealth through social restructuring program. After 1990's, FELDA no longer established new settlement, but engages in a diversified range of economic development and business activities. FELDA has launched a number of private corporate entities such as Felda Engineering Services Sdn Bhd (FESSB), Felda Palm Industries Sdn Bhd and Felda Global Ventures Holdings (FGVH). FGVH is considered to be the world's largest plantation company, where its palm oil operations spread across Peninsular Malaysia, Sabah, Sarawak and other countries such as Indonesian, Thailand and etc. Mainly involved in plantations, downstream and sugar businesses, FGVH is a globally-integrated, diversified agri-commodities company with operations in ten countries across four continents and employs close to 19,000 people in some 44 subsidiaries in over ten countries. FGVH ranks among the top 25 companies on Bursa Malaysia with a market capitalization of RM16.6 billion.

Today, FELDA is a huge organization with a total agricultural landbank of more than 853,000 hectares and a 530,000 strong manpower mainly comprising of settlers and their family members (Nik *et al.*, 2010). Through various agricultural business activities, FELDA plays a vital role as a catalyst for the country's economic growth and contribute to the country's GNP.

Despite the many successes and accomplishments achieved by FELDA, there are many issues and problems faced by the settlers. Among the main issues that are of interest to social science researchers are linked to the social problems among FELDA youths (Azizi & Narinder Kaur, 2002; Nik *et al.*, 2010) and the socio-economic problems faced the FELDA settlers (Ahmad Sharifuddin, 1992; Hajah Che' Asniza *et al.*, 2005; Bahijah *et al.*, 2009; Ahmad Rashid & Ramlan, 2011). Social and socio-economic problems were rampant among FELDA youths particularly in the 1990s because the number of teenagers in the FELDA settlements was increasing rapidly but the employment was scarce. In addition, drug misuse cases were also rising among the youths in many FELDA settlements.

The study by Ahmad Sharifuddin (1992) examined the problems of unstable income of the FELDA settlers and proposed a more effective approach to eradicate poverty and to overcome socio economic imbalance among the FELDA settlers. In Hajah Che' Asniza *et al.*, (2005), the researchers surveyed the involvement of FELDA settlers' children in entrepreneurial activities. Using a sample size of 400 respondents in FELDA Jengka, Pahang, their study revealed that 56.10 percent of them were involved in small businesses but earning less than RM1,000 per month, on

average. Further analyses show that most of these entrepreneurs are lacking in terms of business management and financial management skills, as well as education, training and support. One of the possible explanations for this scenario is the remote locations of the settlements.

Meanwhile, Bahijah *et al.* (2009) examined the major socio-economic issues and the current socio-economic status of FELDA settlers in Perlis. Through face-to-face interview with respondents from two FELDA settlers in Perlis, the findings of the study showed that the implication of the ageing phenomenon of the FELDA settlers to some extent affects the settlers' ability to work effectively on their plantation. In addition, the findings also revealed that the second generation issue has become the most significant factor contributing to the productivity and income increment of the settlers compared to other selected socio-economic variables.

In another study, Ahmad Rashid & Ramlan (2011) identified the career selection initiatives among FELDA youths in Pahang. The study is motivated by rising social problems involving youths in FELDA settlements such as drug abuse, illegal racing and theft. The researchers postulated that one of the main sources of the problem is the high level of unemployment as well of lack of initiative in career selection process. Using survey questionnaires and a sample size of 125 youths, the findings revealed that majority of the youths have taken considerable initiatives to survey career information, upgrade academic level, increase self-awareness and plan future career path. However, most of them are lacking in terms of the latest Information Communication Technology (ICT) skills, job application skills as well as having low self-esteem.

The issues presented thus far, show that one of the roots to the various problems that persist among FELDA settlers is weak money management due to low level of financial literacy or knowledge. This may be due to the fact that most FELDA settlements are located in rural areas, thus the settlers have limited access to relevant information that can guide them to make prudent and wise personal financial management skills. If the settlers are financially stable, other problems such as social ills, lack of education and skills, and unemployment can be reduced substantially. Furthermore, with good understanding of personal finance, the children of FELDA settlers do not have to rely on low-paying employments near their settlements. They can accumulate sufficient amount of money to start their own businesses, either in their settlement or even in the town areas nearby.

The purpose of this study is thus to test the level of financial literacy among the FELDA settlers and also to examine the factors that determine the level of financial literacy. This is important because it can provide the FELDA management and also the government significant information with regards to the personal financial problem faced by the FELDA settlers. Firstly, the study can reveal the reality of the financial literacy level among the FELDA settlers. Then, it presents the determining factors that lead to the level of financial literacy among the FELDA settlers. This will enable FELDA management and the government to formulate and design special programs to overcome the existing problems. In addition, it can also serve as a platform to increase the income level of the FELDA settlers and thus contribute to the realisation of the National Transformation Programme (NTP).

1.2 Problem Statement

As discussed earlier, there are various problems and issues regarding the FELDA settlers – social problems, education problems and socio-economic problems. This study focuses on the socio-economic problems that affect the FELDA settlers by examining the financial literacy level of the FELDA settlers. It is expected that low financial literacy level among the FELDA settlers is the main cause of their financial problems. For example, over reliance on cooperative (Koperasi FELDA) to manage their personal finance leads to many FELDA settlers end up with high burden of indebtedness. This problem arises when they have to depend on monthly advanced allowances of RM1,500 while waiting for their crop to reap.

Additionally, personal financial problems also lead the settlers to helplessly rely on third party sources of loans such as normally illegitimate money lenders who charge them excessive interest rates which push them unto bigger financial problems. This occurs mainly when they have exhausted the limit amount provided by Koperasi FELDA and denied to take further advances. As such, prudent and wise personal financial management is crucial because not only it can help the settlers from falling into the debt-trap, it also can help the settlers to increase their income, primarily through good savings and investment planning.

The lack of financial literacy is actually a global phenomenon which also occur in developed countries such as the United States (Lusardi & Mitchell, 2005), United Kingdom (Smith, 2005) as well in Japan and Australia (Smith, 2005). However, in these countries, the standards used as the minimum financial literacy level are much higher than those used in the developing countries. For example, in

the developed countries, examples of financial literacy issues are regarding lack of knowledge about innovative financial products, misunderstanding about investment diversification, inability to perform time value of money calculations and misconceptions about inflation (Hilgert *et al.*, 2003; Agnew & Szykman 2005; Alessie *et al.*, 2007; Agarwal *et al.*, 2007; Lusardi & Mitchell, 2005; 2007a; Lusardi, 2008a; 2008b; Cory & Pickard, 2008). Apparently, the financial literacy issues in the developed countries are quite different from those in a developing country such as Malaysia, and especially so when it involves the FELDA settlers.

In Malaysia, studies involving personal financial literacy have also been conducted, but the number is limited and only a few of them looked at rural communities like FELDA. Tan *et al.* (2011) examined the financial literacy level among the public in Klang Valley. The results show that majority of the respondents have adequate basic financial literacy, and more than half of them are reasonably financially literate at an advanced level. In another study, Folk *et al.* (2012) examined the influence of financial learning on retirees' retirement financial planning preparation in Malaysia. The findings of the study show that financial literacy is affected by behavioural assessment of personal finance.

Mohamad Fazli *et al.* (2011) investigated the impact of personal and family background, academic ability, and childhood consumer experiences on the financial literacy of college students in Malaysia. The results show that Chinese students, students who live on campus, and students attending private colleges have relatively higher level of financial literacy. Meanwhile, Delafrooz and Paim (2011) examined the relationship of demographic factors with saving behaviour and the determining

factors of saving behaviour among Malaysian's employees. The results indicated that there are significant differences of financial behaviour according to age, education, income and financial literacy.

Based on the studies of financial literacy conducted in Malaysia, only a few of them has tackled the people in the rural areas, let alone the FELDA settlers. Most of the studies concentrated on the college students and people living in the urban areas who are in the middle and high income groups. This is quite surprising because examining the level of financial literacy and knowledge is actually much more crucial for people who are in the lower income group and also in the rural areas. This is due to the fact that with lower income, lower education level and being far from big cities, their financial literacy and knowledge is limited. In addition, they may also have poor decision making ability when it comes to money matters. Therefore, there is a gap in the literature of financial literacy, and it is the intention of this study to fill in the gap.

1.3 Research Questions

Below are several research questions relating to problems faced by the FELDA settlers in managing their personal finance:

1. Even though FELDA settlers normally earn regular income, they still face several financial challenges, such as, higher education costs for the children, rising medical expenses, and increase in the cost of living. If these issues are not managed appropriately, it can lead to indebtedness and the problem is becoming more serious if it occurred during the wait for their crop to reap.

However, which of the problems are the most significant and occur most frequently?

2. Financial literacy level among the FELDA settlers especially the first generation is presumed to be very low, which is proven by the many financial issues and problems faced by them. However, how low exactly is their financial literacy level?
3. Many factors can be attributed to the low financial literacy level among the FELDA settlers, such as lack of education, lack of access to financial information, negative attitude or behaviour and many more. However, which factors are actually significant in influencing the financial literacy level among the FELDA settlers?

1.4 Research Objectives

Based on the research questions developed earlier, the specific objectives of the research are as follows:

1. To identify the most significant personal financial problems faced by FELDA settlers.
2. To assess the level of financial literacy among FELDA settlers.
3. To investigate the factors determining the personal financial problems of FELDA settlers.

1.5 Significance of the Study

Despite the many studies conducted pertaining to FELDA settlers' socio-economic problems, hardly any of them investigate the determining factors that lead to the personal financial problems in the first place. This calls for an empirical study on financial literacy among the FELDA settlers because it is the root of personal financial management problem. The number of studies on financial literacy in the developed countries is numerous, but similar studies in Malaysia is still lacking. Moreover, financial literacy studies in Malaysia focused on urban population, college students and working people. In fact, only a few studies which specifically measures the level of personal financial literacy among the FELDA settlers in the first place. Therefore, the purpose of this study is to fill in the gap in the literature of personal finance specifically the financial literacy dimension. This is where the study can contribute to the body of knowledge, especially among the academicians and personal finance researchers.

