

**FINANCIAL PLANNING FOR POST-RETIREMENT AMONG
URBAN MALAYSIANS IN KLANG VALLEY**

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FINANCIAL PLANNING FOR POST-RETIREMENT AMONG URBAN MALAYSIANS IN THE KLANG VALLEY

ABSTRACT

This study examines the extent Malaysians make financial preparations and their readiness for retirement and the predictors of financial planning for post-retirement. The study delved into the concept of financial planning, life-cycle theories of savings, consumption, and investing, and the critical issues surrounding the study of retirement, particularly the financing of consumption during the post-retirement period. Data was collected using questionnaire survey method on urban Malaysians in the Klang Valley areas. A total of 990 questionnaires were distributed to respondents with a 55.2 percent return rate. The results revealed that twelve of the hypotheses and sub-hypotheses were supported and five were not supported. The study found that education, spouse age, home ownership, and current financial resources are significant demographic variables that have a positive relationship with financial planning for post-retirement.

There is a significant perception towards financial planning for post-retirement among the older age cohorts (age above 46 years). This difference in perceptions among the different age cohorts could be attributable to younger age cohorts having lower income and higher financial commitments. While the younger age cohorts may be aware of the importance of financial planning, they may choose to defer their saving decisions as they feel that time is still on their side. The study found a positive relationship between consumption and financial planning for post-retirement. Expected retirement age was found to have no moderating effect on the relationship between personal orientations towards retirement planning and financial planning for post-retirement. This finding has important implications for policy makers to spearhead a campaign for a higher level of

financial literacy in schools and educational institutions and to inculcate the importance of further savings among young Malaysians in beginning of their career. This is to supplement the expected government pension for the civil servants and the employees provident fund contributions (EPF) for people in the private sector. The policymakers will have to review their economic strategies of relying heavily on private consumption to stimulate domestic economic growth. In view of the high household debts and longer life span now, more Malaysians may not be able to retire at the expected retirement age of 60 years. As the number of older Malaysians is projected to rise to 3.4 million by 2020, this phenomenon has major implications for policy makers to review the existing social security framework for retirees and the pressing need for medical care and housing for Malaysian retirees.

KEWANGAN PERANCANGAN SELEPAS PERSARAAN ANTARA RAKYAT MALAYSIA KAWASAN BANDAR DI SEKITAR LEMBAH KELANG

ABSTRAK

Kajian ini mengkaji sejauh mana rakyat Malaysia membuat persiapan kewangan dan kesediaan mereka untuk persaraan dan jangkaan perancangan kewangan selepas persaraan. Kajian menggunakan konsep asas perancangan, teori kitaran hidup mengenai simpanan, penggunaan, dan pelaburan, serta isu-isu kritikal yang berkaitan kajian selepas bersara, terutamanya pembiayaan penggunaan dalam tempoh selepas persaraan. Data dikumpul menggunakan kaedah soal selidik kepada rakyat Malaysia bandar di kawasan bandar di Lembah Klang. Sebanyak 990 borang soal selidik telah diedarkan kepada responden dengan kadar pulangan 55.2 peratus. Hasil kajian menunjukkan bahawa dua belas hipotesis dan sub hipotesis telah disokong dan lima tidak disokong. Kajian mendapati bahawa pendidikan, usia pasangan, pemilikan rumah, dan sumber-sumber kewangan semasa adalah demografi pembolehubah yang mempunyai hubungan yang positif dengan perancangan kewangan selepas persaraan. Terdapat persepsi yang signifikan ke atas perancangan kewangan selepas persaraan di antara mereka yang berumur lebih tua (umur 46 tahun ke atas). Perbezaan persepsi antara mereka yang berbeza umur mungkin disebabkan mereka umur yang muda mempunyai pendapatan yang lebih rendah dan pada masa yang sama mempunyai komitmen kewangan yang tinggi. Walaupun mereka yang berumur lebih muda mungkin menyedari pentingnya perancangan kewangan, mereka mungkin memilih untuk menangguhkan keputusan membuat simpanan kerana mereka merasakan masa mempunyai banyak masa. Kajian mendapati hubungan positif di antara penggunaan dan perancangan kewangan selepas persaraan. Umur persaraan didapati mempunyai tiada kesan menyederhanakan

hubungan antara orientasi peribadi ke arah perancangan persaraan dan perancangan kewangan selepas persaraan. Dapatan ini mempunyai implikasi yang penting bagi pembuat dasar untuk menerajui kempen celik kewangan di sekolah-sekolah dan institusi pengajian tinggi dan memupuk kepentingan simpanan di kalangan remaja Malaysia yang memulakan kerjaya mereka. Ini adalah untuk menampung pencen yang di perolehi oleh penjawat awam dan caruman Kumpulan Wang Simpanan Pekerja (KWSP) bagi mereka di sektor swasta. Pihak penggubal dasar perlu mengkaji semula strategi ekonomi sedia ada yang banyak bergantung kepada penggunaan individu untuk merangsang pertumbuhan ekonomi domestik. Memandangkan hutang isi rumah yang tinggi dan jangka hayat lebih lama sekarang, lebih ramai rakyat Malaysia tidak boleh bersara pada umur jangkaan persaraan 60 tahun. Dengan bilangan rakyat Malaysia yang berumur lebih tua dijangka meningkat kepada 3.4 juta menjelang 2020, fenomena ini mempunyai implikasi yang besar untuk penggubal dasar untuk mengkaji semula rangka kerja keselamatan sosial yang sedia ada untuk pesara dan keperluan yang mendesak bagi penjagaan kesihatan dan perumahan bagi pesara Malaysia.

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ABBREVIATIONS

FSA	Financial Services Authority
EPF	Employees Provident Fund
LIAM	Life Insurance Association of Malaysia
DB	Defined Benefit
DC	Defined Contribution
GDP	Gross Domestic Product
AKPK	Credit Counselling and Debt Management Agency
SOCSSO	Social Security Organisation
PTF	Pension Trust Fund
AFF	Armed Forces Fund
AARP	American Association of Retired Persons
SPSS	Statistical Package for Social Scientists

1.1 Introduction

This study examines the extent urban Malaysians in the Klang Valley make financial preparations and their readiness for retirement and the predictors of retirement plans based on the life-cycle model and the critical issues surrounding the study of retirement based on the life-cycle theories of savings, consumption, investing, and financing consumption during the post-retirement period. This chapter outlines the problem statement, research questions and objectives, scope of study, justifications of the study, and introduces the concept of financial planning for post-retirement.

1.2 Problem Statement

Most people hope that they are saving enough, while others think that it is too difficult to know whether they are saving enough or not (FSA¹ 2002a). People either do not understand their pension predictions, or these are either not understood or thought not to be relevant because retirement is still a long way off (FSA 2002a). It has been estimated that 85 percent of the world's households (Holzmann *et al.*, 1999, Willmore, 2007) and 90 percent of its working-age population (Gillion *et al.*, 2000, Willmore, 2007) lack any formal retirement income schemes to secure their income security in old age. As a greater share of retirement resources is invested in risky assets, there is a greater probability that individuals reach their planned retirement age with substantially less certainty in their retirement assets (Sevak, 2002).

¹ Financial Services Act (United Kingdom)

A secure retirement in the future involves sacrificing some consumption today. The need for saving is of particular importance if we look ahead to the rising future costs of providing for the consumption needs of an increasing population of elderly people (McNeil and Hunter, 2014). Sustainable income flow, not the stock of wealth, is the objective that counts for retirement planning (Bodie, 2003). The most obvious pitfall in self retirement planning is that it shifts all retirement-planning risks – not saving enough, making poor investment choices, outliving savings – to untrained individuals, who often do not have the time, inclination or know-how to manage them. But even when good choices are made, a market meltdown near the end of their working careers can still blow their savings to smithereens. The sharp market swings in 2008/9 have led some investors to dump their investments in equities at depressed levels, locking in losses that may severely diminish their retirement savings. So, even if investors follow the golden rules of investing – saving early and diligently, holding a broadly diversified investment mix, never tapping their savings until retirement – their success would still depend largely on the performance of the stock and financial markets. Falling stock prices, lower interest rates and reduced dividends from previously stalwart companies may also reduce retirees' monthly income, requiring them to reduce spending or consider new ways to get income out of their assets.

We live in a time of great economic changes which impact greatly the way people spend, save, invest, and manage the risks to protect their standards of living in their retirement years (McNeil and Hunter, 2014). Economic globalisation and increased urbanisation raise concerns regarding the future abilities of traditional family systems of support to cater for the increasing elderly population. There are concerns that

westernisation, through the process of economic globalisation, will see an erosion of familial support and filial piety associated with Asian cultural values (Martin, 1989; Schulz, 1997).

With social and medical advancements, Malaysians are living longer. The average life expectancy in Malaysia has increased – from 47 years old in the 1950s to 72.6 years old for men and from 48.5 years old to 77.2 years old for women (Department of Statistics, Malaysia 2013). Better healthcare, availability of advanced medical technology, improved standards of living, higher education and literacy, have contributed to this change (Arokiasamy, 2002). This means that more Malaysians are spending longer times of their lives in the post-retirement period although the retirement age for civil service had been increased from 58 years old to 60 years old effective from 2012. The Malaysian government has raised the compulsory minimum retirement in the private sector to 60 years old effective from July 2013 (from 55 years old previously) (Samy, 2013). Because Malaysians can expect to live another 15 years or more after their retirement, most people are still quite fit to continue working. Employers in the private sector are at liberty to set new terms once an employee retires. Typically, the employee is put on an annual contract subject to his medical fitness, and has to endure uncertainty every time it is due for renewal. With declining fertility and longer life expectancy, Malaysia's population older than 60 years increased from 1.5 million in 2000 to 2.4 million in 2012 (Department of Statistics, 2013). By 2020 it is estimated that the number of older persons will be 3.4 million and by 2035, Malaysia will be in the category of aging nations as defined by the United Nations that is with older persons constituting more than 15 percent of the population (10th Malaysia Plan, 2011-2015).

The increase in life expectancy is one of the great achievements in any modern society. But increases in life expectancy impose substantial economic consequences for the population and country. When life expectancy increases, people are more likely to outlive their working years. An increase of time spent in retirement raises the need for retirement income. This affects in particular savings rates, social transfers and the welfare of the elderly (Bloom *et al.*, 2003, 2007). These aspects have crucial implications for economic growth, consumption levels, and intergenerational transfers (Deaton and Paxson, 1997; Auerbach *et al.* 1999; Mason *et al.*, 2006, Peglow, 2010). A longer time spent in retirement may endanger the long-term financial sustainability of a country's social security systems.

Improving longevity expands the life time, but the gained life years may not be healthy ones especially in older ages. This implies that if longevity is accompanied by ill health and disability in old age, a proportional life cycle change would decrease the percentage of time spent in retirement in a healthy state. In addition to adjustments of the life cycle caused by health or disability, constraints and incentives of the social security systems are of particular importance for the evolution of life cycles – for example, decisions on retirement age are strongly dependent and influenced by institutional factors. There is a strong relationship between the effective retirement age and the age at which benefits from pension plans can be drawn (Peglow, 2010). If we were to follow the life-cycle model, households should save and accumulate wealth to provide for their retirement consumption. The key puzzle then is why people still do not save. The literature on saving behaviour has provided evidence that people do not save and accumulate enough, even among those nearing retirement. Given that earnings will decline when

people retire, such behaviour can imply poor living standards for the elderly (Hubbard *et al.*, 1995). Low saving could restrain the growth of investment and output and thus the tax base and the future economic of any country.

With increasing longevity, understanding the issues of savings behaviour and how savings are invested to secure post-retirement income become of paramount importance. The majority of Malaysians relies on the little nest egg built up through mandatory contribution to the Employees Provident Fund (EPF) which may not necessarily be enough for their retirement income. Table 1.1 below shows the average savings of EPF members at 54 years of age, one year before entitlement to full withdrawal, is about RM70,283 (US\$21,297). As at 31 December 2013, the EPF had 13.92 million members, out of which only 6.53 million are active contributors (EPF Annual Report, 2013). Based on a total labour force in the country of 13.8 million in 2014 (Department of Statistics, 2014), the EPF coverage as measured by the ratio of active EPF contributors to the labour force is about 47.3 percent, which mean that about 52.7 percent of the labour force does not contribute to the EPF. However, employees in the public sector of 1.4 million (Source: Pemandu², 2014) which comprise about 10.1 percent of the total labour force are covered by government pension scheme for civil servants. This would increase the overall coverage of the labour force to about 57.4 percent. It is therefore estimated that about 42.6 percent of the country's labour force is not covered by any formal retirement scheme.

² Performance Management and Delivery Unit, Prime Minister's Department.

A survey conducted by Professor Mokhtar Abdullah in 1995 showed that the EPF lump-sum retirement benefits were found by the majority of retirees to be inadequate to sustain life after retirement. In most cases the benefits were exhausted within three years of receipt at age 55 (Beattie, 1998). A second survey in 2004 shows an improvement, that retirees managed to stretch their EPF withdrawals up to 10 years (Habib, 2007). According to the EPF annual report (2013), 84 percent of active members have less than RM100,000 contributed to the EPF savings, which is insufficient to see them through twenty years of post-retirement.

Table 1.1: Average Savings of EPF members at 54 years of age

Year	Active Members		Inactive Members		Average Savings (RM)
	No. of Members	Average Savings (RM)	No. of Members	Average Savings (RM)	
2009	54,939	139,816	134,556	22,707	56,659
2010	62,028	142,968	148,844	23,704	58,785
2011	62,358	149,216	146,172	23,389	61,016
2012	68,151	158,302	157,425	24,155	64,684
2013	73,168	166,650	160,131	26,250	70,283

Source: EPF Annual Report 2013

With about 90 percent of the country's total labour force employed in the private sector, this exclusive reliance on mandatory savings pillar in the private sector through the EPF results in the consequent lack of protection against longevity and inflation risks, lack of survivors' benefits, and inadequate replacement rates even at the time of retirement. This arrangement has also been found to be particularly discriminatory against women. Women as a group have lower exposure to labour force during their lifetime, and when

they do, they as a group earn less than men and tend to live longer than men, and would require greater resources in old age. An important characteristic of retirement financing arrangements in Malaysia has been reliance on family, especially children. However, lower fertility rates, industrialisation, urbanisation, changing attitudes and values, expectations leading to more individualistic lifestyle are gradually undermining this reliance (Asher, 2002).

It has been estimated by the Life Insurance Association of Malaysia (LIAM) that “less than 5 percent of Malaysians are financially prepared to retire” (Habib, 2007, Mok *et al.*, 2007). The president of LIAM, Ng Lian Lau sum it as: “that those in their 20s think they are too young to think about retirement, while those in their 30s and 40s tend to believe they are doing enough because they have their EPF savings, and those who are 55 feel it is just too late for them. Only 40 percent of Malaysians have taken life insurance to cover themselves. At 55, most people cannot afford to retire” (Habib, 2007). Folk, Beh and Baranovich (2012) revealed that savings and retirement resources adequacy problems in the low-income and mid-income groups were serious, as 38.2 percent of the total employed Malaysians in the “informal sector” in 1998 were not covered by the EPF and any pension scheme. Longer life expectancy coupled with increasing medical cost and the lack of adequate social support increases the probability of falling into poverty. Aging population is prone to distress in many developing countries and Malaysia is no exception (Mok *et al.*, 2007).

1.3 Research Objectives

There is a growing trend around the world where the primary responsibility for providing an adequate retirement income has shifted from governments and employers to the individuals (Bodie, 2002). Pension plans are shifting from the defined-benefit (DB) form to defined-contribution (DC), in which plan participants must make investment decisions (Bodie, 2002). Whereas employers bear the financial risk in DB plans, workers bear the financial risk in DC plans (Sevak, 2002). Together with increasing longevity, this substitution of DB plans with DC plans have make social security arrangements less certain, compounded by increasing health care costs, and other social factors such as elderly parents no longer living with their children as they used to do.