The study on financial literacy among FELDA settlers is also important because it can provide the FELDA management and also the policy makers more statistically sound information with regards to the financial literacy level and determinants in FELDA settlements. The results of the study can help the management and policy makers to design training courses which are specifically tailored to their actual levels and problems of financial literacy. With these training courses, the objectives of solving the financial problems and elevating the income level among the FELDA settlers can be achieved more effectively. Furthermore, these training modules can be replicated to other agencies or authorities such as Federal Land Consolidation and Rehabilitation Authority (FELCRA), Urban

Development Authority (UDA), Muda Agricultural Development Authority (MADA), Rubber Industry Smallholder's Authority (RISDA), Southeast Johor Development Authority (KEJORA) and others.

The findings of the study can also provide the relevant government agencies some ideas with regards to the significant factors that can affect the financial literacy level of people with low income and living in the rural areas. This can help them design specific programmes that can actually benefit these people according to their needs and problems.

1.6 Scope and Limitations of the Study

Due to financial and time constraints, this study focuses only on FELDA settlers in Bukit Tangga, which is closely located to UUM, Sintok, Kedah. Furthermore, it focuses only on financial literacy problems and do not touch on other dimensions such social ills, education problems and drug problems. This is to ensure that the objectives of the research are carried out more effectively. Due to time and budget constraints, this study only employs the survey questionnaires method and will not endeavour into qualitative research method.

1.7 Organization of the Study

This chapter lays the introduction of the study by discussing the background of the study, the problem statement, the research objectives, the significance of the study and the scope and limitations of the study. Chapter two discusses the literature review, chapter three presents the research methodology, chapter four discusses the

findings of the study and finally, chapter five provides the conclusion and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview of Personal Finance

Personal Finance is a branch of study under Finance which specifically deals with how individuals manage their finances. According to Overton (2007), the financial planning process is defined as the strategic management process applied to personal finance. This process normally involves the following steps: goal setting and prioritizing, information gathering, information analysis and status appraisal, developing a financial plan, execution and monitoring and reviewing. The overall financial planning process is developed to suit individual's personal financial needs. These financial needs can be categorized into six main elements: credit and cash management, investment management, risk management and insurance, tax planning, retirement planning and estate planning (Malaysian Financial Planning Council, 2004).

Individuals either manage their finances on their own or hire a financial planner to assist them in developing a financial plan. Employing financial planners is common in developed countries but is still considered new in developing countries. A comprehensive financial plan normally consists of all the six dimensions above and follows all the steps involved in the financial planning process. A sound financial plan will provide an individual with better financial standing, financial security, financial freedom and peace of mind.

The following Figure 2.1 shows the framework for personal financial management process.

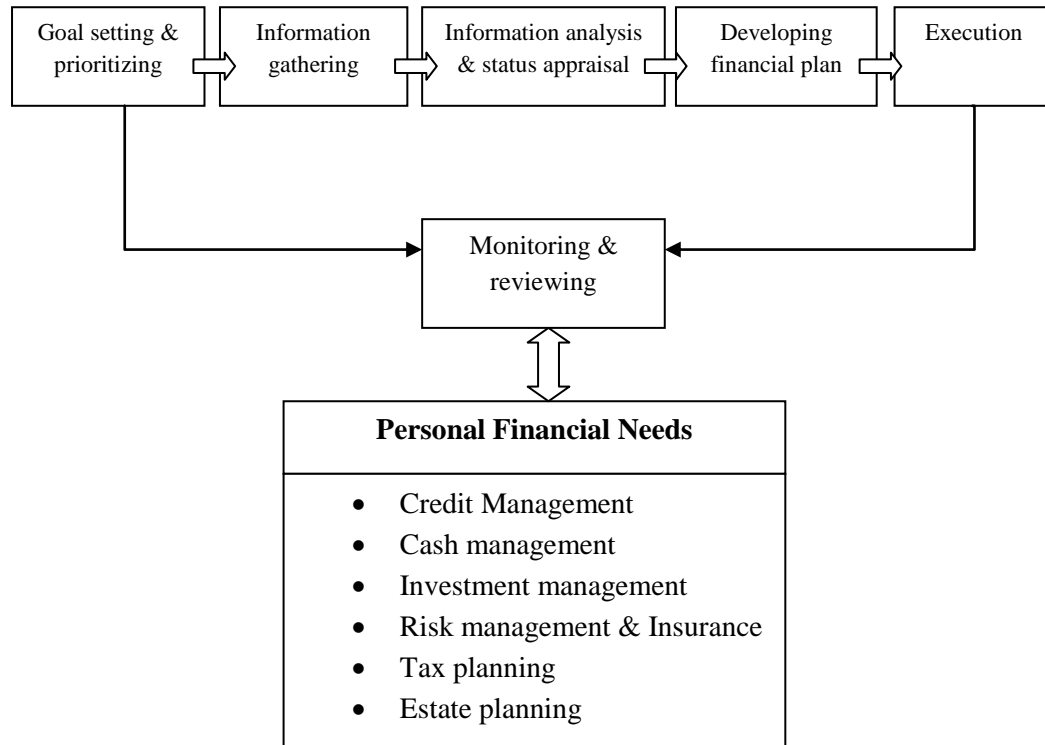


Figure 2.1:
Framework for Personal Financial Management Process (Adapted from Tan et al., (2011))

According to Gan (2008), personal financial planning in Malaysia can be considered to be at its preliminary stage. This is rather unparalleled with the development and growth of the Malaysian capital markets, particularly the stock market, banking industry and unit trusts. Although generally Malaysians are aware of the importance of financial planning, many of them still do not fully understand the importance of benefits of proper personal financial planning (Citi, 2008). According to Tan *et al.* (2011), the reason why many Malaysians are still not ready to pursue comprehensive personal financial planning is probably due to relatively low level of financial literacy. However, relevant information and knowledge of individuals' financial literacy level in Malaysia is still lacking. According to Tan *et al.* (2011), real

understandings of individuals' financial literacy level are crucial and affect the development of the financial planning industry. Given its significance, the following section discusses in greater length about the relevant empirical studies on financial literacy.

2.2 Definition of Financial Literacy

In general, financial literacy is the ability to understand finance. More specifically, financial literacy refers to the set of basic skills and knowledge which enables an individual to make educated and effective financial decisions (Thilakam, 2012). According to American Institute of Certified Public Accounts (2003), financial literacy can be stated as the ability to effectively evaluate and manage one's finances in order to make prudent decisions in order to reach life goals and achieve financial well-being. This is similar to the definition given by U.S Financial Literacy and Education Commission (2007), whereby financial literacy is defined by the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being. Meanwhile, Garman and Forgue (2000) stated that financial literacy as knowing the facts and vocabulary necessary to manage one's personal finances successfully.

Kim (2007) stressed that financial literacy is the general knowledge that is important for people's survival and it involves understanding the complicated principles of spending, saving, and investing. Similarly, Greenspan (2001) stated that financial literacy is an essential skill that is important to the long-term financial standing. According to Thilakam (2012), financial literacy is significantly utilized in personal finance areas and it usually involves the wisdom and expertise of

properly making decisions relating to several personal finance areas such as saving and investment planning, insurance, real estate, tax planning and retirement planning and involves through knowledge of important financial concepts such as compound interest, financial planning, credit card mechanism, advantageous savings behaviours, consumer rights, and time value of money. This shows that financial literacy is more than just natural intelligence; it requires knowledge and education in financial matters.

In another study, Huston (2010) highlighted four main areas that surfaced from previous researches definitions of financial literacy and knowledge: basic of personal finance knowledge and behaviours, borrowing processes, saving and investing planning, and also protection planning. Huston suggested that financial literacy can be generalized as having two scopes: understanding personal finance knowledge (theory) and using personal finance knowledge (application). Similar to Huston, Remund (2010) also stressed that financial literacy is not just a measure of knowledge and defined financial literacy as “a measure of the degree to which one understands key financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-term decision making and sound, long-range financial planning, while mindful of life events and changing economic conditions” (p. 284).

Therefore, even though financial literacy is relatively new (Kempson *et al.*, 2006), it becomes more crucial for the public to have personal finance skills so that they can manage their economic needs accordingly (Lusardi & Mitchell, 2007a). Due to increasing difficulty in managing personal financial matters, Greenspan (2003)

stated that there is a growing demand for financial literacy education. This explains why personal finance has become increasingly popular in recent years. On the other hand, improved financial literacy could have assisted the households to seek assistance and guidance from financial experts, and to adapt that knowledge to their lives . In this regards, it is important to look at the financial literacy tests that have been used by previous researchers in order to measure the level of financial literacy among various groups of people.

2.3 Financial Literacy Test

The purpose of conducting a financial literacy test is to assess the basic financial skills and knowledge on various areas of finance, particularly personal finance. One of the earliest studies of financial literacy is conducted by Danes and Hira (1987), which examined 323 Iowa State University students' knowledge about personal finance and overall financial management; financial record keeping, credit cards management, personal loans planning and insurance. Generally, the study stated that, most college students had inadequate financial knowledge but certain groups are more knowledgeable than others. The findings show that males, upper class men, and students who are married have greater knowledge than females, lower class men, and single students in two dimensions of personal finance, namely, insurance and personal loans.

In a study by Volpe *et al.* (1996), a personal investment literacy test was conducted on 454 students at Youngstown State University. The study investigated the relationship between the level of investment literacy and gender, academic discipline and courses, and also financial experience. The students' knowledge of

investing management was investigated using a questionnaire developed by John Markese, president of the American Association of Individual Investors, and adapted from the Money Forecast Issue of Money magazine (1993). The survey included ten questions on personal investment subjects which included risk and diversification, financial advisor qualifications standard, tax planning, business math management, interest rates, stocks, bonds, mutual funds, and global investing planning. The average score was 44 out of 100, which showed that students had insufficient knowledge of personal investment. The results showed that female students and non-business students were less knowledgeable about personal investment than were males and business students.

A year later, Markovich and DeVaney (1997) conducted a survey on 500 college senior students at a prominent Midwestern university on personal finance knowledge and practices. The survey consisted of 21 multiple choice questions on credit management, payments of loan, emergency funds and insurance to evaluate students' financial literacy. One point was given for each correct answer. The average score is 9.31 out of 21, showing that senior college students have inadequate personal finance knowledge. Male seniors and senior business students tend to score higher; seniors with three or fewer credit cards tend to have less outstanding credit card debt than those with four or more cards; and, college seniors were more satisfied with their financial management skills than with their financial knowledge.

In another research, Chen and Volpe (1998) investigated personal financial literacy level of 924 students from 13 academic institutions, comprising of both public and private schools in California, Florida, Kentucky, Massachusetts, Ohio,

and Pennsylvania. The study investigated the relationship between financial literacy and several students' characteristics, and the impact of financial literacy on students' opinions and decisions with regards to financial issues. Consisting of 52 questions which includes 36 multiple-choice questions, the survey tested financial knowledge as well as students' opinions and financial decision-making. Among the topics used to assess financial knowledge are savings and borrowing, insurance, and investments. The findings imply that students do not have enough knowledge of personal finance. Furthermore, the findings also reveal that non-business students, female students, students in lower class rank, students below the age of 30, and those with limited working experience possess lower levels of financial knowledge. Students with lower level of financial knowledge are more likely to make wrong financial decisions in the areas of general knowledge, savings and borrowing, and investments.

Using the same data set as in the earlier study, Chen and Volpe (2002) examined gender differences in knowledge of personal finance and found that women are less knowledgeable about personal finance compared to the male students. The average percentage of correct score was 52.9%, suggesting that students have inadequate knowledge of personal finance. The average score is almost similar to that of the study by Markovich and DeVaney (1997) earlier. The authors found that financial literacy is significantly influenced by education level and working experience. The results also showed that men are more enthusiastic and confident in personal finance matters. In addition, most of the students stated that they acquired financial knowledge from their parents.

Robb (2008) examined the relationship between personal financial knowledge and credit card behaviours among 1,354 college students at a larger, public university in the southeast of USA. Personal financial knowledge was measured using a six-question scale designed to capture general financial information. The results showed that financial knowledge influenced whether or not students are prudent in using and managing their credit cards.

In addition to being called ‘financial literacy’, researchers also use the term ‘financial knowledge’. For example, Xiao *et al.* (2010) examined the relationships among financial education, financial knowledge, and risky credit behaviour of university students. The researchers assessed financial knowledge using both subjective and objective instruments. Subjective knowledge denotes students’ self-evaluation of their financial knowledge on a five-point scale from 1 (very low) to 5 (very high). Objective knowledge, on the other hand was evaluated using eight true-false questions created by Hilgert *et al.* (2003) which tested respondents’ actual knowledge about credit management. The average score for objective financial knowledge of 3.53/8 shows that the average score is less than half (44%). The mean score of subjective financial knowledge of 3.40/5 implies that generally students are of the opinion that their financial knowledge is between “moderate” (3) and “high” (4).

In another study, Borden *et al.* (2008) investigated the impact of a financial education seminar called the Credit Wise Cats on the financial knowledge, attitudes, and behaviour of 93 college students. In order to identify good financial management practices, specifically on credit cards uses, financial knowledge score

was computed. The study discovered that the respondents recorded significantly higher financial knowledge score at post-test than pre-test, and that financial knowledge score of the male students is higher than that of the female students.

In another related study, Heckman and Grable (2009) assessed the determinants of personal finance knowledge among university students and examined how this knowledge influences their perceived self-efficacy in dealing with financial issues. The researchers used a 20-item personal finance index adopted from Avard *et al.* (2005) to assess personal financial knowledge. The findings of the study show that financial knowledge is significantly and positively related with self-efficacy, suggesting that students who are more knowledgeable are more effective and confident in managing financial matters.

In another study, Mohamed & Fatima (2013) conducted a financial literacy test among a sample of individuals residing in the United Arab Emirates (UAE) and examined its relation to different forms of personal debt such as bank loans, borrowing from friends and/or family members, and borrowing through credit cards. With a sample of 412 working adults, the researchers used a questionnaire consisted 28 items to measure financial literacy and five items measuring personal financial attitude on investment, inflation and interest, protection, pension, and savings and borrowings. The findings show that the average score of the financial literacy test is 43.3% and is well below the average level of 50% reported in many studies. However, the mean score of males and females was not significantly different.

Most of the studies discussed so far were conducted in the United States. Generally, they focused on college students and young people. In Malaysia, there are several studies which developed the instruments to measure personal finance literacy level. For example, Mohamad Fazli *et al.* (2011) examined the effect of personal and family background, academic ability, and childhood consumer experiences on the financial literacy of university students in Malaysia. With a sample of 2,519 students in 11 public and private colleges in Malaysia, financial literacy was measured using a 25-item test of financial knowledge. The average score recorded is less than fifty percent, showing that majority of them have inadequate financial knowledge. As for the determinants of financial literacy, it is shown that the most significant factor is the childhood experience of discussing financial matters with parents. The findings show that generally, Chinese students, students who live on campus and those attending private colleges are more likely to be more financially literate.

Tan *et al.* (2011) investigated the relationship between individuals' financial literacy levels and their commitment or engagement in personal financial planning. They measured the financial literacy level of the respondents using a test which consists of 13 questions which includes five questions to measure individuals' basic financial literacy level. The questions involved fundamental financial and economic concepts such as numeracy, time value of money, compound interest and inflation. The researchers adapted the work of Lusardi (2008a) and Lusardi and Mitchell (2005) to design questions that are useful to reflect individuals' understanding of such concepts that formed the basis of their daily financial transactions and decisions. Another eight questions were to determine the individuals' financial literacy at an advanced level. The questions were adapted from the work of Lusardi

and Mitchell (2007b) and covered the function of stock market, knowledge of mutual funds, relationship between interest rates and bond prices, risk diversifications, risk levels, long-term return, and fluctuation in asset. The separation into basic and advanced level of financial literacy provides a good platform to gain better insights as to the individuals' performance in financial literacy.

This section has presented the studies which have developed the instruments to test the level of personal finance literacy and financial knowledge. The next section discusses the previous studies which examined the determining factors of financial literacy found in previous studies.

2.4 Determining Factors of Financial Literacy

The previous section has discussed about financial literacy tests, focusing on how the tests were conducted and how the scores were used in the various personal finance studies. This section presents the literature review on the determining factors of financial literacy.

Bernheim (1995) pointed out that many households did not know how to perform very simple financial calculations, and most people lacked basic financial knowledge. Households needed financial education earlier in life as shown in the study by Bernheim *et al.* (2001), which found that those who were exposed to financial education in high school saved more than those who were not. Furthermore, those who lacked financial literacy were more likely to take on high-interest mortgages (Moore, 2003). According to O'Hara (2003), consumers used to purchase a home for the purpose of paying it off prior to retirement. However, nowadays,

consumers purchase a home with little or nothing down, just to use it as a revolving debt account. Hilgert *et al.* (2003) findings confirmed that those who did not correctly calculate interest rates for a stream of payments ended up borrowing more money and accumulating less wealth.

In addition to indebtedness problem as a result of taking high-interest mortgage, inadequate saving is also a common problem in personal finance. Lusardi and Mitchell (2006) worried that households did not save enough for retirement, accumulated excessive amounts of debt, and failed to take advantage of new financial innovations. However, in a later article, it was stated that increasingly, individuals were being required to take more responsibility for their own retirement savings (Clark *et al.*, 2006). The authors pointed out that optimal decision making required adequate knowledge of financial principles and education. The results of the study were that financial education produced significant changes in how individuals planned for retirement (Volpe *et al.*, 2006). Furthermore, it goes to show that there are various possible factors which could determine one's financial literacy level.

According to Rooij (2009), there is a big gap between actual financial knowledge and the ability to make retirement and savings decisions, which implies that higher financial education stimulated wise financial decisions. Rooij also suggested that there is a need for more research on the factors of financial literacy and how to organize those factors in financial education classes to increase effectiveness. A low level of financial literacy in combination with several negative

behavioural traits, made consumers attracted to decisions that are not always in their best interest (Rooij, 2009).

In addition, Brown (2009) found a significant correlation between financial literacy education and financial decision making in the areas of credit reports, credit scores, and overall financial decision making. The results of the author's focus groups suggested financial literacy programs influenced students' budgeting and spending as well as their usage of credit cards (Brown, 2009). This shows that improving financial literacy can positively affect the personal finance behaviour of individuals.

In a study by Lusardi and Mitchell (2011b), it was found that respondents who had higher financial literacy were more likely to plan for retirement, more likely to have an emergency fund, and less likely to engage in poor credit card behaviours. Similarly, Behrman *et al.* (2010b) found that financial literacy enhanced peoples' likelihood of contributing to their pension savings. Lusardi and Mitchell (2011a) found a positive relationship between planning and savings as well as investment success. Their results suggest that financial literacy can play a role in both savings and portfolio choice. This is further reinforced by the findings in the study by Capuano and Ramsay (2011) whereby the participants with higher financial literacy scores were associated with greater amounts of savings, investments, and retirement funding.

The studies above show that having a positive habit towards saving is important in determining one's financial standing as well as one's retirement.

Furthermore, preparing ahead for retirement planning is an important trait that determines one's personal financial literacy level.

A study by Monticone (2010) found a positive relationship between financial knowledge and early family background, suggesting that parental factors are important in influencing personal financial literacy level. In order to tackle this issue, Grinstein-Weiss *et al.* (2011) examined the amount of financial knowledge transferred from parents to children and found that the level of parental financial teaching significantly influenced the children's financial capabilities. According to Lusardi and Mitchell (2011b), respondents whose parents had invested in stocks and retirement savings were 45% more likely to be knowledgeable about risk diversification. This shows that parental factors significantly influence one's financial knowledge.

In addition to parental factor and behaviour towards savings and retirement planning, several characteristics and attributes such as type of family (with or without children), gender, age, education level, years of working and income are also found to be significant in influencing financial literacy level.

Grinstein-Weiss *et al.* (2006) found that families with children were more motivated to save money but found it difficult to do so due to the huge cost in raising the children. Lusardi (2006) also found that those households with children had lower wealth holdings. Lusardi and Mitchell (2006) found certain groups of the population, such as women, the elderly, and those with low education levels, had lower financial literacy level than other groups. Agarwal *et al.* (2009a) showed that

financial mistakes were more apparent among the young and the elderly, whom had low level of financial knowledge. Similarly, Loibl and Hira (2005), Lusardi and Mitchell (2006), and Morrison (2009) reported that males had significantly higher perceived financial well-being than females. In addition, the results also suggested that gender, age, and income had a positive relationship with perceived financial well-being (Morrison, 2009). Noon & Fogarty (2007) found that the years of work variable was positively related to financial literacy.

The findings in the study by Yang (2010) show that when using their defined contribution retirement plans, women saved less than men. It was also found that married people had the tendency to contribute more into their retirement plans than single people, possibly due to being a dual-income family. Yang also found that age was positively and significantly related to financial literacy, as shown by the increasing contributions as they grow older.