Increasingly, the very complex problem of saving and investing to provide for a secure retirement income is being transferred to the individuals who may not have the knowledge nor the training to handle the task. This assume that people are capable of making the complex calculations necessary to determine how much to consume and how much to save, and that the households have the requisite willpower to delay consumption in order to provide for the future. There may be many who may think they are adequately covered by government pension scheme or EPF and consequently are not aware of the need to take a more proactive approach to prepare for their own retirement. With this in mind, this study seeks to examine questions highlighted below regarding the various alternative perceptions of financial planning in the Malaysian context. In the absence of a comprehensive old-age social security scheme in Malaysia, it is critical that

people plan for their own financial retirement needs to protect themselves from social and economic distress in their old age.

Financial planning for post-retirement seeks to address the following research questions:

1. What are the perceptions among urban Malaysians from different age cohorts relating to financial planning for post-retirement?
2. Is there a relationship between personal orientations and financial planning for post-retirement?
3. Does expected retirement age moderates the relationship between personal orientations toward retirement planning and financial planning for post-retirement?
4. Is there any relationship between current financial resources and financial planning for post-retirement?
5. Does parental retirement planning influence financial planning for post-retirement?
6. Is there a relationship between consumption during work life and consumption during post-retirement?

According to the life-cycle theory, people will save while young and working, and dissave when old and retired. Within this context, the main dependent variable in this study is the financial planning for post-retirement among urban Malaysians in the Klang Valley; the independent variables are the different age cohorts, personal orientations, financial resources, parental retirement planning, and consumption, with expected retirement as the moderating variable.

Based on the discussion above and the justifications outlined in Section 1.5, the research objectives for this study are:

1. To examine the perceptions among urban Malaysians from different age cohorts towards financial planning for their post-retirement;
2. To study the relationship between personal orientations and financial planning for post-retirement;
3. To study the moderating effect of expected retirement age on the relationship between personal orientations toward retirement planning and financial planning for post-retirement;
4. To study the effect of current financial resources on financial planning for post-retirement;
5. To study the extent of parental retirement planning influence on financial planning for post-retirement; and
6. To study the relationship between consumption and financial planning for post-retirement.

1.4 Scope of Study

This dissertation examines the extent urban Malaysians make financial preparations and their readiness for retirement, and the predictors of retirement plans. A research framework was tested, identifying several variables affecting financial planning expectation and planning outcomes such as age cohort, current financial resources, parental retirement planning, consumption, personal orientations, and expected retirement age. The study further examines the issue by means of a cohort analysis to examine whether belonging to a particular age group relates to differences in attitudes

toward retirement and securing financial security in the post-retirement period among urban Malaysians.

1.5 Justifications of the Study

Most people desire a high standard of living and look forward to a comfortable retirement. And yet most people think retirement planning is important only when they are about to retire. Current lifestyles entail financial commitments and encourage consumption. People opt for current satisfaction, leaving not enough for investment or concern over future security. For those in the lower-income bracket and those just starting their careers, the priority, logically, would be survival for the present time.

The growing importance of defined contribution pension arrangements is shifting the responsibility for managing retirement assets and income to the individuals and households (Bodie, 2002). Individuals have to assume more responsibility for their own financial well-being after retirement. This has increased the sensitivity of retirement security to variation in the returns of selected investments and assets. Are individuals trained and sophisticated enough to make such financial decisions for themselves? They face the challenge of deciding how to allocate their retirement portfolios across broad asset classes and across many different financial products. Asset allocation decisions have important consequences for retirement wealth accumulation (Poterba, Rauh, Venti and Wise, 2006).

As Malaysians live longer, it is crucial to study people's decisions and for policy makers to be aware of the significance of people behaviour of planning for retirement and post-retirement financial needs and how savings are invested to generate income on a sustainable basis during retirement. Increased longevity, inadequate personal savings and the lack of social security has raised concerns over the quality of post-retirement life. As a result, financial planning for post-retirement and financing has become a leading human resource issue which will grow in importance. Saving and planning for retirement can be a complex task, and many individuals may perform it very imperfectly, even postponing the decision until it is too late (Lusardi, 2001). Because lifetimes are uncertain, people also want and need to insure against the uncertainty of life expectancy. While financial planning is relatively developed in developed countries like the United States, United Kingdom, and Australia, it is still considered very much to be in its nascent stage in Malaysia.

This study incorporated key principles of the life-course perspective adopted from the life-cycle theory, which place financial planning for post-retirement in a sociohistorical and contextual framework. The findings of this study is of significance not only to advance our knowledge of saving for retirement in Malaysia, but also for policymakers to examine the effectiveness and consequences of different public pension schemes, provident fund such as the EPF, and the introduction of private retirement saving scheme. This study will attempt to provide information on applied solutions by focusing on problem areas as a vital stepping stone to the well-being of Malaysians in old age.

The subject matter underscores the importance, complexities and timely nature of studying retirement expectations and preparations in Malaysia.

Only a small body of research has examined the abovementioned preparatory behaviours and their predictors. Treussard's (2008) study on life-cycle planning focused on optimal career risk management and retirement planning from the perspective of human capital. Kim (2004) studied retirement transitions in terms of shocks to household resources; and Dan (2004) focused on structural, personal, work, and family predictors of planning. In Malaysia, Folk (2012) focused on financial education and filial piety factors, while Husniyah (2010) which focused on financial well-being and risky investments among families. The reasons for this can be attributable to the fact that many published studies of financial planning for retirement are based on secondary data sets, which were not primarily designed to study planning, or are based on economics, a field that is not as interested in behavioural activities compared to sociology. Additionally, while retirement planning sessions, employee benefit specialists, and financial experts are not new, they have become much more pervasive in society in recent years. Consequently, it is difficult to compare research on the predictors of and pervasiveness of these activities from say the 1970s and 1980s and today, since the availability of these services is vastly different now. One reason has been the growth of the financial services industry including businesses that manage people's savings and investments. This study has great implication on a subject of great concern which is the increasing household debts in the country. Another implication is

the growing phenomenon of population aging. Both these implications and its impact on the economy are further elaborated under 1.5.1 and 1.5.2 below

1.5.1 Financial Planning and Increasing Household Debts

Since the Asian financial crises in the late 1990s, several countries including Malaysia have tried to stimulate domestic consumption to boost national growth rates. Two key

ways to do that were to lower interest rates and ease the regulation of credit. Intensive marketing by banks and financial institutions have lowered the minimum-income bar for credit cards and mortgage and other consumer loans. Private consumption has played a significant role in simulating domestic demand in the Malaysian economy with a robust performance of 7.6% in 2013 mainly supported by stable employment conditions, continued strong wage growth and easy access to credit (Bank Negara, 2014).

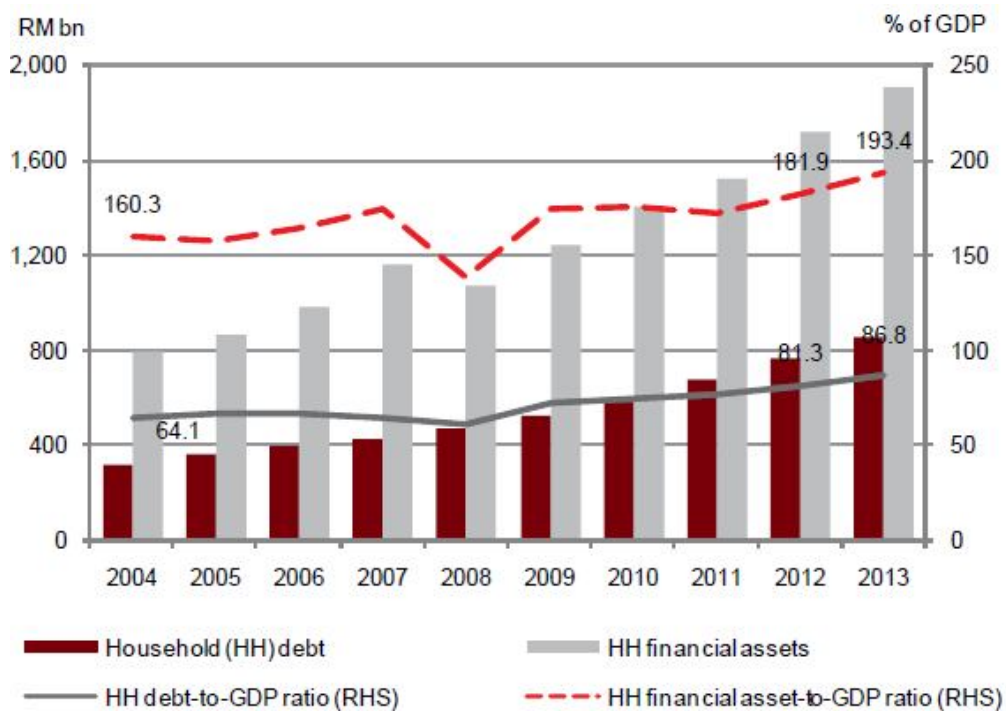
Banks started to target household consumers more aggressively due to perceived lower credit risks after major corporate defaults during the Asian financial crisis in the late 1990s. At the same time, good quality corporations started to tap more into the lower-cost bond markets for their funding needs. Because of this increasing dependence on private consumption in recent years as a key driver of economic growth in the country, the levels of household debts in Malaysia have reached relatively high levels. This fact which has not been highlighted often enough has serious policy implications which make understanding the relationship between private consumption and income crucial to

the study of savings for the individuals and investing for the post-retirement period. As lending to households forms an increasing segment of the country's financial system, it is crucial for policymakers to be aware of the implications for monetary policy and financial stability both to the country and family. As with most forms of credit, the rapid development of household debt can create vulnerabilities if the debt reaches an unsustainable level. Increasing indebtedness means that the family and household sector has more exposure to interest rate risks and shocks to household income and debt servicing capability (Norhana and Toh, 2009).

Prior to the 1997 Asian Financial crisis, the share of household debt in the total outstanding bank loans was relatively small compared to the share of loans extended to the business and corporate sector. According to MARC Analytical Insight (2011), household debt in the banking sector which stood at 16% in 1998 climbed to 56% in 2010. That's more than threefold increase in a period of approximately 10 years. Malaysia's household debt has since snowballed to 86.8 percent of GDP in 2013 (81.3% in 2012) (Figure 1.1). This ratio is the highest in Asia, second to Japan's 130 percent. It is also much higher than ratios of 10 to 33 percent for other developing countries such as India, Indonesia and Thailand. Malaysia's household debt-to-GDP ratios is ironically also higher than most developed countries, with the exception of the US (102%) and UK (109%), both of which were facing housing related problems. Malaysia's household debts by end 2013 reached RM854.3 billion, an increase of 11.7% over 2012 (Source: Bank Negara Financial Stability and Payment Systems Report 2013). The debt-to-GDP ratio does not take into account the government's contingent liabilities, which include government-backed bonds and other guaranteed debt by government-linked

corporations. This phenomenon is not unique to Malaysia. As living standards rose globally, consumer demand for goods increased, and availability of easy credit encouraged a shift from saving to spending funded by debts. Also, debt repayment ratio i.e. the percentage of household's income required to repay household debts is used to determine the burden of debt of households.

Figure 1.1: Key Household Debt Indicators



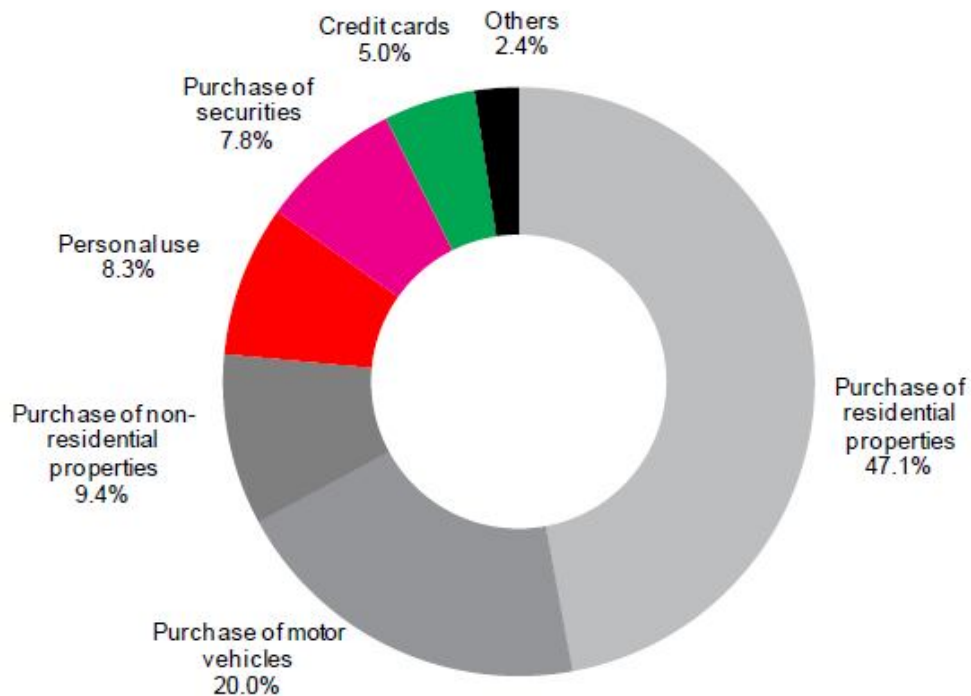
Source: Bank Negara, CIMB Research 2014

According to Bank Negara and CIMB Research reports, the composition of household debt at end-2013 (Figure 1.2) comprises of property loans (56.5%), automobiles (20%), personal loans (8.3%), credit card (5%), purchase of securities (7.8%), and others

(2.4%). Higher repayments for debt taken to buy houses, cars, and for other consumption needs would eventually bite into private consumption and saving for retirement. There is a great need to balance between consumption and savings. However continued rising household debt may constrain consumption in the event of any rise in interest rates and debt service costs. According to the World Bank's Economic Monitor report (2013), household expenditures will take a hit as the government continues to cut

subsidies and other policies. Reduced energy subsidies, not only in terms of additional fuel price hikes but also increase in electricity tariffs will have a knock-on impact on consumer prices. Private consumption may therefore be negatively impacted by possible interest rate hikes and tighter credit markets.

Figure 1.2: Household Debts by Composition



Source: Bank Negara Malaysia, CIMB Research (2014)

The competition is so great amongst the credit card companies and banks that people are constantly sent pamphlets, brochures and teasers trying to encourage them to transfer their accounts and spend. However, this unrestrained use of credit cards comes at a heavy price, not only to the cardholders but also to society at large. The reckless lending to household consumers not only contributes to a rising tide of personal bankruptcies

but bears a social cost of broken families, domestic violence, and even suicides. Such event had occurred in South Korea where several large banks had suffered heavy losses in 2002 arising from what analysts said was a pattern of “reckless lending to consumers without properly assessing the creditworthiness of consumers”. A similar pattern had been observed in other countries in Asia, Latin America, and Russia.

It can eventually cut into the banks or financial institutions’ ability to finance business loans. Drawing funds away from business investment can be a serious drag on economic growth. Banks reduce their capital bases, interest rates are forced up, capital becomes harder for businesses to raise, and companies slip into bankruptcy. Indeed, corporate bankruptcies in South Korea, Hong Kong, Thailand, and elsewhere in Asia have risen over recent years, as many businesses have been unable to find new sources of financing from banks weighed down by portfolios heavy with non-performing loans. The decline in investment is often compounded by the binge-and-purge effects of high consumer debt, in which consumers run up huge credit card bills and then spend virtually nothing for months. This cycle can make it hard for retailers to make long-term business plans (Kurlantzick, 2003). Prominent economists have begun to realize the potential dangers excessive consumer lending poses to the developing world. As the

1997's Asian financial crisis demonstrated, crises in one developing nation's economy can rapidly spread to others, sparking a wave of destabilization throughout the world economy. The mid-1990s show that many of the countries that experienced rapid run-ups of consumer credit are those which went through snaps of boom and bust arising from the sharp growth in easy personal credit.

In recognising the concerns over rising consumer debt, the central bank, Bank Negara set up a debt negotiation agency known as the Credit Counselling and Debt Management Agency (AKPK) in 2006 to provide financial counselling and help borrowers deal with late payments and financial difficulties; while banks could easily check borrowers' borrowing status before granting them any new loans through a data system set up by the central bank to capture all outstanding loans. Since its set up, AKPK had reached out to 248,491 people up to 2013 (source: AKPK); with 40 percent of them enrolled in its debt management program. According to the AKPK, 15 percent of the people enrolled in its debt management programme are below 30 years old; young adults who risk being declared bankrupt because of credit card overspending and failing to observe sound financial planning and management. A study conducted by AKPK reported that nearly 50 percent of credit card holders declared bankrupt were less than 30 years of age. Most respondents cited they lost control on usage of their credit cards.