The amount of education attained was also found to be a significant factor of retirement funding. It was shown that respondents with postgraduate degrees were more likely to participate and contribute more to their defined contribution plans compared to those with lower education level (Yang, 2010). Similarly, the study by Crow *et al.* (2010) also reported that an increase in financial literacy level had a direct effect on retirement planning and behaviour of the respondents.

In another study, Chatterjee and Herbert (2010) also found that educational level was positively related with financial planning. Dusek and Furlong (2010) conducted a study to collect relevant data on financial attitudes, behaviours and

knowledge. The findings of the study revealed that individuals with low income, low education level, and those under the age of thirty showed the riskiest financial behaviours and had the lowest level of financial knowledge.

Collins (2010) investigated personal finance characteristics and behaviour of lower income families and found that financial education increased long-term savings and long-term credit scores of the participants. Similarly, the study by Lusardi and Mitchell (2011a) found lower financial knowledge scores for females, younger people, and those with lower education level. In another study, Bateman *et al.* (2011) examined the financial competence and literacy of participants in Australia and found that the level of financial competency and literacy is positively related to age, education level and income. Furthermore, male's respondents recorded higher financial competency and literacy level.

The study conducted by Mohamed & Fatima (2013) among 412 working adults in the United Arab Emirates (UAE) show that individuals with strong financial attitude tend to borrow less from credit cards. Furthermore, they are more likely to borrow from banks than using credit cards or borrowing from friends/or family members.

With a sample of 146 university employees, González (2013) examined the financial and retirement planning knowledge in Puerto Rico. The questionnaire used consists of 37 questions which include questions on respondents' profile, knowledge about general financial matters and knowledge about retirement and retirement planning. The findings show that majority of the respondents are still lacking in

terms of personal financial knowledge and skills. In fact, many respondents are not familiar with even the most basic economic concepts needed to make savings and investment decisions.

The studies discussed so far have been conducted mainly in the developed countries, such as in the U.S and Australia. In Malaysia, studies involving personal financial literacy have also been conducted, but the number is limited. For example, Tan et al. (2011) examined the financial literacy level among the public in Klang Valley. Based on questionnaires replied by 160 respondents, the results show that majority of the respondents have adequate basic financial literacy, and more than half of them are reasonably financially literate at an advanced level. The findings are parallel with the results of previous studies in developed countries whereby many people lack knowledge in financial economic concepts particularly regarding the stock markets, mutual funds and time value of money. In addition, the results of the study show that individuals with higher financial literacy level show higher tendency to be involved in financial planning compared to the respondents in the medium and low financial literacy level.

In another Malaysian study, Folk *et al.* (2012) examined the influence of financial learning on retirees' retirement financial planning preparation. Using survey questionnaire on a sample of 750 respondents, the results show that financial literacy is affected by behavioural assessment of personal finance.

Mohamad Fazli *et al.* (2011) investigated the impact of personal and family background, academic ability, and childhood consumer experiences on the financial

literacy of college students in Malaysia. The sample consists of 2,519 students in 11 public and private colleges in Malaysia. Financial literacy was measured with a 25-item test of financial knowledge. On average, students answered less than half of the questions correctly. The childhood consumer experience of discussing family finances with parents has a substantial positive relationship with financial literacy. Furthermore, students of Chinese ethnicity, who live on campus, and who attend private colleges are more likely to be financially literate.

In another related study, Delafrooz and Paim (2011) examined the relationship of demographic with saving behaviour and the determining factors of saving behaviour among Malaysian employees. Using survey questionnaire on a sample of 2000 respondents, the results indicated that there are significant differences of financial behaviour according to age, education, income and financial literacy. On the other hand, financial literacy, income, and marital status were stated as most influential predictors of saving behaviour.

Table 2.1 below summarizes the financial literacy measurements or tests employed in previous studies as discussed in section 2.3 earlier.

Table 2.1
Summary of Financial Literacy Tests and Measurements

No.	Study / Research	Descriptions
1	Danes & Hira (1987)	Investigate student knowledge about insurance, personal loans, and financial record keeping.
2	Volpe <i>et al.</i> (1996)	10 questions: risk, diversification, financial advisor quality, tax planning, business mathematic, interest rates, stocks, bonds, mutual funds, and global investing.
3	Marcovich & De Vaney (1997)	21 multiple choice questions: credit uses, loan payment, emergency funds and insurance use.
4	Chen & Volpe (1998)	52 questions: general knowledge, savings, borrowing, insurance and investments.
5	Hilgert <i>et al.</i> (2003)	Adopted from the 2001 Survey of Consumers. 28 questions (True / False) financial literacy quiz. Covering knowledge about credit, saving patterns, mortgages, and general financial management.
6	Lusardi (2008a)	Questions adopted from the National Council of Economic Education Survey, NASD Investor Knowledge Quiz, the 2004 Health and Retirement Study module on financial literacy and planning, the Survey of Financial Literacy. 8 questions : function of stock market, knowledge of mutual funds, relationship between interest rates and bond prices, risk diversification (company stock or mutual fund), riskier (stocks or bonds), long period returns, highest fluctuations, and risk diversification (spreading money among different assets).
7	Heckman (2009)	20 items of personal finance index; adapted from Avard <i>et al.</i> (2005)
8	Xiao <i>et al.</i> (2010)	Subjective and objective instruments; - Subjective: students self assessment of financial knowledge. - Objective: 8 True False questions adapted from Hilgert <i>et al.</i> (2003)

Table 2.1 (Continued)

9	Huston (2010)	4 categories questions: basics of personal finance, saving and borrowing, investment and protection.
10	Remond (2010)	5 main categories: knowledge of financial concept, ability to communicate in financial, attitude to manage financial, skill in making appropriate financial decisions, and planning for future financial needs.
11	Fazli (2011)	25 items (True / False): financial goal, financial record,, savings, investment, retirement, banking system, time value of money, wills, insurance, educational loans, and general knowledge on personal finance.
12	James (2011)	Jump\$tart's biannual survey 1997. 31 questions: income section, money management, saving, investment, spending and card.
13	Folk <i>et al.</i> (2012)	12 questions: retirement needs, investing money, providing for the future, and managing credit use.
14	Scott (2012)	5 elements: <ul style="list-style-type: none"> - 63 questions about general knowledge. - 32 questions in financial skills. - 9 questions in financial attitudes. - 5 questions in financial surveys. - 78 questions in financial factors. All the main questions based on parental financial habits, mortgage decisions, budgeting habits, goal planning, retirement planning, credit management, income planning, insurance planning, financial ratios, saving's planning and investment planning.
15	Mohamed & Fatima (2013)	28 items measuring financial literacy, and 5 items measuring personal financial attitude. Covering 5 dimensions: investment, inflation and interest, protection, pension, and savings and borrowings. Format: true and false statements, multiple choices questions, agree or disagree with particular statements and Likert-type scale.

As can be seen in Table 2.1, the financial literacy tests that have been conducted primarily consist of questions with regards to the basic knowledge of the main components in personal finance such as the personal finance goals, cash

management, credit management, credit card management, insurance, investment, and protection. Basic knowledge on the general finance knowledge such as time value of money, inflation and diversification is also covered. The formats used for the financial literacy tests are true-false questions, multiple-choice questions and also close-ended questions. The number of correct answers would determine each respondent's level of financial literacy.

Table 2.2 below summarizes the main determining factors of financial literacy in previous studies as discussed in this section which will be used in this study.

Table 2.2
Determinants of Financial Literacy

No.	Factor / Characteristic	Research / Study	Relationship with Financial Literacy
1	Education level	Lusardi and Mitchell (2006), (2011a); Tan <i>et al.</i> (2011); Yang (2010); Bateman <i>et al.</i> (2011); Dusek and Furlong (2010); Greenspan (2001); Hilgert <i>et al.</i> (2003).	+
2	Income	Tan <i>et al.</i> (2011); Morrison (2009); Dusek <i>et al.</i> (2010); Bateman <i>et al.</i> (2011); James (2011).	+
3	Parental Factor	Monticone (2009); Yeo <i>et al.</i> (2010); Lusardi <i>et al.</i> (2010); Grinstein-Weiss <i>et al.</i> (2011).	+
4	Credit Management Behaviour	Sharp (2010); Agarwal <i>et al.</i> (2010); Duca and Kumar (2010); Grinstein-Weiss <i>et al.</i> (2011); Lane (2009), Mohamad and Fatima (2013).	+
5	Saving Management Behaviour	Lusardi (2010); Behrman <i>et al.</i> (2010b); Capuano and Ramsay (2011); Grinstein-Weiss <i>et al.</i> (2006).	+

Table 2.2 (Continued)

6	Investment Behaviour	Lusardi (2010); Behrman <i>et al.</i> (2010b); Capuano and Ramsay (2011).	+
7	Retirement Planning Behaviour	Crow <i>et al.</i> (2010); Gonzalez (2013); Lusardi and Mitchell (2005), (2006), (2007a), (2007b), (2007c), (2009), (2011a), (2011b).	+

As can be inferred from Table 2.2 above, 7 dimensions prevailed as the major determining factors of the level of financial literacy among the respondents in previous studies. All of these factors have positive relationship with the level of financial literacy and most of the studies show significant results.

2.5 Hypotheses of the Study

Based on the discussion on the literature review of studies pertaining to the determinants of financial literacy level, the following hypotheses are developed for this study.

H1_o: Education level is positively related to the level of financial literacy.

H2_o: Higher income people have higher financial literacy level than lower income people.

H3_o: Parents' financial teaching and exposure is positively related to the level of financial literacy.

H4_o: Good credit management or behaviour is positively related to the level of financial literacy.

H5_o: Good saving management or behaviour is positively related to the level of financial literacy.

H6_o: Good investment behaviour is positively related to the level of financial literacy.

H7_o: Good retirement planning behaviour is positively related to the level of financial literacy.

2.6 Conceptual Framework of the Study

The underlying theory for this study is the field of personal finance, upon which the concept of financial literacy is derived. As defined in section 2.1, financial literacy is the general aptitude or knowledge of an individual with regards to the basic personal finance dimensions that are important in order to survive financially in today's world.

Based on the discussion on the financial literacy test and also on the hypothesized determining factors of financial literacy earlier, Figure 2.2 below shows the graphical representation of the conceptual framework of the study.

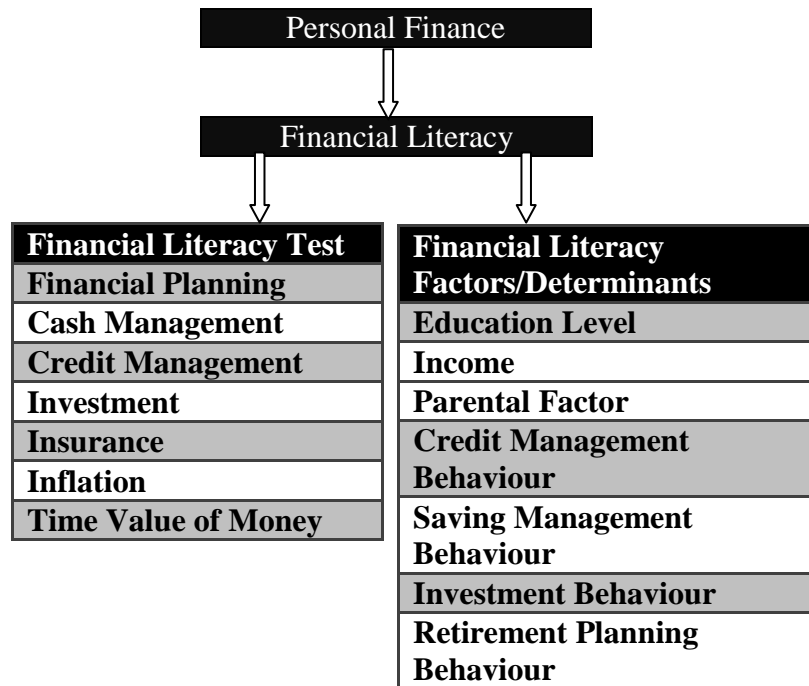


Figure 2.2
Conceptual Framework of the Study

For the financial literacy test, seven areas will be tested, namely, financial planning, cash management, credit management, investment, insurance, inflation and also time value of money. The factors or determinants of financial literacy are as discussed in the hypotheses section earlier, namely, education level, income, parental factor, credit management behaviour, savings behaviour, management behaviour, investment behaviour, and retirement planning behaviour.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter discusses the research method carried out in order to test the hypotheses of this study. This study employs quantitative research method whereby survey questionnaire was designed in order to gather relevant information from the FELDA settlers. This chapter consist of the following sections: sample and data collection, financial literacy test and survey questionnaire and also the analysis of data.

3.1 Sample of the Study, Data Collection and Pilot Study

The population of the study comprises of the FELDA settlers in FELDA Bukit Tangga, near UUM, Sintok, Kedah. This particular FELDA settlement is chosen because it is the nearest to UUM. The total number of houses in FELDA Bukit Tangga settlement is 300, therefore 300 financial literacy tests and questionnaires are distributed in the settlement. Before the questionnaires are distributed to the FELDA settlers, a pilot study was conducted in order to assess the validity of the questionnaires as well as to come up with a benchmark on the financial literacy score. The sample of the pilot study comprises of 40 Master's students in UUM Kuala Lumpur.

3.2 Financial Literacy Test and Survey Questionnaire

The first part of the questionnaire consists of demographic and personal information questions about the respondents, namely; gender, age, education level, monthly income, and years of working experience. The second part is the financial literacy

test which consists of 10 questions to test the basic personal finance skills and knowledge as follows:

Table 3.1
Financial Literacy Test

No	Questions
1.	The chance of winning a gift in UUM expo is 10 percent. If 1,000 people visit the expo, how many people are expected to win a gift? (A) 100 (B) 10 (C) 11 (D) Do not know
2.	If 5 people have the equal share of a RM2 million inheritance, how much will each of them get? (A) RM400,000 (B) RM200,000 (C) RM40,000 (D) Do not know
3.	Suppose you had RM100 in a savings account and the interest rate was 2% per year. After 2 years, how much do you think you would have in the account? (A) More than RM102 (B) Exactly RM102 (C) Less than RM102 (D) Do not know
4.	If you inherit RM10,000 today and your neighbour inherits RM10,000 three years from now, you are actually receiving more money than your neighbour. (A) True (B) False (C) Do not know
5.	An investment with a high return is likely to have high risk (A) True (B) False (C) Do not know
6.	Stocks and bonds have many similarities with each other. (A) True (B) False (C) Do not know
7.	Diversification in investment is important because it usually increases investment return (A) True (B) False (C) Do not know
8.	If you already have life insurance, you do not need medical insurance. (A) True (B) False (C) Do not know
9.	Inflation can increase the real return of your investment. (A) True (B) False (C) Do not know
10.	Which of the following normally has the highest risk? (A) Savings account (B) Bonds (C) Stocks (D) Do not know

After the financial literacy test is conducted, the respondents filled out the questionnaires on the personal financial literacy factors or determinants which consists of twenty items on parent's financial teaching and exposure, credit management or behaviour, saving behaviour, investment behaviour and retirement planning behaviour. The items are as follows:

1. My parents used to teach me about budgeting.
2. My parents used to teach me about the importance of savings.
3. My parents used to discuss with me about family finance matters.
4. My parents have started an investment plan for me since I was a child.
5. I usually pay off the full credit card outstanding amount every month.
6. I usually pay my housing loan instalment on time every month.
7. I usually pay my car loan instalment on time every month.
8. I usually pay my utilities bills (electricity/water/telephone) on time every month.
9. I usually make regular monthly saving as a percentage of my income.
10. I make monthly savings whether or not I have surplus on that particular month.
11. When I want to purchase an expensive item, I prefer to do it through saving rather than using loan.
12. I make regular monthly saving for my emergency fund.
13. I invest in stocks listed on the stock exchange.
14. I invest in unit trusts such as the ASB, ASN, Public Mutual or others.
15. I invest in real estate or property.
16. I invest in gold, silver or other jewelleryes.

17. I know the amount I need to fund my retirement comfortably.
18. I discuss with a financial planner regarding my retirement needs.
19. I do not rely on my children to cover for my retirement/old age needs.
20. I have started planning for my retirements / old age.

Each respondent answered the questions using a 5-point Likert scale where “1” denotes “strongly disagree” and “5” denotes “strongly agree”. The use of Likert scale to measure respondents’ opinion on personal finance factors and determinants was also adopted by Chen and Volpe (1998). Based on the items in the questionnaire, five dimensions or variables emerged as follows: parental factors (items 1, 2, 3 and 4); credit management behaviour (items 5, 6, 7 and 8); savings behaviour (items 9, 10, 11 and 12); investment behaviour (items 13, 14, 15 and 16) and retirement planning behaviour (items 17, 18, 19 and 20). This is mainly adapted from the questionnaires developed by Lusardi and Mitchell (2007b; 2011b), Marzieh *et al.* (2013), González (2013) and Mohamad and Fatima (2013).

The questionnaire method is used to allow anonymity of respondents when they revealed their financial literacy level. This is deemed useful in encouraging more unbiased responses. It also required less sophisticated interviewing skills and was easily manageable by respondents, which amounted to shorter response time (Saunders, *et al.* 2003). The financial literacy test and the questionnaire were translated into Bahasa Malaysia first before given to the respondents in FELDA.

3.3 Analysis of Data

After the financial literacy test and the survey questionnaire for the FELDA settlers are completed, the data were entered into the SPSS statistical package so that the data could be analysed. For the financial literacy test, each respondent is given marks to correspond with the number of correct questions answered. Then, the answers of the questionnaires are processed and analysed so that the dimensions which comprised of parent's financial teaching and exposure, credit management or behaviour, saving behaviour, investment behaviour and retirement planning behaviour prevailed. Then, regression analysis is performed whereby the financial literacy score will be the dependent variable and the ten dimensions or factors will be the independent variables. The regression formula is as follows.

$$\text{FINLIT} = \alpha + \beta_1\text{EDUC} + \beta_2\text{INCOME} + \beta_3\text{PARENT} + \beta_4\text{CREDIT} + \beta_5\text{SAVE} + \beta_6\text{INVEST} + \beta_7\text{RETIRE} + e$$

Where;

FINLIT = Financial literacy level as measured by the test score of the financial literacy test. The maximum score is 10 and the minimum score is 0.

EDUC = The level of formal education of the respondent.

INCOME = The monthly income of the respondent.

PARENT = The parental teaching and exposure of financial matters and knowledge.

CREDIT = The credit management behaviour of the respondent.

SAVE = The savings behaviour of the respondent.

INVEST = The investment behaviour of the respondent.

RETIRE = The retirement planning behaviour of the respondent.

Before regression analysis was conducted, a correlation analysis was performed to analyse the strength of the correlation among the independent variables of the study. For the regression analysis, the adjusted R^2 and the overall F-statistics show the adequacy of the model. The coefficient sign shows the relationship between each independent variable against the financial literacy level while the probability value will determine whether this relationship is significant or not. In addition, the sample is divided into two groups – the high financial literacy group and the low financial literacy group. The cut-off point between the two groups is the average score of the financial literacy test for the overall sample.

CHAPTER FOUR

DISCUSSION OF RESULTS

4.1 Introduction

The purpose of this study is to measure the level of financial literacy among the FELDA settlers in Bukit Tangga, Kedah and to examine the determinants of financial literacy level. The instrument used in this study is survey questionnaire which contains several demographic questions and twenty questions with regards to the hypothesized determinants of financial literacy level. Before the questionnaires were distributed to the FELDA settlers, a pilot study was conducted whereby the sample comprised of 40 Masters' students at Universiti Utara Malaysia Kuala Lumpur (UUMKL). The programs in UUMKL are conducted on part-time basis, therefore most of them are adults who are working in private or government sectors, or having their own businesses.

The purpose of the pilot study is to examine the reliability of the questionnaire and the suitability of the questions in the financial literacy test as well as the questionnaire. After the pilot study was conducted, minor adjustments are being made to the financial literacy test questions and also the questions in the questionnaire.

This chapter is organized as follows. Section 4.2 provides the analysis of the overall sample, while section 4.3 discusses the comparison of the high financial literacy group versus the low financial literacy group. Section 4.4 provides the summary and conclusion of the chapter.

4.2 Analysis of the Findings of the Overall Sample

In this section, the results of the financial literacy test and the questionnaire of financial literacy determinants of the FELDA sample, are discussed.

4.2.1 Descriptive Statistics

Descriptive statistics below recorded the genders, age, level of education, level of income, working experience, financial literacy score, mean of financial literacy score and analysis of financial literacy test in the pilot study.