According to Bank Negara report (2013), 34.48 percent of Malaysians use credit cards i.e. more than one of out of every three persons. The easy availability of credit cards to young adult Malaysian has given rise to a credit card debt of RM32.3 billion owed by

Malaysians in 2013 (Bank Negara Malaysia). The increasing trend of commercial banks and financial institutions providing free credit cards, free transfer of credit balances, and upping credit limits are pushing Malaysians further into debts. There are calls to restrict credit card holding by increasing the minimum monthly salary requirement from the present RM1,500 to RM5,000. A study by Fatimah Daud (Ngui, 2005) found that 10.5 percent of personal bankruptcies in Malaysia are due to credit card abuse, other causes are defaulting on car loans (23%), failing to repay personal or business loans (20%), bankruptcies due to standing as a guarantor (21%).

The low interest rate environment in recent years had reduced the cost of borrowing and increased the incentive for households to borrow in order to smooth their desired path of consumption over the life cycle. In line with the government's efforts to promote home ownership, banks and financial institutions are required to offer housing loans, especially to low-income borrowers. Besides housing, the streamlining and reduction of duties on lower capacity cars have also boosted the demand for household credit. Government policies have therefore facilitated greater allocation of credit to households.

This increase in household debt has thus far supported the growth in private consumption and made positive contributions to the other sectors in the economy. Nevertheless, as lending to households increasingly becomes a larger segment of the financial system, it is crucial for policymakers to be aware of the implications for monetary policy and financial stability. The rapid increase in household debt can create financial vulnerabilities and impact the financial saving and security of future Malaysian retirees. Increased indebtedness means that the household sector has more exposure to interest rate risks and shocks to household income. Households whose debts

carry mostly floating interest rates are vulnerable to rising interest rates. Higher interest rates and the corresponding increases in debt servicing costs result in a reduction in disposable income and, hence, consumption and savings. The risks are more significant if households have taken advantage of low borrowing rates to increase the size of their mortgage excessively.

1.5.2 Financial Planning and Population Aging

Population aging is a growing phenomenon in most industrialized countries (Gruber and Wise, 1998). Malaysia's population, which stand at 30.059 million in 2014 (Dept. of Statistics, 2014) is expected to grow to about 33.4 million by year 2020. The current median age is less than 24 years. In term of age structure, the present population is still considered "youthful". However, with regard to the aged population (65 years and older), there has been a clear trend towards aging population in Malaysia. The proportion of aged population stood at 5.3 percent in 2012 compared to 3.7 percent in 1980 (Table 1.2). Given prevailing demographic trends, it is projected that by year 2020, those aged 65 and above will constitute about 6.1 percent (Table 1.2) of an estimated population of 33.4 million. In terms of absolute numbers, the population of older persons will increase from about 1 million in 2000 to 2.3 million by the year 2020. This represents a more than two-fold increase within the span of 20 years, or an increase of 65,000 older persons per year. However, even this estimate of older persons has since been revised to 3.4 million by 2020 (Source: 10th Malaysia Plan, 2011-2015).

The overall dependency ratio has decreased from 69.2 per cent in 1991 to 59.1 per cent in 2000 and expected to further decline to 57.8 per cent in 2020 (Source: Malaysia Country Report, UNCC 2002). The drop in the dependency ratio was due to the increase in the proportion of the working age population of 15-64 years as well as slower growth of the population below 15 years. As the percentages of elderly people in the population rises, the number of young people is proportionately diminishing. Because of this increasing population of elderly people, research on retirement is crucial if Malaysian society is to manage and reduce the burden of poverty among retirees and the elderly population. McMorrow and Roger (2003) outlined several reasons why an aging population is important which include inter alia: (1) the increasing “aged dependency ratio”; (2) increased longevity; (3) increased costs to government of age-related spending; and (4) the impact upon the aging workforce.

An aging trend will lead to a drop in the “aged dependency ratio”, which is the ratio of people over the age of 65 years old to those aged between 15 and 64 years old. A high dependency ratio means that there are fewer people working and paying tax to older people who are no longer working. Increased life expectancy means an increase in the number of elderly people which contribute to a consequential increase in higher health care costs for individuals, health care organisations, and government. The costs to the government for other age-related spending such as pension and welfare support will also increase. An aging population is important because of the consequent impact upon the demographic profile of the country’s workforce. The age structure of a country’s population affects its aggregate saving, which affects growth through investment. Growth in turn is influenced by other age structure effects and feeds back into aggregate

saving by the life cycle mechanism (Lindh, 1999). The future age structure of the population will have considerable implications for social and economic development. In the next two decades, Malaysia will still have a moderately “young” population, with those within the age group 0-14 constituting 30.5 percent of the total population. Much of the development resources will still need to be devoted to cater for the needs of the younger age groups i.e. child care, education and other social services. While attending to the needs of the younger segment of the population, there is also concern for the steady increase of older persons, both numerically and in proportionate terms. Some of the demographic changes – rapid reduction in mortality, steady pace of fertility decline contributing to the consequent declining family size will impact the elderly persons. The decline in fertility and mortality levels in Malaysia has been consistent with the rapid economic growth that the country has been experiencing. As care for the older persons has traditionally been within the family system, further decline in the family size would ultimately reduce the number of family members available to care for their aged dependents. Care of the elderly within the family system is fast becoming a problem owing to the fact that the extended family structure is slowly being undertaken by nuclear family. Such problems are compounded as more women participate in the labour market and with increasing mobility of young family members.

Table 1.2: Population Size and Age Structure, Malaysia, 1980 – 2020

	1980	1991	2000	2020
Total Population (million)	13.7	18.5	23.3	33.4
Average Annual Growth Rate (%)	2.3	2.64	2.6	1.8
Age Structure (%)				
0 – 14	39.6	37.2	33.1	30.5
15 – 64	56.7	59.1	62.9	63.3
65 & above	3.7	3.7	4.0	6.1
Dependency Ratio (%)	76.4	69.2	59.1	57.8

Source: Department of Statistics, Malaysia; Eighth Malaysia Plan, 2001-2005

Several factors have affected the demographic changes in Malaysia – declining fertility, increased urbanisation, and the increasing proportion of females joining the work force, which in turn would greatly impact the Malaysian society from the following perspectives – social, economic, cultural and personal. The dramatic increase in the number of older persons would require Malaysia to address the numerous problems faced by the group, including inter alia financial support, physical and healthcare.

Bloom *et al.* (2003) put forward the theory that a possible explanation in savings increase has been a rise in life expectancy. This increased life span, if coupled with a fixed or inelastic retirement age will give rise to a greater need for savings for retirement. Although longer life spans encourage saving, this effect is eventually offset

by the larger elderly population; the savings boom due to a rise in life expectancy is therefore temporary. This leads to the hypothesis that the effect of life expectancy on national savings rates depends on the social system in place (Bloom *et al.*, 2007). Bloom *et al.* (2007) find that (a) increased longevity has little effect on savings without mandatory retirement, but increases savings in countries with mandatory retirement, and (b) high replacement rates lower national savings in pay-as-you-go systems but increase savings rates in fully funded systems.

1.6 Financial Planning for Post-Retirement

Financial planning for post-retirement follows the different stages in an individual's life as he or she progresses from childhood to retirement – that is youth, prime earning years, and post-retirement period. By saving and investing younger, the individual gets to reap the benefit of compound interest, for example money invested at 7 percent doubles every 10 years, while failure to save risks threatening future financial security (Frank, 2005).

The two principal theories of saving are the life-cycle hypothesis (Modigliani and Brumberg, 1954; Modigliani and Ando, 1957; and Ando and Modigliani, 1963), and the permanent income hypothesis (Friedman, 1957). Both of these theories assume that individuals and households try to smooth consumption over their lifetimes. The basic idea behind the life-cycle model associated with Modigliani and Brumberg (1954 and 1980) is that individuals try to smooth their consumption over time by accumulating resources during the periods of higher earnings for later expenditure, mainly for

retirement. Milton Friedman (1957) proposed in his permanent income hypothesis that people spend a fixed fraction of their permanent income on consumption (Palley, 2005). The differences in these theories will be outlined further in Chapter 2 leading to the selection of the life-cycle theory in the formulation of the research framework for this study in Chapter 3.

1.7 Summary

There are six research objectives in this study which make further contributions to the literature on the understanding of financial planning for post-retirement among urban Malaysians based on different age cohorts. The study is divided into six chapters. This chapter outlines the problem statement, research objectives, the scope of study, the justifications for the study, and introduces the concept of financial planning for post-retirement. Chapter 2 reviews the literature on retirement and the life-cycle theories of consumption, savings, and investing, and related personal finance topics. Chapter 3 details the formulation of the research framework and research studies relating to the study, while Chapter 4 explains the research methodology adopted. Chapter 5 summarises the data analyses and research findings. Chapter 6 discusses the research results and implications from this study.

2.1 Introduction

This chapter focuses on two main areas relating to the research topic. The first part reviews definitions of retirement in the literature and how previous studies defined and measured retirement. The second part reviews previous research and literature on the concepts and theories relating to life-cycle theories of consumption, saving and investing pertaining to financial planning for post-retirement.

2.2 Retirement

The traditional concept of retirement is changing. The previous notion of life was divided into three distinct periods: schooling, working years, and retirement. Today, retirees may choose to continue working, either at the same place or different pace and place (AARP, 2002). For some, retirement could mean taking up part-time employment. Many older workers are continuing to work after retirement; either remaining in the same job or taking up alternative employment. About 70 percent of older workers in a US study expected to continue to work after retirement (AARP, 2002; 2003). The common definition of retirement is the cessation of full-time employment (Hall and Johnson, 1980; Montalto, Yuh, and Hanna, 2000)

Feldman (1994) define retirement as a state of exit from a current job that has been held for some time, with the intent of less commitment to work, and a decision that is taken sometime after the individual's middle age. Retirement has historically been defined from an economic perspective (Gustman, Mitchell, and Steinmeier, 1995). For most people, retirement means the end of a full-time working life and the beginning of a

different life, but without the identity, prestige and status (AARP, 2003). In sum retirement is a normative transition in the life course.

Other studies argue that retirement should be seen as one of several transitions in the life-course of individuals that are embedded in historical, social, and personal contexts (Moen, 1996, 1998; Kim and Moen, 2001, 2002, Jaeger and Hom, 2004). That is retirement is affected by the macro-social phenomena, such as how pension systems operate and ruling norms in society concerning the right timing of retirement (Moen *et al.*, 1992; Han and Moen, 1999), and the employment patterns of spouse and other family members. The theory basically states that retirement should be viewed as a gradual process in which the individual, interacting with societal norms, may experience rupture or continuity in well-being as a consequence of retirement (Jaeger and Holm, 2004).

Atchley (1971) developed the theory of continuity which posits that individuals will voluntarily retire if they have the financial resources to maintain their preferred lifestyle. Retirement has also been described as a process, a state (Atchley, 1982); as an event, a role, and a process, involving a life transition from employment for income (Evans, Ekerdt and Bosse, 1985; Ekerdt, 1987). It was viewed previously as an end rather than a beginning – something that should be put off as long as possible. Miller (1965) links a person's identity to work, and views retirement as an occasion for an identity crisis, with an accompanying loss of self-respect and feelings of uselessness.

Decreased work hours among older people often proxy the demand for leisure (Hamermesh, 1984). As people transition from the usual highly organised and habitual work routine to retirement, they may find themselves having to take more personal responsibility for planning their daily living and new routine and ongoing relationships (Hartford, 1984). Changes that come with retirement are: self-identity, sense of importance and value as an individual and member of the community, relationships with family and friends, daily activities, financial status, and living arrangements (Hornstein and Wapner, 1985). People are expected to make their own plans and schedules, to enjoy their own company, to make new connections, to form new relationships, and to be accepted for who they are as individuals, rather than for a title and position in an organisation (Hartford, 1984). Adequate retirement planning should include *inter alia* the psychological and social aspects as well (Tan and Folk, 2011).

Two factors determine the retirement span – the retirement age and life expectancy. In a life-cycle savings context, retirement age determines the period for saving and for dis-saving (Munnell, 2006). The increase in the retirement span among Malaysians reflects improved life expectancy – the typical Malaysian retiring at say 60 years old will spend another 15 years or more in retirement. The individual's responsibility for retirement security includes making an estimate of one's life span, apart from other important factors such as – retirement investment returns, future expenses in later years, and increases in the cost of living. Therefore, people face the prospect of having to support themselves for a long time on their accumulated retirement assets. A realistic option for most people may be to work longer given that more Malaysians are living longer and

healthier lives and that employment has shifted from physically-demanding goods-producing jobs to less arduous service-oriented jobs.

Most developed countries have a retirement age of 65 years. While some countries such as Sweden is proposing to increase the retirement age to 67 years, other countries such as Japan and Germany are increasing their retirement age from 60 to 65 years (El-Hamidi, 2006). Often the individual's financial position determines the retirement date, rather than personal choice (Salter, 2003). Hansson *et al.* (1997) identify three main influences on the retirement decisions: financial status, physical limitations and health problems that inhibit a person's ability to work, and psychological factors such as diminished job attachment, satisfaction with career attainment, and anxieties about separation from the workplace. Phillipson (2004) find that financial circumstances influenced the decision to continue working or to retire. Gustman and Steinmeier (1994) identify that pension-plan incentives (financial) and physical limitations and health problems influenced the retirement decision. Psychological influence such as job satisfaction has been identified to affect the retirement decision (Gustman and Steinmeier, 1994; Rosenman and McDonald 1995).

Most retirement planning programs focus on the material aspects of transition from employment into retirement. Not enough attention has been given to the psychological factors that are of increasing importance. Retirees, who made a gradual transition into retirement as opposed to immediate retirement, have been found to have greater satisfaction during retirement (Quinn, 1981). Gradual retirement creates less discontinuity in an individual's life than a sudden retirement (George, 1980). Another

factor influencing retirement plans is an increasing positive attitude toward leisure (McPherson and Guppy, 1979; Poitrenaud, Vallery-Masson, Vallerson, Demeestere, and Lion, 1979; Hwalek, Firestone, and Hoffman, 1982).

Recently, a more positive view of retirement has been put forward, which relates to adjustment to retirement, to pre-retirement attitudes held with respect to the notion of retirement (Thompson, Streib, and Kosa, 1960; Streib and Schneider, 1971). Those who are prepared for retirement may view the event more positively (Glasmer, 1981). Research indicates that planning for retirement is positively related to satisfaction during retirement (Thompson, 1958; Ash, 1966; Glasmer, 1981; Szinovacz, 1982). Most retirement planning programs focus on health and finances. Few retirees actually miss their jobs (Atchley, 1976; Ward, 1979).

Retirement age is important as it determines the duration of a person's working life and therefore how many years he has to earn income and build up the financial security for the future. This in turn determine the duration of the post-retirement period and the number of years the person will need to finance himself after his retirement. The expected retirement age is included as a moderating factor in the formulation of the research framework in Chapter 3 (Figure 3.2) for this study.

2.3 Life-Cycle Theory

Modigliani and Brumberg (1954) formalized the idea that people maximize utility of their future consumption, postulating that the main motivation for saving is to

accumulate resources for future consumption during retirement (Jappelli, 2005).. Seeking a stable living standard and achieving one, however, are two very different things. The model suggests that consumption and saving decisions are made from a life cycle perspective. A key aspect of life-cycle saving and investing is establishing the divide between the period over which the saving occurs – that is, the work life – and the period during which assets are drawn down – the retirement span. The life-cycle hypothesis attempts to explain the way that people split their income between spending (consumption) and savings, and the way they borrow. The typical shape of the age-income profile over the life-cycle starts with low income during the early working life, then earning increases until it reaches a peak before retirement. The standard life-cycle model is represented by a “hump-shaped” pattern which suggests that an individual builds his asset accumulation during his working years and spends those assets during his retirement years. This hypothesis suggests that saving is high when income is high (relative) to lifetime average income; conversely saving is low when income is low. When people are young, and again when they are old, they generally have much less income, it is natural when earnings are high that they save for retirement.