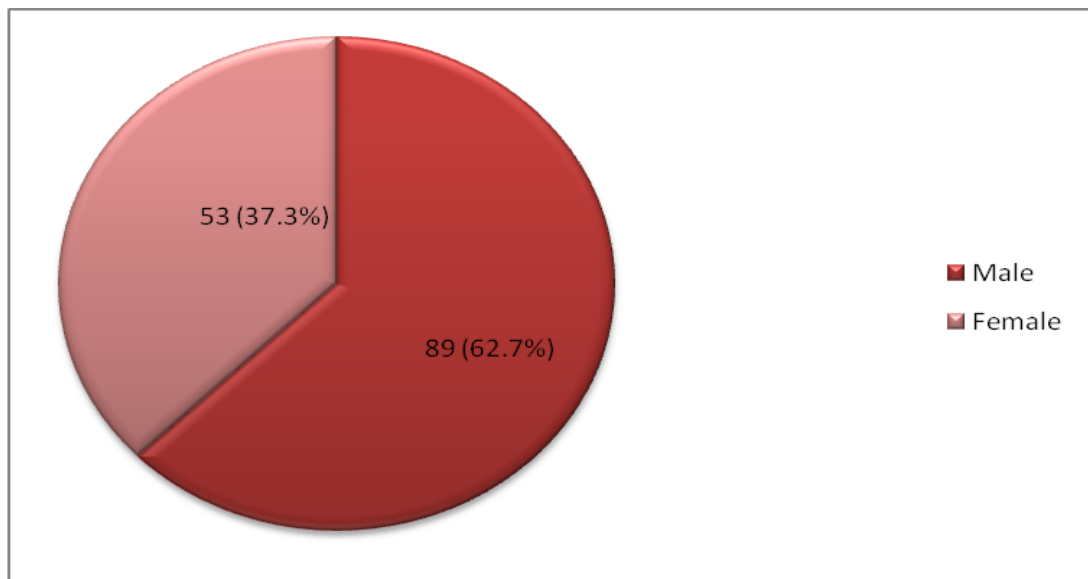


Figure 4.1
Gender of the Respondents in the FELDA Settlers Sample

Figure 4.1 above shows the bar graph of the gender distribution among the respondents in FELDA Bukit Tangga, Kedah. Out of the 142 respondents, 89 (62.7%) of them are male while the other 53 (37.3%) are female. Overall, men play

a more significant role than the women as far as FELDA Bukit Tangga settlement is concerned.

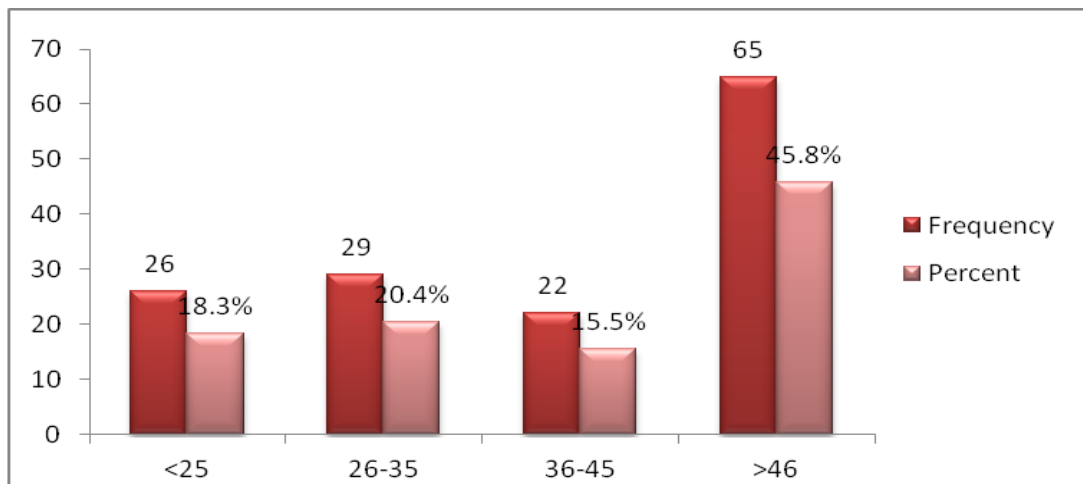


Figure 4.2
Age of Respondents in the FELDA Settlers Sample

Figure 4.2 above shows the bar graph of the age of the respondents in the FELDA Bukit Tangga sample. It shows that 26 (18.3%) of the respondents are below the age of 25; 29 (20.4%) of them are between the age of 26 to 35; 22 (15.5%) of them are between the age of 36 to 45; and 65 (45.8%) of them are above 46 years old. This indicates that the FELDA group is relatively much older compared to the pilot study group, which consists of master's students.

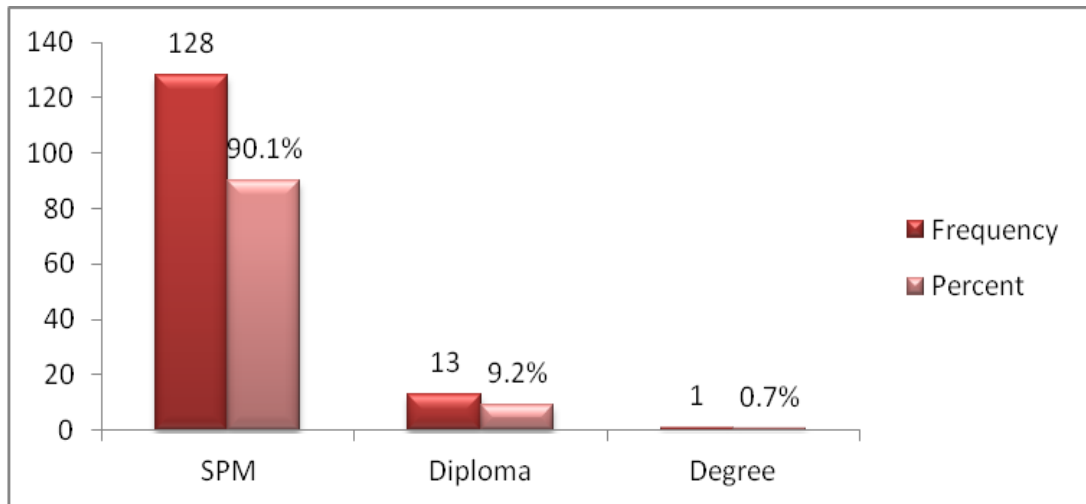


Figure 4.3
Education Level of the Respondents in the FELDA Settlers Sample

Figure 4.3 above shows the bar graph of the education level of the respondents. Out of the total respondents, 128 or 90.1% of them have at most SPM certificate, 13 or 9.2% have diploma, while only 1 or 0.7% is a degree holder. This is totally different from the sample in the pilot study earlier, where almost all of them have at least a degree. This shows that the education level of the FELDA settlers is still very low and it may be one of the most significant factors that affect their personal financial literacy level.

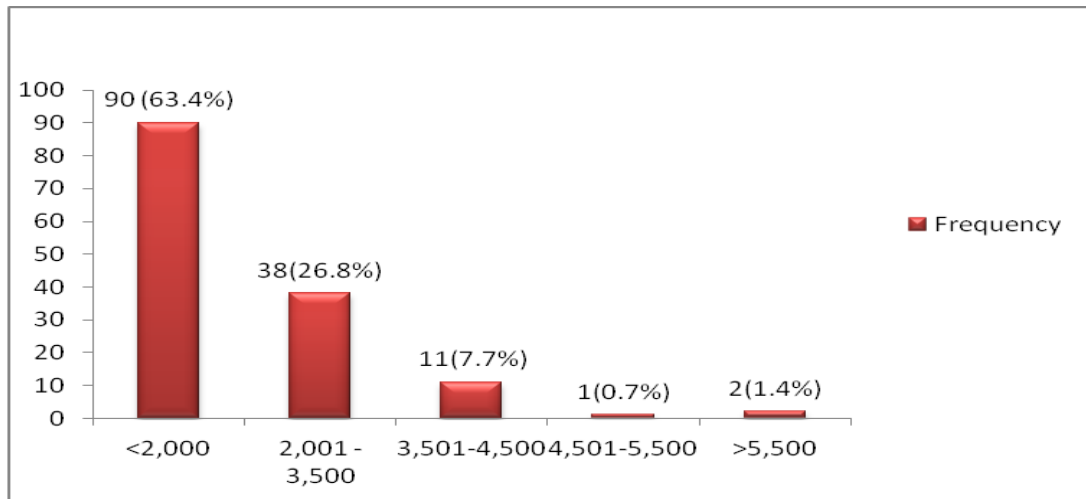


Figure 4.4
Monthly Income Level of Respondents for FELDA Settlers Study

Figure 4.4 above shows the bar graph of the monthly income level of the respondents in the study conducted among FELDA settlers at FELDA Bukit Tangga. Out of the 142 respondents, 90 or 63.4% of respondents have monthly income of RM2,000 or below, 38 or 26.8% earn RM 2,001 to RM 3,500; 11 or 7.7% of them earn RM 3,501 to RM 4,500; 1 or 0.7% of respondents have monthly income of RM 4,501 to RM 5,500; and the other 2 or 1.4% earn more than RM5,500. Therefore, the overall level of income among the FELDA Bukit Tangga settlers is very much lower than the pilot study group. With relatively low income, it is difficult for the FELDA settlers to devise a proper and comprehensive personal financial plan. As such, their awareness and knowledge on personal finance may also be limited.