The life-cycle model suggests that people will save while young and working, and dissave when old and retired. This implies an accounting effect – when societies have many elderly people, savings will be low – and motivates the study of the interaction between demography and aggregate savings. In theory, in the absence of a bequest motive, the dissavings of the old should offset the savings of the young, so that in a stationary population (with a stable age distribution and no population growth) there is no aggregate saving. However, if the age structure of the population is unbalanced

(from population growth), or if the economy is undergoing rapid economic growth and wage incomes of the young are high relative to the retirement incomes of the old, the savings of different cohorts may not cancel out, and aggregate saving, or dissaving, may occur (Ando and Modigliani, 1963, Bloom *et al.*, 2007).

While there may be a typical financial life-cycle pattern that applies to most people, each family and individual might encounter unexpected events at any time that are difficult to predict if and when they might occur, and are not planned for in their financial life-cycle. Lifestyle situations will affect the financial situation and requirements at different stages in life. The global economic meltdown in 2008/2009 resulting in a rout in most stock markets around the world has ignited a crisis of confidence for millions of people in the world who manage their own retirement savings plans.

According to the life-cycle model, the typical households will accumulate savings (assets) during their matured working years, while savings will be negative for the young and the retirees (Modigliani and Brumberg, 1954, 1980; Modigliani, 1986a). In the face of labour income fluctuations over the course of life, these theories imply that saving rates will be uneven over the course of life (Coleman, 2006). Milton Friedman (1957) proposed in his permanent income hypothesis that people spend a fixed fraction of their permanent income on consumption. Permanent income is defined as the annuity value of lifetime income and wealth (Palley, 2005); the sum of non-human wealth and human wealth (that is, one's present and future income), which represents the present value for current and future income (Flavin, 1981).

The main difference between life-cycle hypothesis and permanent income hypothesis concerns the length of the period. In the Modigliani-Brumberg's life-cycle theory, the planning period is finite, whereas for Friedman, the planning period is infinite, meaning that people save not only for themselves but also for their descendants (Jappelli, 2005). The life-cycle hypothesis and permanent income hypothesis share some similar predictions about individual behaviour: income shocks (transitory taxes and rebates) and capital gains or losses can be expected to have small effects on consumption (Modigliani, 1986b).

The theories imply that people are concerned about long-term consumption and help explain saving and consumption in terms of expected future income. Since consumption is determined by anticipated lifetime resources (rather than current resources), saving over short periods of time (example, one year) is expected to reflect departures of current income from average lifetime resources. When current income falls below average expected lifetime income, saving decreases, and individuals and households may even borrow to finance consumption. When current income exceeds average expected lifetime resources, individuals and households save. Therefore, savings rates will be low during early adult years, will rise with age as income increases, and will decrease and become negative in retirement as earnings fall (Coleman, 2006).

According to Borsch-Supan and Lusardi (2003), the main saving motive in the life-cycle model is consumption smoothing due to a declining marginal utility of consumption, and the fact that income after retirement is generally lower than before. Figure 2.1 illustrates this life-cycle profile of saving. With relatively low earnings at the

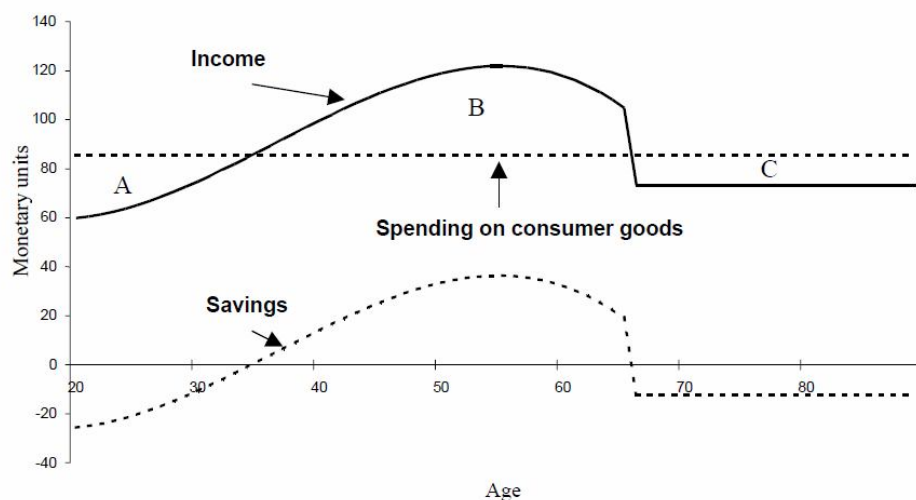
beginning of the career, consumption is smoothened by borrowing (via financial markets or a loan from the family) (area A). Increasing earnings makes saving possible (area B), which is then decumulated after retirement (area C). This profile, however, rests on a number of simplifying assumptions: for example, the introduction of uncertainty and market imperfections. Borrowing constraints are likely to prevent young households from smoothing consumption before the symbolic age of 35 years in Figure 2.1 (Jappelli and Pagano, 1989, 1994; Alessie, Devereux, and Weber, 1997). Higher saving rates are expected (especially at younger ages) in the face of more stringent borrowing constraints.

Figure 2.1 assumes that the time of death is known for the life-cycle computation. In fact, there is uncertainty about the time of death (Davies, 1981; Rodepeter and Winter, 1998); and a great deal of income uncertainty over the life course. Thus, saving not only serves to offset the decline of income after retirement, but also to shield households against income shocks (Zeldes, 1989a; Caballero, 1990; Deaton, 1992; Carroll, 1994, 1997). Uncertainty becomes particularly relevant when households face borrowing constraints (Deaton, 1991). Individuals face uncertainty not only in income and in the length of life, but also in all kinds of future economic circumstances such as healthcare costs in old age (Hubbard, Skinner, and Zeldes, 1995; Palumbo, 1999; Kennickell and Lusardi, 2001). There thus exists a precautionary motive to save and not just a retirement motive. Probably because of the pervasiveness of uncertainty and imperfections in the insurance and financial markets, there exist various public and social safety nets. These safety nets may in turn replace the need for savings, for example by reducing the gap between earned and actual income that needs to be filled in

Figure 2.1 below and by insuring against shocks. Countries with a high replacement of earnings by pension annuities are therefore likely to feature lower wealth at retirement, and less decumulation of wealth after retirement. Similarly, unemployment benefits (Lusardi, 1998; Engen and Gruber, 2001) and other welfare policies (Hubbard, Skinner, and Zeldes, 1995; Gruber and Yelowitz, 1999) which aim to reduce changes and shocks to life-time income, is likely to reduce the amount of precautionary savings (Browning and Lusardi, 1996).

In addition to public safety nets, individuals may also rely on the network of relatives and friends to offset shocks (Lusardi, 2000a). Such informal borrowing opportunities may replace formal capital market interactions and reduce further the need to save.

Figure 2.1: Income, Consumption and Life-Cycle Saving



Source: Borsch-Supan and Lusardi (2003)

A fairly restrictive version of the life-cycle model specifies that the only uncertainty is the date of death (Yaari, 1965). Yaari (1965) suggested that a rational retiree lacking a

bequest motive would annuitize all his assets. A moderate extension of the life-cycle model allows for unexpected outcomes both for earnings and for expenses (Browning and Lusardi, 1996). For example, families have unexpected expenditures such as uninsured medical expenses or higher than expected educational expenses. These families may have planned to reach retirement with adequate resources, but were not able to realize their plans. Unexpected events can generate substantial variation in wealth outcomes even though individuals are behaving optimally.

Another type of explanation for differences in savings across households has to do with the varying subjective time rates of discount; some people strongly prefer present consumption to future consumption causing them rationally to choose not to save (Dynan, 1993). On the earnings side, workers may have anticipated smoothly rising earnings, which would cause them to delay saving until their earnings were higher, but instead they may encountered periods of unemployment or perhaps their earnings were flat. From a lifetime perspective, they would not have saved enough early in their work life, and so they would not have reached retirement with enough actual savings relative to their lifetime incomes (Hurd and Zissimopoulos, 2003).

The life-cycle theory is one in which the wealth of the nation gets passed around; the very young have little wealth, middle aged people have more, and peak wealth is reached just before people retire. As they live through their golden years, retirees sell off their assets to provide for food, housing, and recreation in retirement. The assets shed by the old are taken up by the young who are still in the accumulation part of the cycle (Deaton, 2005). With population growth, there are more young people than old,

more people are saving than are dissaving, so that the total dissaving of the old will be less than the total saving of the young, and there will be net positive saving. If incomes are growing, the young will be saving on a larger scale than the old are dissaving so that economic growth, like population growth, causes positive saving, and the faster the growth, the higher the saving rate. It does not matter whether it is population growth or growth in per capita incomes, what matters for saving is simply the rate of growth of total income. In an economy with no growth, wealth will just be passed around; no new wealth will be created. The total wealth in the economy depends on the length of retirement, and in simple cases, the ratio of a country's wealth to its income is a half of the average length of retirement, a prediction remarkable for its precision, simplicity, and lack of unspecified parameters. More generally, the ratio of wealth to income is lower the faster is the rate of growth of the economy, and is at its largest when the rate of growth is zero (Deaton, 2005).

Some economists are sceptical of the life-cycle theory; for example, contrary to the theory, many American workers are entering retirement without any assets. And a large percentage of workers who do have assets apparently continue to add to them after they retire. Neither of these phenomena is easy to reconcile with simple versions of the life-cycle model (Burtless, 2004). Another limitation of the life-cycle hypothesis is the omission of bequests as a factor determining saving. Kotlikoff and Summers (1981) maintain that the desire to make bequests is an important factor driving saving. However, saving for bequest also to some extent could be likened to saving for retirement.

Some studies have found that the elderly do not dispose off their assets in the way that the theory requires and indeed that many of the elderly appear to save part of their incomes. Saving for retirement seems to start only in middle-age, and to be insufficient to prevent a sharp fall in consumption at retirement, and such a fall has been well documented (Banks, Blundell, and Tanner, 1998). Uncertainty about the date of death may limit the extent to which retirees are willing to run down their assets, which in itself will generate “unintended” bequests. Tobin (1967, Deaton, 2005) noted that if each person expects their incomes to grow throughout their life, then the life-cycle hypothesis would mean that they should consume more than their income in early life, so that there would be dissaving at both ends of the life cycle, financed by saving in middle-age. However, in practice, because it seems unlikely that young people would be able to borrow enough to secure living standards that was much beyond their current means. As they move into middle-age, there will come a point where they need to start accumulating assets for retirement, even if they would have liked to have borrowed at the beginning of the life-cycle.

Alternative models to the life-cycle hypothesis and permanent income hypothesis have been proposed: the “buffer-stock” models of saving (Deaton, 1991; Carroll, 1997; Carroll and Samwick, 1997, Ziliak, 1999). These models emphasise a precautionary motive for saving (being prepared for emergencies as the most important reason for saving), particularly for younger households and for households facing greater income uncertainty. Kotlikoff (1988) also stressed the importance of the bequest motive. This bequest motive has been drawn to explain why saving does not reduce during old age as would be expected from the life-cycle hypothesis. Bequest can be accidental (Davies,

1981; Abel, 1985) strategic (Bernheim *et. al.*, 1985), or the result of decreased consumption due to an unexpected deterioration of health (Borsch-Supan and Stahl, 1991 as cited in Borsch-Supan, Axel and Annamaria Lusardi, 2003). Kotlikoff (1989) showed that in the United States, about 30 percent of household saving is precautionary. People seem to save because of anxieties about retirement and old age. They save to have a buffer. Denizer, Wolf, and Ying (2000) find that the unusually high savings of elderly may be explained by the precautionary motive. This precautionary or buffer saving has been found to be an important saving motive not only in Western countries but in many other countries as well (Alessie *et al.*, 1997; Horioka and Watanabe, 1997; Warneryd, 1999). Precautionary saving is the complement of life-cycle saving. Younger cohorts facing no income would like to borrow (Gourinchas and Parker, 2002). These economic theories assume that people are rational, forward looking and concerned about consumption patterns, preferences are fixed or very stable, and people have perfect information.

Variations on the standard economic theories include the behavioural, psychological, and sociological theories. Behavioural theories emphasise financial management strategies and self-imposed incentives and constraints (Shefrin and Thaler, 1988). The behavioural life-cycle hypothesis incorporates self-control, mental accounting, and framing. It proposes that individuals use systems of mental accounts and that the propensity to spend varies across accounts. Shefrin and Thaler (1988) suggested that people treat income from different sources differently. Three mental accounts are considered to be relevant when people think about their wealth: current income, current assets (savings), and future income. The temptation to spend money is supposedly the

greatest with current income. In addition, the marginal propensity to save or spend is different with each of these mental accounts. Thaler (1990) introduced the concept of mental accounting. Warneryd (1999) find that many consumers use their own special budgetary system to monitor expenditures through different mental budgets: a specific amount of money is allocated to a different mental budget.

Behavioural theories do not assume that individuals have perfect information, and may behave “irrationally”. These theories suggest that individuals sometimes have trouble resisting temptations to spend. Therefore, individuals may create their own behavioural incentives and constraints (Shefrin and Thaler, 1988). Behavioural theories suggest that saving and asset accumulation are likely to increase when mechanisms of contractual saving or other pre-commitment constraints are available. Such mechanisms make it difficult to choose current consumption at the expense of future consumption (Maital, 1986; Shefrin and Thaler, 1988; Maital and Maital, 1994). Psychological and sociological theories do not assume that consumer preferences are fixed, but rather change with economic and social stimuli (Duesenberry, 1949; Katona, 1975). The most fundamental challenge to the life-cycle model has been directed at its basic underlying assumption, that people make rational, consistent, intertemporal plans, that they act as if they are maximizing a utility function defined over the periods of life, according to the received theory of consumer choice over time (Deaton, 2005). As described above, period effects cannot be disentangled from aging and cohort effects in this study. The life- course perspective links both proximal and distal forces to individuals’ lived experiences. While current circumstances and factors are important to examine,

individuals are also a product of the past and anticipated future. Financial planning for retirement is thus viewed as a long-term process, requiring consideration of both current and more distant forces. This study incorporated key principles of the life-course perspective adopted from the life-cycle theory, which place retirement planning in a sociohistorical and contextual framework.

2.4 Consumption

According to the life-cycle theory, individuals and households choose a consumption path that will maximise lifetime utility subject to their lifetime budget constraint (Hurd and Zissimopoulos, 2003). Lifetime utility could be increased by reallocating some consumption from the working life to the post-retirement period. An important prediction is that households will accumulate savings during their working life, and spend some of the savings to finance consumption after retirement. On average, workers save at high rates during their 50s, when their earning usually reach a maximum and expenses have declined from the child-raising ages (Hurd and Zissimopoulos, 2003).

The life-cycle approach makes a number of important contributions. First, it introduces utility maximization, thereby introducing agency into consumption agency. This treatment reconciled macroeconomic consumption theory with microeconomic choice theory. Second, lifecycle consumption theory is also forward looking since it includes lifetime income expectations in the lifetime budget constraint. Third, the constrained utility maximization framework introduces credit markets and borrowing and lending. Fourth, this also introduces the effects of interest rates and time preference on consumption. Fifth, lifecycle theory incorporates a sociological dimension, explicitly

recognizing that consumption expenditures may vary by stage of life. At the empirical level this is confirmed by evidence that population age distribution affects aggregate consumption (Fair and Dominguez, 1991, Palley, 2005).

Within the life-cycle framework, retirement behaviour is viewed as a result of decisions about consumption and labour supply: the time allocation between leisure and market work, wealth, and family structure. The saving decision is driven by the preferences between present and future consumption. The basic assumption is that people find an optimal retirement age and consumption level to maximise their utility over a lifetime. The life-cycle theory also implies that the level of wealth decreases after reaching a peak, at middle age. In many regards, Modigliani and Brumberg's lifecycle model can be viewed as a compromise between the theories of Keynes and Friedman. Thus, the lifecycle approach generates a permanent income consumption function if: (1) the borrowing rate, lending rate, and rate of time preference all equal zero; and (2) there are no constraints on borrowing. If households are liquidity-constrained, their marginal propensity to consume is unity. The reason is that credit constrained households would like to borrow to finance additional consumption but they cannot. According to the life-cycle theory, individuals choose a lifetime pattern of consumption that maximizes their lifetime utility subject to their lifetime budget constraint. Life-cycle consumption theory is forward looking since it includes lifetime income expectations in the lifetime budget constraint. The theory also incorporates a sociological dimension, explicitly recognizing that consumption expenditures may vary across the life stage as mentioned earlier (Palley, 2005).