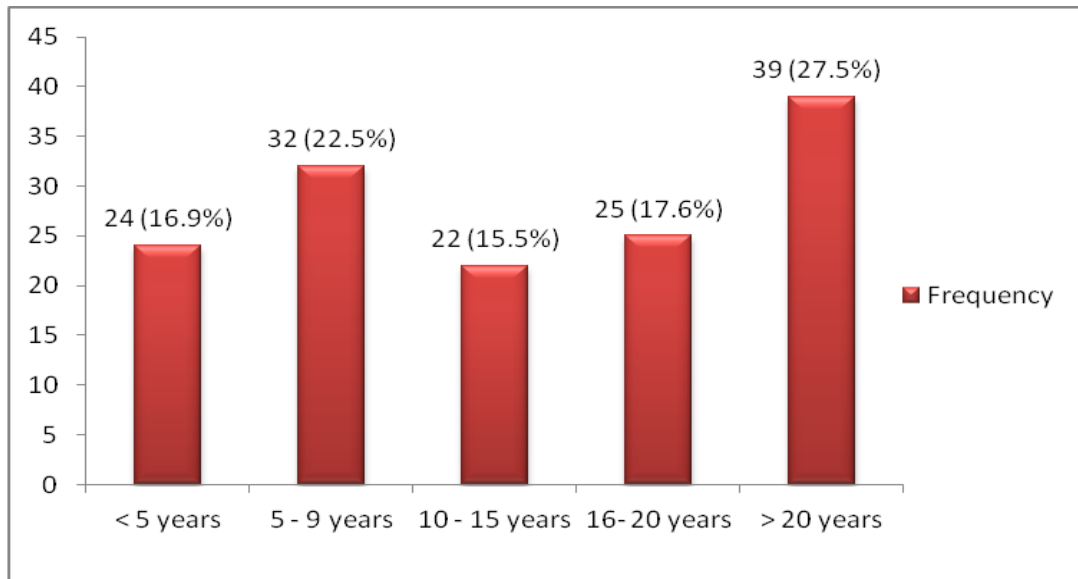


Figure 4.5
Working Experience Levels of Respondents in the FELDA Settlers Study

Figure 4.5 above shows the bar graph of the working experience levels of the respondents in the study conducted among the FELDA settlers at FELDA Bukit Tangga. Out of the 142 respondents, 24 or 16.9% of respondents have less than 5 years of working experience, 32 or 22.5% have 5 to 9 years of working experience, 22 or 15.5% of them have 10 to 15 years of working experience, 25 or 17.6% of respondents have 16 to 20 years working experience and 39 or 27.5% of them have more than 20 years of working experience. This shows that almost 60% of the respondents have at least 10 years of experience as FELDA settlers. This means that for majority of them, doing agricultural-related activities are the only things that they know how to do. Most of them do not have other experience and exposure to other sectors such as industrial or service sectors. Therefore, it is difficult for them to expand their career or to increase their income level by doing other activities. Furthermore, given on what they do for a living, there is no incentive to seek further knowledge on personal finance.

Table 4.1
Mean of Financial Literacy Score in the FELDA Sample

	N	Minimum	Maximum	Mean
Score	142	0	8	4.56

Table 4.1 shows the mean and standard deviation of the financial literacy score among the FELDA settlers in Bukit Tangga. The average score is 4.56, which is very much lower than the average score in the pilot study, 8.05. This is expected because the respondents in the pilot study comprise of Master's students who are more educated and live in urban areas. Moreover, the sample in the pilot study is only 40, while the size of the FELDA sample is 142.

Table 4.2
Analysis of Financial Literacy Tests in the FELDA Sample.

Questions	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Total answer correctly	139	131	101	73	38	18	3	96	2	45
Correctly percentage	97.9 %	92.3 %	71.1 %	51.4 %	26.8 %	12.7 %	2.1 %	67.6 %	1.4 %	31.7 %
Average score	4.56 or 45.60%									
List of questions	<ol style="list-style-type: none"> 1. The chance of winning a gift in UUM expo is 10 percent. If 1,000 people visit the expo, how many people are expected to win a gift? 2. If 5 people have the equal share of a RM2 million inheritance, how much will each of them get? 3. Suppose you had RM100 in a savings account and the interest rate was 2% per year. After 2 years, how much do you think you would have in the account? 4. If you inherit RM10,000 today and your neighbour inherits RM10,000 three years from now, you are actually receiving more money than your neighbour. 5. An investment with a high return is likely to have high risk. 									

Table 4.2 (Continued)

-
6. Stocks and bonds have many similarities with each other.
 7. Diversification in investment is important because it usually increases investment return.
 8. If you already have life insurance, you do not need medical insurance.
 9. Inflation can increase the real return of your investment.
 10. Which of the following normally has the highest risk?
-

(Appendix 4 represents the detail list of questions in Bahasa Malaysia)

Based on table 4.2 above, none of the respondents could answer all the questions correctly, which also implies that none of the questions scored a 100 percent based on the number of right answer. This is remarkably different than that in the pilot study, indicating that the level of financial literacy among the respondents in the pilot study is significantly higher than that of the FELDA settlers. The average score for the FELDA settlers is 4.56, which is significantly lower than the average score in the pilot study of 8.05. Question 1 and 2 recorded the highest score (97.9% and 92.3%), while question 7 and 9 recorded the lowest score (2.1% and 1.4%).

In terms of the questions with the lowest score, both the pilot study respondents and the FELDA settlers recorded similar findings, where both question 7 and question 9 recorded the lowest score. Question 7 is about diversification in investment while question 9 is regarding the effect of inflation on investment return. It can be inferred that these two questions are the toughest questions in the financial literacy test. It requires more than just general knowledge or common sense because the questions test the specific knowledge regarding investment and also inflation.

In addition, question 5 and question 6 also recorded low scores of 26.8% and 12.7% respectively. Question 5 asked about the concept of risk and return, while

Question 6 tested on the differences between stocks and bonds. Another question which recorded relatively low score is question 4 which tested the understanding on time value of money. Overall, it can be concluded that majority of the FELDA settlers in Bukit Tinggi still lack the basic awareness and knowledge about personal finance matters, particularly with regards to the understanding of risk and return, basic knowledge about investments, inflation and also basic time value of money. Some basic understanding and awareness of these areas are important for an individual in order to manage his or her personal financial matters. One of the main possible reasons for the low level of financial literacy may be due to low education, low income and also the fact that the FELDA settlers are living in rural area which is quite far from big cities.

4.2.2 Reliability Tests

Table 4.12 below shows the reliability statistics of the dimensions contained in the questionnaires used in the FELDA study. For each dimension, there are four items or questions asked and the total number of respondents in the FELDA study is 142.

Table 4.3
Reliability Statistics of the Dimensions in the Questionnaire

No	Dimension	No. of Items	Cronbach's Alpha
1.	Parental Factor	4	0.839
2.	Credit Management Behavior	4	0.982
3.	Saving Behavior	4	0.926
4.	Investment Behavior	4	0.998
5.	Retirement Planning Behavior	4	0.972

Based on the results shown in table 4.3, all five dimensions recorded Cronbach's Alpha more than 0.70, showing that the questions or items used for each dimension are highly reliable. This implies that questionnaire is reliable and the results can be used for further analysis in the study.

4.2.3 Correlation Analysis

Before regression analysis is conducted, correlation analysis is performed in order to determine the degree of correlation among all the variables selected in this study. The correlation table of the variables used in the FELDA study is included in the appendix.

Based on the correlation results, it is shown that the dependent variable, financial literacy score (SCORE) is significantly correlated with all the independent variables (EDUC, PARENT, CREDIT, SAVE, INVEST, RETIRE) except INCOME. All the correlation coefficients are positive and are significant at 1% and 5% level. The highest correlation is between financial literacy score (SCORE) and saving behaviour (SAVE), with a correlation coefficient of 0.955. The lowest correlation is between financial literacy score (SCORE) and EDUC, with a coefficient of 0.190.

Among the independent variables, level of income (INCOME) is the only variable which is not significantly correlated with any ones of the other variables. Meanwhile, PARENT is the only variable which is significantly correlated with all of the other variables, indicating that parental influence may be important in determining the financial literacy level among the FELDA settlers. The correlations among the independent variables show that not all variables are significantly correlated with each other, as in the pilot study earlier.

4.2.4 Regression Analysis

In this section, the results of the regression analyses between the dependent variable, (SCORE) and all the 7 independent variables (EDUC, INCOME, PARENT, CREDIT, SAVE, INVEST and RETIRE) are presented.

Table 4.4 below presents the model summary of the regression using the enter method.

Table 4.4
Model Summary of Regression – Enter Method

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.954	.909	.905	.612	1.858

Based on Table 4.4 above, it is shown that the R^2 of the regression is 0.909. This implies that the average variation of all the 7 independent variables are able to explain, on average, 90.9% of the variation in the dependent variable, the financial literacy score. This shows that only 9.1% of the variation in the dependent variable (SCORE) are not able to be explained by the independent variables and as such could be explained by other variables not included in this study. The R^2 obtained in this study is relatively higher than most of the previous studies where financial literacy score is the dependent variable. The Durbin-Watson statistic of 1.858 shows that there is no autocorrelation problem with the data used in the regression model.

Table 4.5
Results for the Coefficients of the Regression – Enter Method

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	.369	.305		1.209	.229
EDUC	-.226	.163	-.038	-1.384	.169
INCOME	-.048	.070	-.019	-.688	.493
PARENT	-.011	.019	-.023	-.578	.564
CREDIT	.345	.029	.809	12.015	.000
SAVE	.024	.045	.045	.542	.589
INVEST	.063	.029	.136	2.138	.034
RETIRE	.012	.015	.022	.767	.444

Dependent Variable: SCORE

Table 4.5 shows the results of the regression of the financial literacy score against the 7 independent variables in the FELDA study using the enter method. The results show that only CREDIT and INVEST are statistically significant. The other 5 independent variables are not significant in explaining the variation in the financial literacy score.

The CREDIT variable recorded a coefficient of 0.345, with a probability value of 0.000. This implies that as a person's credit management behaviour improves, his or her personal financial literacy score will be higher. This finding supports hypothesis 4 which states that good credit management or behaviour is positively related to the level of financial literacy.

The INVEST variable recorded a coefficient of 0.063, with a significant value of 0.000. This implies that as a person's positive attitude towards savings increases, his or her personal financial literacy score get higher. This findings support hypothesis 6 which states that good investment management or behaviour is positively related to the level of financial literacy.

The findings so far suggest that, using the Enter method, only credit management behaviour and investment behaviour significantly determine the level of financial literacy among the FELDA settlers in Bukit Tinggi. The other independent variables (EDUC, INCOME, PARENT, INVEST and RETIRE) are not significant, therefore, hypotheses 1, 2, 3, 5, and 7 are not supported by the regression results using the Enter method.

In addition to the Enter method, the Stepwise method is also conducted on the data and the results are presented in the next section.

Table 4.6
Model Summary of Regression of FELDA Sample - Stepwise Method

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.952	.907	.906	.561	1.870

Based on Table 4.6 above, it is shown that the R^2 of the regression is 0.907, about the same as in the Enter Method earlier. This implies that the average variation of all the 7 independent variables are able to explain, on average, 90.7% of the variation in the dependent variable, the financial literacy score. This shows that only 9.3% of the variation in the dependent variable (SCORE) are not able to be explained by the independent variables and as such could be explained by other variables not included in this study.