The life-cycle hypothesis and permanent income hypothesis predict that current income is not the key predictor of current consumption because the marginal propensity to consume out of permanent income is large, while the marginal propensity to consume out of transitory income is small. By taking in future income, people attempt to maintain a fairly constant standard of living even though their incomes may vary considerably over the short term period. Therefore, any increases and decreases in income that people see as temporary have little effect on their consumption spending (Bryant, 1990). The basic permanent income hypothesis posits that individuals consume a fraction of this permanent income in each period and thus the average propensity to consume would equal the marginal propensity to consume (Meghir, 2002).

Another relevant theory was Duesenberry's (1948) relative income theory of consumption. Duesenberry's theory maintains that consumption decisions are motivated by "relative" consumption concerns i.e. "keeping up with the Joneses". Another claim is that consumption patterns are subject to habit and are slow to fall in face of income reductions (Duesenberry, 1948, Palley, 2005). An extension of the Life-Cycle Permanent Income models is the theory of precautionary savings; that savings function not only as an income reallocation over the life cycle, but also as an insurance against income shocks. Precautionary savings lead to consumption cut-backs and the accumulation of wealth to insure against uncertainty or risk; particularly the income risk. With individual income uncertainty and prudence, households hold liquid wealth to insure themselves against future contingencies. Hubbard, Skinner, and Zeldes (1994 as cited in Gourinchas and Parker, 2002) demonstrate that this uncertainty can lead to hump-shaped consumption profiles as households save for precautionary reasons early

in life and run down these assets during retirement due to lower levels of uncertainty and an increased probability of death.

Gourinchas and Parker (2002) find that consumption rises with age, until around age 45 when it begins to drop. Consumption smoothing posits that households seek to spread their spending power over time as well as across times – times that is good and bad. This follows from the assumption of diminishing marginal utility; that spending more and more at a given point in time yields less and less additional pleasure, which economists call utility. Borrowing constraints may cause the inability of households to fully smooth their living standards by borrowing more money than is feasible or desired. Borrowing constraint appears to affect about two thirds of young and middle-aged households. Such households typically either have high mortgage, education expenses, loan repayments, or other expenses. Whereas conventional financial planning focuses simply on finding the fixed annual saving amount or fixed annual saving rate needed to achieve arbitrary retirement spending targets (Kotlikoff, 2008).

It was found that in more rapidly growing economies; the young are relatively much richer than the old. If the life-cycle hypothesis is correct, the age profile of consumption should be relatively higher for the young than the old in more rapidly growing economies, so that higher growth should rotate the cross-sectional age-profile of consumption clockwise (Carroll and Summers, 1989). For each individual, it is assumed (by appropriate assumptions about preferences) that increases in life-time resources lead to proportionate increases in consumption in all periods of life. As a result, consumption is proportional to life-time resources or, what is more or less the same thing, to average

income over the life span. By building up and running down assets, working people can make provision for their retirement, and more generally, tailor their consumption patterns to their needs at different ages, independently of their incomes at each age. One of the biggest challenges to the life-cycle hypothesis is whether the data really support the fact that people save when they are young and run down their assets when they are old. If the life-cycle hypothesis is correct, even in part, the age profile of consumption should be relatively higher for the young than the old in more rapidly growing economies, so that the higher growth should rotate the cross-sectional age-profile of consumption clockwise.

Borrowing constraints appear to affect the younger households; such households typically either have high mortgages, education expenses, loan payments, or other off-the-top expenses. For example, a typical middle class household whose children will graduate from college will be likely be constrained until the children graduate. This means the household needs a plan to achieve a stable living standard before the children graduate as well as a separate plan for a stable, but higher living standard for the years thereafter (Kotlikoff, 2008).

Modigliani (Deaton, 2005) argued that the main effect of uncertainty would be to generate a demand for precautionary saving; except perhaps among the very young, the accumulated assets of life-cycle savers could serve a double purpose, not only for retirement, but as a buffer against unexpected emergencies. Carroll (1997) has shown that people with uncertain future earnings who are sufficiently prudent will never borrow, if there is the possibility, however remote, that they will not earn enough to be

able to repay their debts. If such people expect their earnings to grow over time, they will nevertheless keep their consumption with their current incomes, thus inducing a close articulation or “tracking” between consumption and income. Therefore, people are maximizing their expected lifetime utility, as postulated by the life-cycle theory under uncertainty; their consumption is effectively constrained by their current incomes. People can save to smooth out their consumption, but they cannot have consumption greater than their income, except when they already have assets in the bank (Deaton, 2005).

As the basic idea of the life-cycle theory is that people seek to maintain their living standards (smoothing their consumption) as they age and face life’s various contingencies (Kotlikoff, 2008), consumption is included as a factor in the formulation of the research framework in Chapter 3 (Figure 3.2) for this study. As outlined above, consumption is an important factor in planning for post-retirement and as such it is also an important variable in this study.

2.5 Savings

Modigliani’s life-cycle theory of saving identified that the need to provide for retirement is one of the most important motives for saving. In the saving context, this means moving resources from good times, when one is working and earning money, to bad times, when one is retired and earning nothing. In the investment context, it means diversifying one’s resources so that there is something to eat not just when the stock market booms, but also when it crashes (Kotlikoff, 2008). Gourinchas and Parker

(2002) define saving as equal to investment income – liquid and illiquid – plus labour income minus consumption. They define life-cycle saving as the difference between total income and life-cycle consumption.

The life-cycle theory of saving predicts that consumption and saving behaviour of an individual changes greatly with income, wealth, age, marital status, and other socioeconomic conditions during the various stages of the individual's life (Tin, 2000). Individuals work and save when they are young and run down their savings during retirement (Thornton, 2001). It has been suggested that the age structure of the population has a major impact on savings behaviour (Sarantis and Stewart, 2001). Alessie, Lusardi and Aldershof (1997) find that people in the Netherlands save for different reasons that vary by age and the differences match life stages. People seem to have saving motives that are appropriate for a certain life stage.

The literature emphasize that there is considerable heterogeneity in household saving behaviour. Psychological and sociological theories of saving seek to explain saving-related preferences, aspirations, and expectations. Katona (1975) noted that saving is a function of two sets of factors: the ability to save and the willingness to save. The emphasis on ability to save acknowledges that some individuals, because of limited economic resources, special consumption needs, or other circumstances, find it more difficult to defer consumption than others. Psychological theory focuses on the choice that individuals who can postpone consumption must choose to do so; which decision requires some degree of willpower. Variations on psychological and sociological theories consider the effects of families (Cohen, 1994), peers (Duesenberry, 1949), and

past saving experiences (Katona, 1975; Furnham, 1985) on saving-related beliefs, aspirations for saving, and consumption patterns. Another reason given for not saving is procrastination using the concept of “hyperbolic discounting (Laibson, 1997; Laibson and Harris, 2001). Under hyperbolic discounting, people wait too long to get started on saving for retirement, which can be a costly error given the power of compound interest (Deaton, 2005). The relation between life-cycle hypothesis and social security has been found to correlate through the “extended life-cycle model” (Munnell, 1974; Feldstein, 1976). They pointed out that pension wealth should be counted as part of the individuals’ resources, and that the transition to a social security regime would affect discretionary saving. If the life-cycle hypothesis posits that total saving is controlled by a target accumulation to support retirement, then one may conclude that social security and discretionary (saving) should largely offset each other. This is substitution effect – pension saving crowding out discretionary saving (Jappelli, 2005).

Keynes outlines eight motives for saving (Browning and Lusardi, 1996):

1. Precaution, which implies building up a reserve against unforeseen circumstances;
2. Foresight, which includes providing for anticipated future relationship between the income and expenditure (life-cycle motive);
3. Calculation, which refers to the wish to earn interest and appreciation;
4. Improvement, which means to enjoy a gradually improving standard of living over time;
5. Independence, which refers to the need to feel independent and to have the power to do things;

6. Enterprise, which means having the freedom to invest money if and when it is favourable;
7. Pride, which concerns leaving money to heirs (the bequest motive); and
8. Avarice or pure miserliness.

Browning and Lusardi (1996) added a ninth motive: the down payment motive. This is to accumulate deposits to buy houses, cars and other durable goods. Browning and Lusardi (1996) emphasized there are other motives to save apart from providing for retirement. Households may save to leave a bequest to future generations; and a precautionary saving motive. Lusardi (2001) accounts for the fact that households accumulate little because they can rely on help from relatives and friends in case they run into severe financial difficulties in the future. Households whose head has a high education have higher savings. Households who experienced negative shocks in the past end up having lower wealth, while receiving inheritances or other transfers leads to higher savings. Households with a bequest motive accumulate more, while those who are impatient accumulate less. Households who have a large pension accumulate more rather than less wealth, showing that households who have much in retirement assets also have more in other forms of accumulation (Gustman and Steinmeier, 1999, Lusardi, 2001).

The abovementioned studies show that there are vast disparities in wealth holdings and the disparities persist even among households of similar age and economic status. Not only do wealth holdings vary widely across households, but many families report low savings even close to retirement (Diamond and Hausman, 1984; Poterba *et al.*, 1994;

Venti and Wise, 1997, 1998; Lusardi, 1999). Diamond and Hausman (1984, Lusardi, 2001) found that a large fraction of households arrive at retirement in the US with as little as \$1,500 (in 1966 dollars). Other studies note that wealth holdings are particularly low for households whose head has low education (Bernheim and Scholz, 1993; Hubbard *et al.*, 1995).

Warneryd (1999) defines saving as the excess of income over consumption over certain period of time. Saving is considered as the residual of income minus consumption (Browning and Lusardi, 1996). Katona (1975) classifies saving into three categories: residual saving, contractual saving, and discretionary saving. For residual saving, no active saving decision is needed, because saving represents whatever money left. Contractual saving refers to regular savings like a retirement pension scheme, and buying a life insurance. For contractual saving, at least one decision is needed to set aside a certain amount of money as soon as the income is received. Discretionary saving refers to the freedom to save or to spend the money that is available after expenditures or necessities. This saving happens when the individual decides in advance that a certain amount of money should be left at the end of a certain period of time. Discretionary saving is of more interest to psychologists, as people make saving and spending decisions about their discretionary income. Saving behaviour implies that the perception of future needs a saving decision and a saving action (Warneryd, 1999). Saving provides a means by which households and individuals can distribute their income over the life course, providing themselves with financial security for possible hard times ahead and for their retirement (Modigliani, 1970).

Katona (1975) pointed out that the decisions of individuals to save or spend their money collectively influence the economy, because personal savings comprise a significant source of investment funds. Katona (1975) suggested that disposable income was a direct measure of a person's ability to save. He proposed that the ability to save resulted from how optimistic or pessimistic the person felt about the state of the economy. He noted most people save because of: emergencies, retirement, children and family needs, and for other purposes such as buying a house, durables, or for holidays. Warneryd (1989) argues that the psychological concept of self-control underlies most theories of saving: saving results from the ability to resist the temptation to spend, and this ability is held to be greater in people who are older, more educated and more middle class. Gasparski (1991) considers saving as the results of decisions which are influenced by individual perceptions, cognitions and values. Engen *et al.* (2004) consider household to be saving adequately if it is accumulating enough wealth to be able to smooth its marginal utility of consumption over time in accordance with optimizing consumption. Before retirement, consumption is financed by labour earnings, decumulations of previous savings, and inheritances. After retirement, consumption is financed by previously accumulated savings/assets and post-retirement income (if any).

The life-cycle hypothesis is not without shortcomings. The theory predicts there are differences in saving behaviour over the life-cycle, but some studies could not confirm the expected saving behaviours of individuals or households at different stages in the life-cycle: the young and old did not behave as predicted (Juster, 1986; Thaler, 1990). According to the life-cycle hypothesis, young people should borrow to cover any shortfall in their income and old people should spend more than they do.

The standard results of the life-cycle theory of saving are: (1) the level of consumption at any point of time depends on the present value of the entire lifetime earnings; and (2) the proportionate rate of change of the marginal utility of consumption at any point of time is equal to the difference between the subjective discount rate and the objective discount rate or the rate of interest (Nagatani, 1972). George Katona (1975), an economic psychologist, noted that saving is a function of two sets of factors, ability to save and willingness to save. The ability to save acknowledges that some individuals, because of limited economic resources or special consumption needs, find it more difficult to defer consumption than others. Other individuals who defer consumption must choose to do so, a decision that requires some degree of willpower. For example, households are expected to defer consumption and save for future security if their perceptions of household finances, interest rates, unemployment, and inflation, are pessimistic.

Behavioural theories of saving note that individuals have trouble resisting temptations to spend, even when they want to save. Behavioural economists explain individual savings in terms of mental accounting, which is a set of cognitive operations used by individuals and households to organise, evaluate, and keep track of financial activities (Thaler, 1998). The mental accounting concept incorporates social, cultural, and experiential influences and not just demographic and economic factors. It emphasises not just the level but also the composition of income and wealth in explaining saving behaviour (Asher, 2002). Policies that rely on workers to make their own decisions about retirement saving and investment seem reasonable if most workers make these choices rationally and competently. However, the same policies look less appealing when

people base their retirement and saving choices on herd behaviour, faulty logic, or defective information. Recent empirical research on saving behaviour has focused on whether workers typically accumulate enough savings so that they can live comfortably during retirement? This has aroused considerable controversy because of disagreement over what constitutes adequate saving for retirement (Burtless, 2004). Lusardi (2001) reports that the median holdings of workers who had hardly thought about their retirement is less than one-half of the median wealth of workers who have thought of or a lot about retirement. By the time the retiree discovers he has retired too early or saved too little, he may not have the opportunity to undo his mistake by saving more or returning to work again (Burtless, 2004).

If people accumulate assets for their own retirement, they should dissave when they retire. But empirical evidence suggests that retired people typically do not spend all of their retirement income. Poterba (1994) found that saving rates among retired people were positive in six “group of seven” countries, and in excess of 30 percent in Italy and Japan. Such empirical evidence has often been used to discredit the life-cycle model. However, Jappelli and Modigliani (1998) found the results from most household surveys use an incorrect definition of income, treating social security contributions as taxes and pension benefits as earned income. They argued that social security contributions should be treated as mandatory savings, and pension benefits should be treated as a mixture of capital income and capital decumulation. In cases where these adjustments have been made, they found that saving rates of retirees are negative, even though retirees do not spend all the income they receive. Brugiavini and Padula (2003 as cited in Coleman, 2006) estimated that retired people in Italy save about 20 percent

of their retirement income when their pension was treated as earned income, but negative 20 percent when a portion of their pension was counted as capital decumulation. As described in this section, savings is an important factor in planning for post-retirement and as such it is also an important variable in this study.

In terms of macroeconomics, the life-cycle model predicts that aggregate saving rates should be an increasing function of the overall country growth rate. This is because the lifetime income of the young is high relative to the old when economic growth is high, so the saving of the young should exceed the dissaving of the old (Coleman, 2006). The life-cycle model of saving is based on the assumption that people have the knowledge to forecast their needs in the future and the discipline and skill to act on those forecasts. To properly forecast retirement needs and how much they should save each year, people need to predict their earnings over their lifetime, how long they will be able to work, how much they will earn on their assets, and their life expectancy (Munnell, 2006). The current work in behavioural finance, which brings together, economics, finance, and psychology, has tried to identify some of the factors to poor preparation for retirement. Among the problems identified are: (1) myopia; (2) “hyperbolic discount”; and (3) self-control.

2.5.1 Myopia

People are absorbed in their daily routines, or prefer not to think of their own age, and fail to see what lies in the future. This myopia is enhanced by the fact that saving and investment decisions are complicated. Benartzi and Thaler (2002) show that investors prefer the portfolios chosen by other people rather than the ones chosen by themselves, suggesting that task difficulty prevents people from reaching optimal decisions.

Campbell and Mankiw (1989) find that roughly 40 percent of all agents are “hand to mouth”.

2.5.2 Hyperbolic Discount

A second problem is the low value many people seem to place on their future well-being. Psychologists and economists attribute this to people being “hyperbolic” discounters, in that their near-term discount rates are much higher than their long-term discount rates. In the case of a Ringgit saved today is seen as growing fast in the short run, but slowly thereafter, so benefits more than a short period away have very little value.

2.5.3 Self-Control

Many people know that they should be saving for retirement, but find it very difficult to act on that knowledge. Inertia and procrastination are major components of the discipline problem with regard to saving behaviour. The literature on saving finds that making decisions about retirement is one area where people are likely to procrastinate.

Deferring the start of saving has no immediate penalty. Because of lack of discipline, people often need commitment devices to ensure that they put money aside. Most people lack the foresight and discipline to save and accumulate resources while working to support themselves in retirement, in the absence of institutionalized savings arrangements.

The basic idea of the life-cycle theory (Modigliani and Brumberg, 1954 and 1980) is that individuals try to smooth their consumption over time by accumulating resources

during the periods of higher earnings for later expenditure, mainly for retirement. Savings is therefore included under current financial resources as a factor in the formulation of the research framework in Chapter 3 (Figure 3.2) for this study.

2.6 Understanding Consumption in Retirement

During retirement, consumption may be even higher early on as people pursue their retirement dreams, such as travel and new leisure activities. Consumption levels may also change - people having larger homes might like to downsize, even if not for economic reasons, for example, the cost and problem of caring for larger homes can be substantial later in life. Medical costs and the need for long term care are likely to increase during retirement.

Understanding changes in consumption (changes in household expenditures) after retirement from the labour force is important for determining a financially sound retirement plan, and ensuring the economic wellbeing and health of the retirees. As people live longer, question arises on whether retirees can maintain their consumption well into retirement. Retirees may be able to smooth their consumption as they transition into retirement but are they able to sustain that consumption level over their remaining lifetimes? Several studies have shown that the baby-boomers generation in the US are not saving enough to maintain current levels of consumption into their retirement years (Bernheim, 1996; Moore and Mitchell, 1997; Yuh, Montalto, and Hanna, 1998). Nieswiadomy and Rubin (1995) found that with increased life expectancy and better health, the propensity for retirees to purchase leisure related

services doubled. Health care expenditures correlated positively with age, as older retirees greatly increased the amount spent on health care (Hatcher, 2007). Households may decrease consumption because of a lack of financial planning. Under the life-cycle model, consumption eventually starts to decrease (Hanna, Fan, and Chang, (1995).

Popular financial advice suggests that households should strive to replace between 65 and 85 percent of their pre-retirement income in retirement (Uccello, 2001). Retirees have lower consumption needs than workers because they do not incur work-related expenses. Housing costs tend to decline at older ages once homeowners pay off their mortgages. In addition, older adults no longer need to save for retirement, and they typically pay lower taxes than younger people. On the other hand, health care costs tend to rise at older ages, and many elderly people who lack private health insurance face catastrophic medical expenses (Crystal *et al.*, 2000; Goldman and Zissimopoulos, 2003).

The life-cycle hypothesis posits that consumption remains smooth during the transition from work into retirement (Modigliani and Brumberg, 1954; Hurst, 2007). However, empirical evidence has shown that people consume less in retirement (Banks *et al.*, 1998; Engen *et al.*, 1999, Bernheim, Skinner and Weinberg, 2001; Hurd and Rohwedder, 2003; Aguiar and Hurst, 2005). This decline has been referred to as the “retirement consumption puzzle” (Attanasio, 1999). One possible explanation is that increased mortality risk at older ages makes consumption less desirable. The observed decline raises the questions whether the life-cycle hypothesis is correct or whether people underestimate their needs in retirement. Understanding consumption changes

among newly retired is also important for individuals who are trying to assess how much income they will need in their retirement, what the experience has been of cohorts older than themselves, and what more they need to do before retirement to continue to enjoy the same level of economic well-being that they now experience (Fisher *et al.*, 2005).

Lundberg, Startz, and Stillman (2003) and Hurst (2004) found substantial average declines in food expenditures as respondents moved from work to retirement. Bernheim, Skinner, and Weinberg (2001) went beyond food expenditures and found a 14 percent decline in mean expenditures in the first two years of retirement. Aguiar and Hurst (2005) found that while food expenditures decline 17 percent at retirement, the quantity and quality of food consumed did not change. They conclude that given time to produce food at home and additional time to shop for bargains, the elderly spent less on food while maintaining their well-being. Laitner and Silverman (2005) found a 16 percent decline in total consumption upon retirement. On the other hand, Hurd and Rohwedder (2003) reported that total spending increases by 3 percent within two years of retirement. The retirement consumption puzzle changes character with each change in the definition of consumption. As the definition of consumption broadens beyond food expenditures, the gap between consumption while working and consumption at retirement grows smaller (Fisher *et al.*, 2005).

Hamermesh (1985a) and (Burtless, 2004) found that consumption early in retirement is 14 percent higher than their retirement income can support, forcing them to reduce their consumption in later old age. Hausman and Paquestte (1987) and Burtless (2004) found

that retirement led to a decline in expenditures in food of about 14 percent of pre-retirement consumption. For workers who were forced to leave their jobs because of layoff or deterioration in health, the drop in consumption was even bigger – an additional 9 percent of pre-retirement food consumption. Hurd and Rohwedder (2003) and Burtless (2004) confirm that consumption falls at retirement; the average decline is about 15 percent to 20 percent of pre-retirement consumption. Workers experiencing significant reductions in consumption after they retire could possibly indicate that they were short-sighted in their saving or unpleasantly surprised by the drop in income that followed retirement. Another explanation for the fall in consumption is that workers have lower spending needs after leaving work. The drop in consumption spending may not be connected with a decline in welfare (Burtless, 2004).

Recent research revealed that essentially all the declines in expenditure at the time of retirement occur in two consumption categories: work related expenses (such as clothing and transportation expenditures) and food (meals at home and meals away from home). The fact that work related expenses decline in retirement is not all surprising. Becker (1965, Aguiar and Hurst, 2007) formalized the notion that consumption is the output of a production function that combines market goods and time. Such a “home production” function allows households to optimally substitute time for expenditures in response to fluctuations in the relative cost of time. In a study focusing on the differential lifecycle spending patterns for different consumption categories, Aguiar and Hurst (2007) find that “spending on total food, clothing and non-durable transportation” falls for people between their early and late 60s, by 10, 22, and 20 percent respectively. Conversely, spending on housing services, utilities, charitable giving, net gambling

receipts, and entertainment remain constant or rise during the retirement years. Aguiar and Hurst (2007) demonstrate that older adults find lower prices for everyday items by spending more time shopping around. In particular, they highlight that food, a necessary good, declines relative to entertainment (and several other categories) in the second half of the lifecycle.

Why would households forgo food (a necessity) while simultaneously increasing their spending on entertainment and charitable giving? Aguiar and Hurst (2007) conclude that spending on goods that are complementary to time (like entertainment) will increase in retirement, while spending on goods that are substitutes to time (like food production) will fall during retirement. The decline in food expenditure can be explained by an increase in home production of food by retirees; the time allocated to food production goes up in retirement and actual food intake may not change. Bernheim, Skinner, and Weinberg (2001) examined food consumption declines among retirees and found that: essentially all households, irrespective of pre-retirement wealth and post-retirement income replacement rates, experienced a decline in food expenditure during retirement; and the declines in expenditure are largest for households with the lowest retirement resources (Hurst, 2007).

The literature documents that retirees spend much more time on food production i.e. preparing meals and shopping for groceries, than their non-retired counterparts. The actual food intake (as measured by the quantity and quality of one's diet) remains constant through retirement despite the fall in food expenditure. There is substantial heterogeneity across individuals with respect to changing expenditures in retirement.

Declines in expenditures are greatest for households that have accumulated little wealth prior to retirement (Hurst, 2007). The literature also shows that there is substantial heterogeneity across households in the change in expenditure associated with retirement. Much of the heterogeneity can be explained by households involuntarily retiring due to deteriorating health. Health shock can affect the optimal consumption decision; households who are forced to retire earlier than expected will likely experience a sharp decline in their lifetime resources. Health shocks can cause a reallocation of the consumption bundle towards health expenditures away from other consumption categories. Someone stricken with a severe illness that affects his ability to work may also have decreased appetite causing him to spend less on food expenditure. Hurd and Rohwedder (2006a) examined expenditure changes for households who self report poor health as reason for their retirement; their findings show that those who experienced a poor health shock forcing them to retire were more likely to report expenditure declines at time of retirement.

When retirement spending targets are set too high – higher than the appropriate living standard-smoothing level, households are told to save too much and spend too little prior to retirement. When the targets are set too low, households are told to save too little and spend too much prior to retirement. Either way, when household reaches retirement age, its living standard will change abruptly – its consumption will be disrupted rather than smoothed. Kotlikoff (2008) demonstrated that targeting mistakes of 15 percent can readily induce 30 percent disruptions in living standards, pre- and post-retirement. Unfortunately, the size of the targeting mistakes associated with the ubiquitous 75-85 percent replacement rate rule-of-thumb is not 15 percent, but rather

well above 50 percent. Households who are subjected to these rules of thumb can easily be told to save many times more than is appropriate (Kotlikoff, 2008).

2.6.1 Rating Replacement Rates

Based on the life-cycle model (Modigliani and Ando, 1960) and the permanent income theory (Friedman, 1956), a replacement rate (post-retirement income divided by pre-retirement income) would be less than 100 percent only because of tax considerations and reduced need to save out of post-retirement income. The issue of adequacy of income after retirement has been the subject of a number of studies in the UK and the US (Bodie, 1990; Bernheim, 1992; Banks *et al.*, 1998, 2002; Blake 2004). The literature focuses on studying the changes in the living standards after retirement (Whiteford and Kennedy, 1995, Gough and Adami, 2008), by examining changes in income, expenditure or consumption (Adkinson, 1985, Gough and Adami, 2008).

To measure post-retirement income adequacy, Engen *et al.* (2004) compare the levels of post-retirement income to poverty rates among the elderly. First, poverty has been defined in different ways; Gough and Adami (2008) define as poor those individuals having resources (typically income) below 50 or 60 percent of the median income. They used 60 percent of median national income as poverty threshold (as indicated by Eurostat guidelines; Duncan *et al.*, 1993; Whelan *et al.*, 2003, Gough and Adami, 2008). The median definition has the advantage over the mean value of providing a better estimation of income, by avoiding small numbers of very high incomes. A 75 percent income replacement may support a comfortable retirement for someone who is in

excellent health, which is likely to be the case in the early years of retirement. But the same replacement rate may be grossly inadequate to pay for necessities and medical expenses if the retiree's health deteriorates (Burtless, 2004). Other studies examining the issue of retirement adequacy generally focus on one of two measures: the income replacement rate or the consumption replacement rate (Banks *et al.*, 1998). The income replacement rate measures retirement adequacy as the ratio of post-retirement income to pre-retirement income. The consumption replacement ratio considers the ratio of retirement wealth to estimated consumption needs during retirement (Cole and Liebenberg, 2008). Ibbotson *et al.* (2007a) adopts a very high 80 percent replacement rate. The calculation of target replacement rates is an exercise in reverse engineering. Researchers start with the pre-retirement income of households, then they get to the spending being done before retirement, and assume the income needs to be replaced. They calculate the pre-retirement income needed to cover that spending (Kotlikoff, 2008).

Gustman and Steinmeier (1998) consider an income replacement rate of 60 percent. Munnell and Soto (2005) also use an income replacement and find a replacement rate of 73.8 percent for couples and 86.3 percent for single individuals if lifetime earnings are used. Smith (2003) finds that income replacement rates increased during the 1980s and 1990s, reaching a high of 74 percent. Montalto (2001) and Butrica *et al.* (2005) use consumption in generating a measure of retirement adequacy. Montalto (2001) measures retirement adequacy as the ratio of retirement wealth relative to consumption needs. She finds consumption replacement rates ranging from 110 percent to 315 percent, depending on the planned retirement age. Butrica *et al.* (2005) examine the

expenditure-to-income ratio (the inverse of the consumption replacement ratio in their study and find median ratios of 81 percent for married couples and 90 percent for single individuals. Considering the inverse of these ratios (a measure similar to the consumption replacement rate), the results of their study are comparable to those of Mantolito (2001). Haveman *et al.* (2005) estimate that consumption replacement rates (including home equity) range from between 88 percent for single males and 104 percent for married couples.

The use of the consumption replacement rate to measure retirement adequacy is rooted in the lifecycle literature (Cole and Liebenberg, 2008). Several studies find that consumption changes over a person's lifetime. Changes in consumption during retirement are hypothesised to primarily result from a drop in expenses from a variety of factors: the elimination of work-related, dependent-related, and/or household expenses; the elimination of retirement savings expenses, and the possible reduction in taxes paid (Bernheim, Skinner, and Weinberg, 2001; Gourinchas and Parker, 2002; Munnell and Soto, 2005; Hurd and Rohwedder, 2006). The measurement of consumption has been found to be problematic; Banks *et al.* (1998) found that unanticipated shocks around the time of retirement can affect consumption levels of retirees, where a majority of individuals seem to have expectations about their future retirement income that exceed the effective pension entitlements. The problem with the use of replacement ratios is that the payments of lump sums skew the ratios themselves (Gough and Adami, 2008).

Empirical studies find that consumption fall during retirement. These findings support the use of the consumption replacement rate approach as a viable method to determine

whether a household is adequately prepared for retirement. Specifically, when considering the consumption replacement rate (rather than the income replacement rate) as a measure of retirement adequacy, research suggests that since consumption falls during retirement, a consumption rate of greater than 85 to 90 percent would likely be sufficient for the household to maintain a comparable standard of living during retirement (Cole and Liebenberg, 2008).

Kotlikoff (2008) outlines five critical problems with the replacement rate methodology. First, the calculation assumes that a household's spending after retirement will be precisely the same as its spending before retirement. This is strong assumption considering that the pre-retirement spending being measured includes all household expenditure i.e. on consumption, mortgage payments, support for children, education, medical expenses, etc. Second, the replacement rate method ignores new spending needs in retirement. Examples include taking care of parents who live longer than expected, healthcare and nursing home care. Third, the replacement rate presumes that the household's demographic composition will remain constant throughout retirement, it ignores the fact that children will leave the household and that one spouse may be significantly younger than the other. Fourth, the replacement rate approach assumes that retirees use not one single penny of the principal of their retirement assets to finance their retirement consumption. The assumption is that retirees are able to spend only the income earned on their assets. Finally, the replacement rate method assumes that the household's current saving behaviour is consistent with consumption smoothing i.e. with maintaining the household's underlying living standard per person through time. However, if households are already saving the appropriate consumption-smoothing

amounts, they have no need for a replacement target (Kotlikoff, 2008). Conventional planning has young and middle-aged households setting retirement spending targets, which are then used to make both saving and portfolio recommendations. When household retires, conventional planning drops its prior target and recommends a new one, namely that the household spend each year only 4 percent of the amount of assets it has at the initiation of retirement (Kotlikoff, 2008).

2.7 Life-Cycle Investing

Bodie (2003) identifies as a paradigm of life-cycle investing that “a person’s welfare depends not only on her end-of-period wealth but also on the consumption of goods and leisure over her entire lifetime”. The composition of private household savings has changed in a way that increases risk. There has been a significant increase in stock ownership among households since the 1990s (Poterba, 2001, Kezdi and Sevak, 2004). Investing for retirement include how to allocate their investment portfolios across asset classes and across many different financial products. Asset allocation decisions have important consequences for retirement wealth accumulation. Individuals may not fully understand the risks associated with various investment options, and are consequently exposed to investment risks (Poterba *et al.*, 2006). Conventional portfolio advice suggests that working households invest in life-cycle funds, whose asset allocation changes gradually through time from mostly stocks to mostly bonds. In 1969, two Economic Nobel Laureates, Paul Samuelson and Robert Merton, independently showed that stocks do not, on balance, offer a better risk-return deal the longer you hold them.

Consequently, economics prescribes the same split between risky and safe assets for long-term (young) and short-term (old) investors (Kotlikoff, 2008).