Table 4.7
Results for the Coefficients of the Regression – Stepwise Method

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.125	.154		.814	.417
CREDIT	.345	.021	.810	16.170	.000
INVEST	.075	.023	.162	3.240	.001

a. Dependent Variable: SCORE

Table 4.7 shows the regression of the financial literacy score against the 7 independent variables in FELDA sample, using the Stepwise method. The results show that only CREDIT and INVEST are statistically significant. The other 5 independent variables are not significant.

The CREDIT variable recorded a coefficient of 0.345, with a significant value of 0.000. This implies that as a person's positive attitude towards credit management increases, his or her personal financial literacy score get higher. This findings support hypothesis 4 which states that good credit management or behaviour is positively related to the level of financial literacy.

The INVEST variables recorded a coefficient of 0.075, with a probability value of 0.001. This implies that as a person's positive attitude towards investment increases, his or her personal financial literacy score get higher. This findings support hypothesis 6 which states that good investment management or behaviour is positively related to the level of financial literacy.

This findings show that the regression results are consistent for both the Enter method and Stepwise method.

4.3 Comparison Between High Financial Literacy Group Versus Low Financial Literacy Group

In addition to regression analysis, a t-test is also conducted to compare the high financial literacy group and the low financial literacy group. The sample of the study which comprises of 142 respondents is divided into two distinct groups – the high financial literacy group and the low financial literacy group. The cut-off point between the groups is the mean of the financial literacy score of the overall sample, which is 4.56. As a result, 78 respondents scored higher than 4.56, while 64 respondents scored lower than 4.56.

The following table 4.8 summarizes the t-test results of the comparison made between the two groups. The average financial literacy score represents the score in the financial literacy test where the full mark is 10. For the independent variables, the score represents the average Likert scale attained in the questionnaire whereby each dimension is represented by 4 questions.

Table 4.8

Comparison of High Financial Literacy Group Versus Low Financial Literacy Group

Group	Avg Fin. Lit Score	Avg Educ	Avg Income	Avg Parent	Avg Credit	Avg Saving	Avg Invest	Avg Retire
High (n=78)	6.012	1.140	1.443	3.642	3.462	3.351	3.804	2.418
Low (n=64)	2.746	1.064	1.571	2.377	1.428	1.782	2.056	2.167
Prob. of t- test	0.000*	0.176	0.336	0.000*	0.000*	0.000*	0.000*	0.114

*Significant at 1% level

Based on the t-test results in table 4.8, it can be concluded that the average financial literacy score of the High group (6.012) is significantly higher than the Low group (2.746), with a probability of 0.000. Furthermore, the parental influence, credit management behaviour, saving behaviour and investment behaviour between the two groups are also significantly different, where the High group recorded significantly higher average values than the Low group.

However, as far as the education level, income level and retirement planning behaviour are concerned, there is no significant difference between the two groups. This shows that higher education and higher income respondents as well as those who scored higher on retirement planning behaviour do not significantly score higher in the personal financial literacy test. The findings further reinforced the regression results earlier, whereby credit management behaviour and investment management behaviour are found to be significant determining factor of personal financial literacy test score.

4.4 Summary and Conclusion

The sample size of the study is 142 and it consists of the FELDA settlers and their family members. The findings of the questionnaire reveal that generally the most significant problems faced by the FELDA Bukit Tangga settlers are – low education level, low income, limited scope of working experience and relatively low level of financial literacy level. In the financial literacy test, the respondents scored badly on questions about inflation, risk and return, stocks and bonds, diversification and time value of money.

In the regression analysis, using both Enter and Stepwise method, only CREDIT and INVEST variables are found to be significant. This shows that credit management behaviour and investment behaviour are the most important attributes that can significantly affect an individual's personal financial literacy level, as far as the sample of this study is concerned. This finding is consistent with many earlier findings such as that of Lusardi and Mitchell (2011b), where it was found that respondents who had higher financial literacy were more likely to plan for retirement, more likely to have an emergency fund, have investment portfolio and less likely to engage in poor credit card behaviours. In Behrman *et al.* (2010b), the findings show that financial literacy enhanced peoples' likelihood of contributing to their pension savings and to invest. Meanwhile in the study by Capuano and Ramsay (2011) the findings show that participants with higher financial literacy scores were associated with greater amounts of investments and good credit management.

However, five other variables are not significant: EDUC, INCOME, PARENTAL, SAVE and RETIRE. This shows that unlike many other earlier

studies, particularly in the United States, education level, income level, parental influence, saving behaviour and also behaviour towards retirement do not play significant role in determining an individual's personal financial literacy level in Malaysia, as far as the sample of this study is concerned.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Introduction

This study is conducted to assess the level of financial literacy and also to examine the determinants of financial literacy level among the settlers in FELDA Bukit Tangga, Kedah. As such, a financial literacy test that is based on previous studies and also a questionnaire which comprised of items to identify determinants of financial literacy level were developed. The financial literacy test and questionnaire developed were initially conducted on the pilot study sample which comprise of 40 Master's students at UUM Kuala Lumpur. The selection of this sample for the pilot study is so that comparison can be made against the FELDA settlers with regards to the financial literacy score and its determinants. Then, the same set of financial literacy test and questionnaire were conducted on the FELDA Bukit Tangga settlers, with a total number of 142 respondents.

5.2 Summary of Major Findings

The sample of the study comprise of 142 respondents, whereby 63% of the respondents are male and 37% are female. About 46% of them are above 45 years old and 90% of them have at most SPM certificate. Almost 63% of them are earning less than RM 2, 000 per month and 81% of them have worked at the FELDA settlement for more 10 years. The findings of the questionnaire reveal that generally the most significant problems faced by the FELDA Bukit Tangga settlers are – low education level, low income, limited scope of working experience and relatively low level of financial literacy level.

The mean financial literacy score for this group is 45.6% and none of the respondents managed to get score of 100%. In the financial literacy test, the FELDA respondents scored badly on questions about inflation, risk and return, stocks and bonds, diversification and time value of money. The correlation analysis show that financial literacy score is significantly correlated with five variables, namely INCOME, , CREDIT, SAVE, INVEST and RETIRE.

The regression analysis results show that only two variables are significant to determine the level of financial literacy using both of Enter method and Stepwise method in regression analysis, namely credit management behaviour (CREDIT), and investment behaviour (INVEST). This implies that for the FELDA settlers in the sample, the variables (EDUC) level of education, (INCOME) level of monthly income, (PARENT) parental influence, (SAVE) saving behaviour and (RETIRE) retirement planning behaviour do not significantly influence the personal financial literacy level. The results suggest that as far as the FELDA settlers in Bukit Tangga is concerned; those who scored relatively higher in the financial literacy test are those who are better in managing their credit and have good investment behaviour.

Credit management consists of managing one's utility bills, car loan, housing loan and credit cards. Since majority of the FELDA settlers do not have housing loans and credit cards, their credit management concentrated only on utility bills and car loans. The questionnaires reveal that there are quite a number of the FELDA settlers who make the payments on time, despite located quite far away from a town centre.

Good investment behaviour consists of having regular monthly provision as a percentage of income, in order to make some forms of investments. Most of the FELDA settlers who invest choose ASB as their main investment instrument. This finding is consistent with the finding in Scott (2012) which found that people who have systematic and proper investment plan had higher financial literacy scores compared to those without a proper investment plan.

To further reinforce the findings in the regression analysis, a t-test to compare the respondents who have higher literacy score against the respondents who have lower literacy score is conducted. The findings verified that both credit management behaviour and also investment management behaviour of the high-scoring group are significantly higher compared to the low-scoring group.

5.3 Implications of Research Findings

Based on the analysis of the results, the three main objectives of the study have been accomplished. The first objective is to identify the most significant personal financial problems faced by FELDA settlers in Bukit Tinggi. As discussed in the previous section, the most significant problems are low education level, low income, limited scope of experience and low financial literacy level. The personal finance areas they lack the most are inflation, risk and return, investment and also time value of money. The second objective is to assess the level of financial literacy among FELDA settlers in Bukit Tinggi. Overall, the mean score is 45.6%, which is relatively lower than the scores obtained by many previous studies conducted both local and abroad. The third objective is to investigate the factors determining the

personal financial problems of FELDA settlers in Bukit Tinggi. The findings show that only two variables, namely, credit management behaviour and also investment management behaviour are significant in determining the level of personal financial literacy among the FELDA settlers. The findings support hypotheses four and six of the study.

The findings of the study have a significant implication particularly to the government agencies that are responsible for the FELDA settlements. Based on the findings, it is clearly shown that the level of personal financial literacy of the FELDA settlers is very low. They are still lacking in terms of awareness and basic knowledge in various areas such as risk and return, investment, inflation and also time value of money. Therefore, proper and focused training and awareness programs to overcome these weaknesses can be initiated by FELDA management and also by the relevant agencies. A structured module can be developed and used for a training program aimed at increasing the awareness and basic knowledge of personal finance matters among the FELDA settlers in Malaysia.

Furthermore, the findings also reveal that the settlers have relatively low income, low education level and also a very limited scope of working experience. Low education level affects their awareness and basic knowledge of financial matters, whereas low income may deter their motivation to be interested in personal finance matters. Moreover, there is wide-spread belief that personal finance is only for the rich. The limited scope of working experience refers to the fact that most of the settlers could only do FELDA-related agricultural activities. Therefore, they do not develop other skills that can make them marketable elsewhere or that can make

them earn income from other activities. The FELDA management and relevant agencies can devise programmes that can enable the FELDA settlers to add some basic skills in other areas such as business, auto-mechanic or even logistics.

5.4 Recommendations for Future Research

Based on the limitations and also the findings of the study, the following recommendations are suggested for future research into this area.

- 1) Future study can add a few more FELDA settlements representing each region in the country (North, South, East and West) and also those which are also close to big cities. This is to make sure the generalizations made from the study can be applicable to the overall FELDA settlements in the country.
- 2) In addition to FELDA settlements, future research may add other related settlements such as FELCRA and RISDA settlements. This is to examine whether the settlers in these settlements have the same level of personal financial literacy and also share the same financial problems.
- 3) In addition to financial literacy test and questionnaire, it is suggested that future study uses qualitative research method such as in-depth interview and also observation. This is in order to dig out more information from the settlers that cannot be obtained through the use of questionnaire. Furthermore, observation can actually validate whether or not they have answered correctly in their questionnaires.

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