Merton (1969) subsequently modified this prescription to account for the fact that most young and middle-aged households hold most of their economic resources in the form of non-tradable current and future labour earnings. Younger households should invest a small to moderate share of their financial assets in stocks. This share should be increased dramatically in their middle ages; then they should reduce this share dramatically in late retirement. However, at any age, they should set their equity shares based on their risk aversion. No one retirement savings strategy will work for every individual. Each individual needs to determine the right balance for his or her situation. Portfolio choice can reveal a great deal about household behaviour. A retiree need to optimally choose how much to consume (spending decision) in tandem with an investment strategy (investment decision) to support that consumption. This involves the issue of a reasonable asset allocation of retirement assets i.e. how much should the retiree invest in equities, bonds, and other investments.

While it is generally accepted that returns on stocks have outperformed bonds, only a relatively small fraction of households hold stocks (Haliassos and Bertaut, 1995, Lusardi, 2001). Bernatzi and Thaler (2001) find evidence of very naïve diversification strategies. They find many participants in defined contribution saving plans simply divide their contributions evenly across the funds offered by the plan. Lusardi (2001) reports that households who have high education and permanent income are more likely to invest in stocks. Respondents reporting excellent or good health are also more likely

to invest in stocks. The lack of planning has been identified as a strong determinant of portfolio choice (Lusardi, 2001).

Life-cycle investing, especially investing for retirement, is today a matter of intense concern to millions of people around the world. The underlying theory is the “state preference” theory of optimal resource allocation under uncertainty of Arrow and Debreu (1954) and Bodie (2003). In that hypothetical world of complete markets for all contingencies, every individual chooses the combination of elementary time-state claims that maximises that individual’s expected utility (Bodie, 2003). Merton’s theory of continuous-time finance provides a link, however, from the Arrow-Debreu world to the real world through the technology of dynamic replication. Merton’s theory of continuous-time model is much more general than the older Markowitz mean-variance model of portfolio choice. The Markowitz model assumes that individuals make decisions in a static single-period framework. Merton’s framework contains several distinct time horizons. The planning horizon is the length of time between decisions to revise the portfolio, which is controlled by the individual within certain limits. Some people review their portfolios at regular intervals – once a month or once a year. A sudden rise or fall in the price of an asset a person owns may trigger a review of the portfolio. People with substantial investments in stocks and bonds may review their portfolios every day or even more frequently (Bodie, 2003).

Bodie, Merton, and Samuelson (1992) added a third choice variable – the amount of work people choose to do. In this model, individuals start out with an initial endowment of financial wealth and earning power from labour (human capital). The market values

of both components of wealth – financial and human capital – change continuously and stochastically. The wage rate (return on human capital) is perfectly positively correlated with the market return on traded assets. Consumption, wealth, and rates on return are all denominated in units of the consumption goods.

At each point in time, individuals determine the amount of their consumption, the proportion of their financial wealth to invest in risky assets (versus the safe assets), and the fraction of their maximum possible labour income that they will “spend” on leisure so as to maximise their discounted lifetime expected utility. The model’s results indicate that the fraction of an individual’s financial wealth optimally invested in equity should “normally” decline with age for two reasons. First, the fact that human capital is usually less risky than equity and that the value of human capital usually declines as a proportion of an individual’s total wealth as one ages. Second, at any given age, the greater the flexibility an individual has to alter her labour supply, the greater the amount she will invest in risky assets. Individuals may be able to offset changes in the value of their financial wealth by changing the amount they work. They may have the opportunity to work longer hours, take on extra jobs, or delay retirement. If younger workers have more opportunity to alter their labour supply than older workers, the share of assets held as risky equity should decline with age. On the other hand, people with risky human capital, such as entrepreneurs or stock analysts, the optimal path may be to start out early in life with no stock market exposure in one’s investment portfolio and increase that exposure as one ages (Bodie, 2003).

Other continuous-time life-cycle models have incorporated the important effects of habit formation. Habit formation provides a strong rationale for financial products that guarantee that future consumption will not fall below a level established by prior consumption as a minimum acceptable standard of living (Bodie, 2003). Among the important insights of modern financial science identified by Bodie (2003) are:

1. A person's welfare depends not only on her end-of-period wealth but also on the consumption of goods and leisure over her entire lifetime;
2. The value, riskiness, and flexibility of a person's labour earnings are of first-order importance in optimal portfolio selection at each stage of the life-cycle; and
3. Habit formation can give rise to a demand for guarantees against a decline in investment income.

2.8 Portfolio Allocation and Investment Strategies

Poterba, Rauh, Venti, and Wise (2005) examine how different portfolio allocation strategies over the lifecycle affect retirement wealth; they find that the expected return on stocks has an important effect on the distribution of retirement wealth for alternative asset allocation rules. Greater exposure to stocks leads to a higher average retirement returns. As the risk aversion of a retiree increases, the optimal share of the retirement portfolio that is held in stocks declines (Poterba, Rauh, Venti, and Wise, 2006). An important question for portfolio theory is whether the share of wealth should vary with age? According to Samuelson (1969), under normally assumed preference specification, there is no age variation in portfolio shares when capital income is a person's only

source of income. This contradicts the common view of many financial advisers who counsel that older people should reduce the share held in stocks (Bodie and Crane, 1997). Bodie *et al.* (1992) show that if the ability to smooth income shocks by adjusting labour supply is greater for younger workers, then older people should hold less stock in their portfolios.

The standard investment advice calls for individuals to reduce the allocation to risky assets with age, or more precisely, as the investment horizon shortens. Canner *et al.* (1997) cite a rule of thumb stock allocation percentage of 100 minus age. Generally, the so-called lifecycle funds decrease the share in equities as the investor ages. The increasing popularity of lifecycle funds and associated investment strategies runs counter to a key finding by Samuelson (1969) that the portfolio allocation should be invariant to the investment horizon. Samuelson (1969) challenges the conventional wisdom that an investor with a long horizon should invest a larger fraction of his portfolio in risky assets because he has an opportunity to average returns over a longer period. Merton (1969) derives similar results in the context of a lifetime dynamic optimization framework.

Samuelson (1994) discusses the need to account for human capital wealth when assessing the allocation of total wealth, wherein age variation of the optimal financial wealth allocation depends crucially on the variation of labour market earnings with financial market returns. Bodie, Merton, and Samuelson (1992) argue that younger investors have greater flexibility in their subsequent labour supply decisions, and that they should consequently be more tolerant of risk. They suggest that younger investors

may rationally choose to hold a higher fraction of their portfolio in stock than older investors. The possibility for a labour supply response to financial market realizations as a form of hedging offers a clearer justification for a lifecycle investment strategy. Standard investment advice tends to ignore these aspects of prospective labour market earnings, focusing instead on risk tolerance, investment horizon, and the extent of background risks such as labour income risk (Dominitz and Hung, 2006).

Gollier (2001) and Gollier and Zeckhauser (2002) derive the conditions under which the option to rebalance a portfolio in the future affects portfolio choice. They suggest that under specific assumptions about the structure of utility functions, the optimal portfolio share devoted to equity will decline with age. Campbell *et al.* (2001), and Campbell and Viceira (2002) develop numerical solutions to dynamic models which can be used to study optimal portfolio structure over lifecycle if shocks to labour income follow specific stochastic processes and investors have power utility. Cocco, Gomes, and Maenhout (2005) find that a lifecycle investment strategy that reduces the household's equity exposure as it ages may be optimal depending on the shape of the labour income profile.

The empirical evidence on age-specific patterns in household asset allocation suggests weak reductions in equity exposure as households age. Poterba and Samwick (1997) and Ameriks and Zeldes (2004) present empirical evidence on how portfolio shares for stocks, bonds, and other assets vary over the lifecycle. The general conclusion is that equity shares decline very little at older ages, although Ameriks and Zeldes (2004) find some evidence that some households cash out their equity holdings when they reach retirement or annuitize their accumulated holdings in defined contribution accounts. If

investors become more risk averse with age, then the optimal portfolio allocation will become more conservative as the investor ages (Dominitz and Hung, 2006). Recent studies on behavioural finance suggests that, whatever their preferences, expectations, and background risks, investors do not make optimal portfolio allocation decisions. Investors tend to use heuristics or simple decision rules to make their initial allocation decisions (Dominitz and Hung, 2006). Madrian and Shea (2001) examined 401(k) allocation behaviour find that an individual's allocation of regular contributions to a 401(k) plan is sensitive to enrolment default options. Benartzi and Thaler (2001) find that investor allocation decisions are dependent upon the choices offered to them; they tend to allocate $1/n$ of their investment to each of the choices offered, independently of the risk characteristics of the investment opportunities.

In the US, financial institutions have created lifecycle funds to cater to the perceived desire of investors who have a target retirement date to reduce their equity exposure as they age (Poterba *et al.*, 2006). Hewitt Associates (Marquez, 2005) estimates that 30 percent of all 401(k) plans in the US offer lifecycle funds. Lifecycle funds offer a way to combine both stock and fixed income options into a single fund, and to offer investors a time-varying asset allocation mix. These funds offer investors a higher portfolio allocation to stocks at the beginning of a working career than as they approach retirement (Porterba *et al.*, 2006). Conventional financial planning has young and middle-aged households setting retirement spending targets, which are then used to make both saving and portfolio recommendations. However, once the household retires, conventional financial planning drops its prior target and recommends a new one that

the household spend 4 percent each year the amount of assets it has at the initiation of retirement.

Dominitz and Hung (2006) consider three types of investment strategies for retirement: life-cycle investing; lifestyle investing, and simple heuristics. The lifecycle strategy mirrors the lifecycle fund in the investment choice set. The lifestyle strategies follow the findings on optimal portfolio choice by Samuelson (1969) and simply keep a fixed portfolio allocation across periods until retirement. The literature on behavioural finance introduces the $1/n$ decision rule which is a simple heuristics to implement allocation for retirement contributions. Dominitz and Hung (2006) find that a lifecycle investing strategy to be relatively conservative when taken from a lifetime perspective: that is, aggressive investing early in life when retirement assets are relatively small, and investing gets progressively conservative as assets build up. They also find that this lifecycle investment may be outperformed by a simple $1/n$ rule. However, Dominitz and Hung (2006) find that lifecycle investing which tend to be conservative, may induce some investors to take on more risk than they would otherwise and to invest more efficiently than when left to their naïve strategies.

Notwithstanding Samuelson (1969), the life-cycle advice of financial planners is: older people should invest less in stocks than younger people do. Most financial planners advise their clients to shift their investments away from stocks to bonds as they age. In the classic book, “A Random Walk Down Wall Street”, Burton Malkiel (1996 as cited by Jagannathan and Kocherlakota, 1996) advises “more common stocks for individuals early in the life cycle and more bonds for those nearer to retirement”; i.e. “the longer the

time period over which you can hold on to your investments, the greater should be the share of common stocks in your portfolio”.

Financial planners give three common reasons (Jaganathan and Kocherlakota, 1996). First, a substantial part of the risk of common-stock investment can be eliminated by adopting a program of long-term ownership and since older people don't have as many years ahead of them as younger people. Second, some financial planners emphasize that asset allocation is often shaped by the necessity of meeting relatively large obligations in midlife, such as college education for children; to meet these financial targets, investing a lot in stocks may be necessary for a while, but not after enough resources have been accumulated.

Finally, some financial planners point out that a younger person “can use wages to cover any losses from increased risk” while an older person cannot (Jaganathan and Kocherlakota, 1996). They show that if investors can rebalance their portfolios over time, a long horizon is basically the same as short horizon; what matters for investment decision is the length of time between rebalancing, not the investment horizon itself. In asset allocation, whether investors actually switch towards bonds or away from bonds as they age (in midlife) depends crucially on the size of their financial targets, their initial wealth, and the loss associated with failing to hit the targets. This again does not justify financial planners generally recommending risk reduction as investors age. Finally, in explaining the effect of life-cycle behaviour of labour income on investor behaviour, Jaganathan and Kocherlakota (1996) suggest that investors shift the risk composition of their financial wealth in order to substitute for lost labour income (i.e. to offset the

decline in the value of human capital). When investors are young, they have a long stream of future income. As they age, this stream shortens, so the value of their human capital falls.

According to Merton and Samuelson (1974) and Bodie (2002), risk-averse people should choose to invest in such a way as to minimise the volatility of their lifetime consumption flow. If a risk-free lifetime annuity is available, then they should purchase it. The general principles offered by the financial services industry for investing money earmarked for retirement are:

1. Investors should diversify their total portfolio across asset classes;
2. Equity portion should be diversified across industries and companies; and
3. The longer your time horizon, the more one should invest in equities.

A popular rule of thumb says that the fraction of one's portfolio to invest in stocks should be 100 minus one's age. Using this rule, 70 percent of one's investments should be in stocks if one is 30 years old; 50 percent in stocks if one is 50 years old, and 30 percent in stocks if one is 70 years old. The implication is that equities are a better choice the longer one's time horizon. Conventional portfolio advice suggests that working households invest in life-cycle funds, whose allocation changes gradually through time from mostly stocks to mostly bonds. In 1969, two economic Nobel Laureates, Paul Samuelson and Robert Merton independently showed that stocks do not, on balance, offer a better risk-return deal the longer one hold them. Nor do they offer a worse deal. Consequently, economists prescribe the same split between risky and safe assets for long-term (young) as well as short-term (old) investors (Kotlikoff, 2007).

Merton (1969) modified this prescription to account for the fact that most young and middle-aged households hold most of their economic resources in the form of non-tradable current and future labour earnings. Gomes, Kotlikoff, and Viceira (2007) included other salient factors such as borrowing constraints. Young households should invest a small to moderate share of their financial assets in stock; they should increase this share dramatically in their middle ages; and then reduce this share as they approach retirement. Next, they should increase the equity share initially in early retirement, and reduce this share dramatically in late retirement. However, at any age, they should set their equity share based on their own risk aversion (Kotlikoff, 2008). Apart from the EPF scheme for workers in the private sector, there is a dearth of financial products offered to retirees in Malaysia to help them convert their accumulated assets into a stream of retirement income without exhausting their funds too soon. Retirees will need advice on how to optimally convert accumulated assets into a stream of retirement income so as not to exhaust their funds too soon.

Insurers in the US offer life annuities as the preferred distribution; while mutual fund providers propose phased withdrawal plans as the better alternative. Horneff *et al* (2006) advocates a combined portfolio consisting of both annuities and mutual fund investments. Using a lifetime utility framework, they compare the value of purchasing a stand-alone life annuity versus a phased withdrawal strategy backed by a properly diversified investment portfolio, as well as combinations of these two products. The simplest form of life annuity is a bond-like investment with longevity insurance protecting the retiree from outliving her resources, guaranteeing lifetime level payments to the annuitants (Horneff *et al.*, 2006). In terms of payout structure, the life annuities

are similar to the public defined benefit pensions. Insurers hedge these contracts by pooling the longevity risks across a group of annuity purchasers.

How should an individual allocate his investments between the different categories of asset classes i.e. the different investments with distinguishing characteristics: high risk, high return assets and low risk, low return assets? Asset allocation is the strategy of allocating different investment which determines total return and return variability. Asset allocation decision itself is based on the individual's goals, time horizon, and risk tolerance, ranging from conservative to aggressive. The results are reflected in the composition of the investment portfolio allocation to different asset classes. The three major asset classes are – equities (stocks), fixed income (bonds), and cash and cash equivalents (money market instruments). Traditionally, equities provide the best growth potential; equities also involve the greatest risk of all three asset classes. Bond investments can provide stable income stream with generally moderate levels of risk. Cash and cash equivalents are highly liquid and safe in the short-term, but due to the low expected return, cash and equivalents cannot keep up with inflation.

The retiree faces two risks: if he invests in low return assets, he risks outliving the income stream such an investment generates. If he invests in high return assets, there is a chance that losses will diminish the asset base and erode his livelihood. The literature on portfolio investment management posits that investors should pick equities or other high return investment earlier in their life-cycle, and gradually switch to bonds and other fixed-income instruments later in the life-cycle. And by retirement age, they should be holding more than half their investments in bonds and near-cash securities. In

contrast, Malkiel (1990) and Milevsky *et al.* (1997) recommended that investors in their late sixties and older should hold 60 percent in bonds, 30 percent in equities, and 10 percent in a money market fund. Investors in their mid-fifties are recommended to have 50 percent in stocks, 45 percent in bonds, and 5 percent in the money market. Malkiel (1990) based all his recommendations on the variability of returns, without explicitly considering either the expected lifespan of investors or the risk that they might outlive their money. Ho *et al.* (1994) find that retiring individuals should hold more of their portfolios in high risk assets.

2.9 Managing Risks for Retirees

Adverse events and risks have an important influence on the financial decisions and well-being of individuals before and after retirement. Risk management in relation to lifetime income, post-retirement risks and risk management issues, are crucial in life-cycle saving and investing in the context of retirement planning. Maurer and Somova (2009) identify three important risk factors that need to be managed in the post-retirement period:

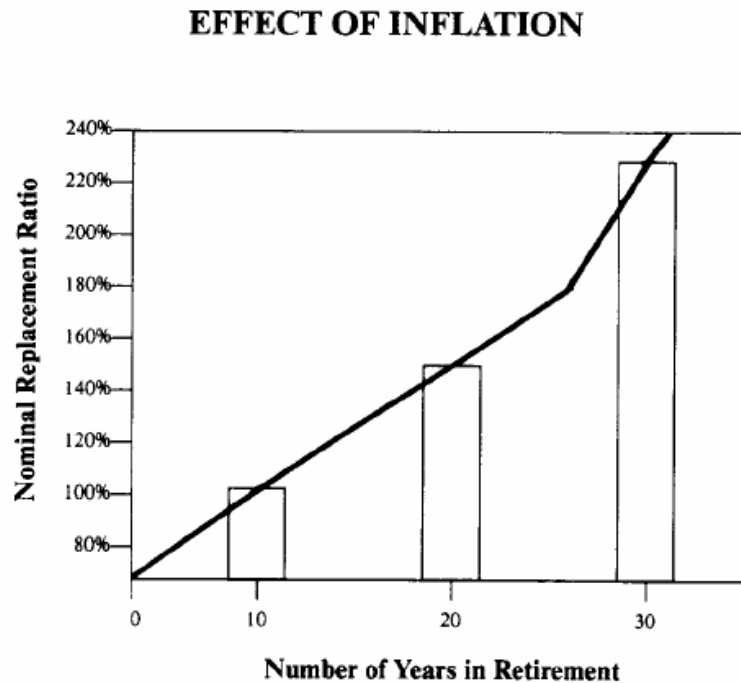
1. Inflation risk that prices may increase too quickly resulting in an erosion of the real value of pension payments and/or other post-retirement income, and thus reducing the purchasing power of pension benefits or post-retirement income.
2. Investment risk that stochastic investment returns will mean that retirement assets fluctuate over time, and decline in value. Efficient market theory implies that higher return prospects come with higher risks.

3. Mortality risk concerning an uncertain lifetime. Mortality risk can have two different adverse outcomes from lifetime consumption and saving perspective.

If the retiree lives longer than expected, he may run out of money. In which case, the retiree will have to reduce consumption later in life, and face the risk of falling into poverty in his post-retirement period. The literature refers to this as longevity risk i.e. the threat of reaching an age where all savings are already exhausted during the lifetime of the retiree (the risk of capital exhaustion). However, if the retiree dies too early without consuming enough of his savings, he may leave behind an unintended bequest (brevity risk). Other risks are the risk of unexpected medical expenses, the need and the cost for long-term care services.

Inflation is a major factor in the adequacy of retirement income and benefits, especially 15 or 20 years after retirement (England, 1988). Inflation-triggered depreciation of retirement assets and income in real terms is of great importance for old age savings and the long time horizons, associated with them. As an illustration, Figure 2.2 below shows, even a relatively mild 4 percent annual inflation rate severely erode the replacement ratio over 20 years of retirement. For example, a ratio of 70 percent at age 65 years must rise 104 percent at age 75 years and to 153 percent at age 85 years to maintain the same standard of living.

Figure 2.2: Effect of Inflation



If 70% of preretirement income is needed at retirement to maintain standard of living, this figure shows how much the replacement ratio must increase with 4% inflation to preserve that standard of living.

Assumptions:

- 4% rate of inflation
- Taxes fully indexed—that is, deductions, interest and tax brackets change with inflation.

Source: England (1988)

Fluctuating returns of the different investment assets (for the retirees) contain both the attraction of an upside potential, and also the disadvantage of shortfall-risks to lose money due to adverse developments in the capital and financial markets. While the literature shows that stocks have a higher return than bonds, it may come at the cost of higher volatility. Even in the decumulation phase, the average investment horizon with

respect to life-expectancy is about 20 years for a retiree at age 60 years. Retirees making prudent decisions would need to seek diversification possibilities not only between individual securities within a specific asset class, but also across different asset categories – stocks, bonds, real estate as well as with recurring income streams from labour income and statutory pension claims (Maurer and Somova, 2009). Given the uncertainty of an individual's lifetime, the expected remaining lifetime of a retiree can give rise to a considerable deviation around the statistical mean. The volatility of the individual lifetime is a factor of the economic consequences of mortality risk. Besides this volatility risk, uncertainty about the future development of the average lifetime itself caused by improvements to the mortality rates of the population is an additional risk factor, the estimation risk.

Mitchell and Fields (1996) have identified five types of risks confronting retired workers: individual risk, employer risk, investment risk, country risk, and international risk. Individual risk arises for a variety of reasons. People are uncertain about their own earning capacity during their working years, because of such factors as unemployment, skill obsolescence, poor health, family disruption and premature death of family breadwinner(s). They also face uncertainties in regard to their consumption needs when they are old, not knowing what they will need because of the risks of poor health and disability or how they will live. While people may seek to follow the accumulation pattern prescribed by the life-cycle model, that is they try to save enough when they are young and working, so as to be able to maintain consumption when retired (Hurd, 1990), but the uncertainties in earning capacity can result in under saving relative to the no-certainty idea (Mitchell and Fields, 1996). In addition, even well-intentioned people

have been found to lack self-control, resulting in inadequate saving for retirement (Thaler, 1994).

Employer risk arises if the firm fails and any employer pension promise becomes valueless. Witness the widespread corporate collapses in the US in recent years: Enron, Lehman Brothers, and many others. It has been estimated that in 2002, of the companies that make up the Standard & Poors 500 index and have DB pension plans, the companies had pension plan liabilities exceeding US\$1 trillion, which are only covered by assets of US\$900 billion creating a deficit exceeding US\$200 billion (Wills and Ross, 2002). Such unfunded liabilities cause severe doubts as to whether or not employers will be able to afford to provide and honour their retirement and pension obligations to their employees when they retire. However, any risk of such phenomenon has not arisen in Malaysia as private retirement industry is still in its infancy stage; the government has just approved the establishment of private retirement schemes in 2012 (Lim, 2012).

Investment risk identified by Mitchell and Fields (1996) refers to the case of funded pension. The monies contributed during peoples' working years are invested by a pension fund in the hopes of earning a positive rate of return. In the event the investments do not work out, all the people who invested with a particular pension fund lose out. Country or national risk is a matter of concern because retirees desire and need some insulation against economic and other financial shocks affecting the economy as a whole. For example, inflation in Eastern Europe has greatly eroded the value of retirees' real pensions (Diamond, 1992); similarly in Argentina, inflation eroded retirement

benefits resulting in social unrest. Other political risks can also pose a serious threat to retirees' economic security. As an example, China had dramatically reduced support for state-owned enterprises without having a coherent replacement for the previous cradle-to-grave system of social support which these outmoded economic institutions provided. Consequently, China's old-age protection system is failing without a resolution of the old-age security problem (Hussain, 1994).

To better protect against these country-specific macroeconomic and political risks, experts suggest that investing in an internationally diversified portfolio of assets, independent of the country's economic and political state (Bodie and Merton, 1992; Davanzo and Kautz, 1992). International risk or risk due to catastrophic global events can similarly affect retirees. These essentially undiversifiable shocks can arise from worldwide or regional depression, global weather shifts or environmental pollution or international epidemics (Mitchell and Fields, 1996). When such an event occurs, no one is unaffected and thus not all risks can be insured against. In Malaysia, Husniyah (2010) found that families who are financially risk adverse were more likely to engage in financial planning, cash-flow activities, good credit practices, savings, and risk management. If the families are more risk tolerant then they were more likely to participate in diversified investments.

In terms of volatility risk, Bodie (2007) and Kotlikoff (2008) identified that holding cash is not necessarily safe since its real return varies with inflation. It can have a negative real yield. Thus, comparing investing in this "safe" asset with investing in stocks biased the analysis dramatically in favour of stocks. In the US, investment in

TIPS, rather than cash, is the appropriate asset for analysing safe investments, but it seems rarely to be so used. The second assumption is that households whose assets perform poorly will make no adjustment whatsoever in their retirement spending target. This is obviously unrealistic; a household that shows up at retirement with half of the resources it expected to have accumulated should, according to economics, spend half the amount it would otherwise have spent (Kotlikoff, 2008).

2.10 Institution Background - Social Security in Malaysia

There are three potential sources of post-retirement income for Malaysians: a government pension for retired civil servants, the Employees Provident Fund (EPF) for employees in the private sector, and personal savings. Malaysia has several social security schemes, which cover contingencies such as old age, employment injury, occupational diseases and invalidity. Formal social protection includes the EPF set up in 1951, the Social Security Organisation (SOCSO) established in 1969, and Government Pension Scheme for the public sector employees, the Old Age Benefit Scheme for the Armed Forces. These different schemes provide protection for different contingencies such as old age (pension and the EPF), and disability (SOCSO).

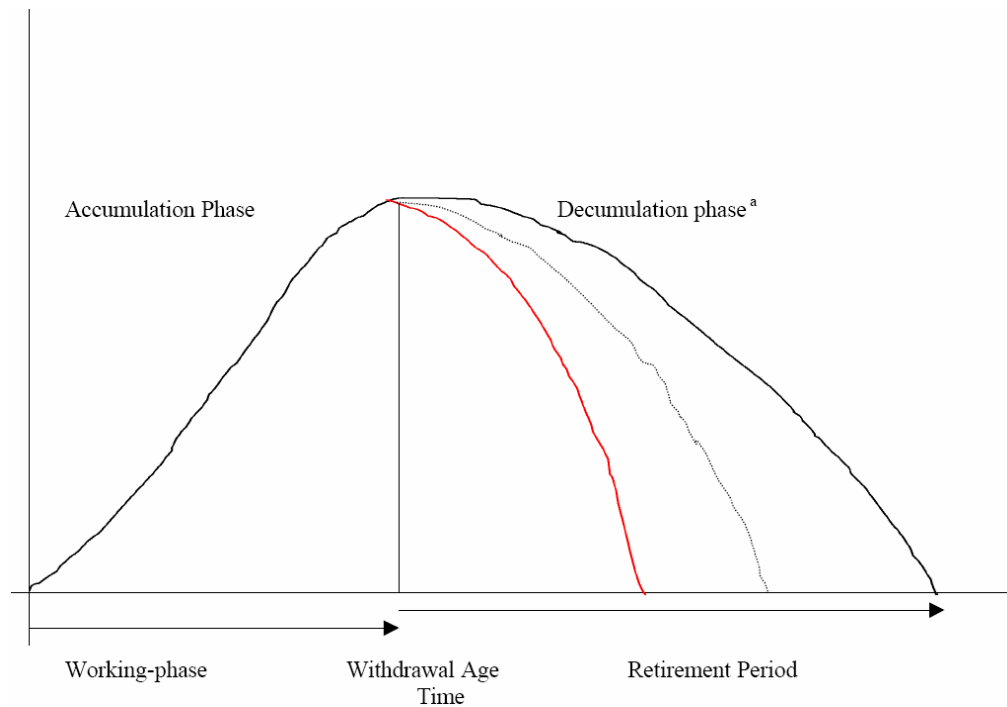
While these schemes provide coverage for the formal sector, the provision is not mandatory for those in the informal sector, which is substantial in Malaysia. Although the EPF is extended to the self-employed on a voluntary contribution basis, the participation rate is low. Hence, those in the informal sector have to rely on savings, drawing down on past wealth and financial support from children and family members

to provide them with income security in their old age. It is therefore timely that the government approved the establishment of Private Retirement Schemes (PRS) in 2012 to facilitate voluntary savings for retirement and complement the mandatory EPF savings for the benefit of private sector employees and the self-employed (Lim, 2012). The PRS industry is still very much at its nascent stage in Malaysia. The government has established the Private Pension Administrator (PPA), regulated by the Securities Commission, to help enhance efficiency and convenience to members as well as the overall administration of an effective PRS industry.

The World Bank and most social security experts advocate a multi-tier framework of social security to provide for retirement income to the different segments of the population. The Bank had earlier suggested a three-pillar system of social security: (1) a publicly managed, unfunded Defined Benefit (DB) first pillar which provides a core retirement income to nearly the entire workforce; (2) a mandatory savings tier and funded Defined Contribution (DC) pillar, designed to ensure that individuals do save for retirement, which would provide a supplement to social security; and (3) a voluntary private saving pillar representing income from private savings. The first tier is tax or contribution-financed redistributive tier with social insurance principles, designed to alleviate poverty and to provide protection to life-time poor. The second tier is the mandatory savings designed to ensure that individuals do save for retirement. The third is a tax-advantaged voluntary savings tier which can be used only for retirement (Asher, 2002). New developments and evidence have led the Bank to suggest a five-tier framework (Holzmann and Hinz, 2005; Asher, 2008). The five-tier framework added Pillar Zero to provide basic pension or social assistance financed from the general

budgetary revenues to cater to the lifetime poor in the community. Pillar Four recognizes the role of family, community, physical assets (housing) and post-retirement employment (Asher, 2008).

Malaysia has basically two types of retirement benefit plans: (1) a government pension system which is essentially a Defined Benefit (DB) scheme for the civil servants; and (2) a state-run provident fund, the EPF for employees in the private sector. The corporatization and privatisation of many government entities such as the utility sector has led to a migration of employees from the DB plan to the DC plan. Research in behavioural economics suggests a breakdown of will power and self-control and often the lump sum EPF withdrawal is spent too quickly. Figure 2.3 below shows mandatory savings scheme such as EPF has two phases, accumulation phase during an individual working career and the decumulation phase upon retirement. In the accumulation phase, the rate of return obtained on total balances accumulated by an individual has a crucial role to play. A low rate of return (nominal rate less inflation rate) implies that the final accumulated balances will be low, and vice versa. In the decumulation phase, the EPF provides for lump sum withdrawals of the accumulated balances rather than converting them to a periodic payment or an annuity (Asher, 2002).

Figure 2.3: Employees Provident Fund (EPF)**Accumulation and Decumulation Phases of Provident Funds**

Source: Asher (2002)

2.10.1 Employees Provident Fund (EPF)

The EPF is the most important source of non-familial support for the elderly in Malaysia. The EPF is a national provident fund set up in 1951. The EPF is a defined contribution plan. Both employers and employees in the private sector contribute to the EPF at the current rate of 11 percent and 13 percent of monthly wages respectively (for income up to RM5,000 per month) and 11 percent and 12 percent of monthly wages respectively (for income above RM5,000 per month). The EPF is mandatory for employees in the formal sector. This coverage does not extend to domestic servants, and

public sector employees, armed forces and police personnel, who are eligible for the public sector pension scheme. However self-employed persons or pensionable

employees are entitled to become members, and can determine their own size of contribution, with a minimum of RM20 per month. An EPF member's contribution is divided into three accounts, viz.: (i) Account I - 60 percent is credited for retirement purposes in accordance with the primary objective of the scheme, and can only be withdrawn upon reaching age 55 years; (ii) Account II - 30 percent credited that may be used for pre-retirement purposes such as withdrawals for buying or building a house, education and health needs as well as when a member reaches 50 years old; and (iii) Account III – 10 percent intended to help members to pay for critical illness expenses. Effective 2008, the liability period for mandatory contribution to the EPF for both employers and employees has been extended from age 55 to age 75. This change is to encourage members to continue working after 55 years to enhance their retirement savings.

At first, the EPF was meant to ensure the financial security of its members, particularly after retirement. Since 1968, contributors are eligible and have the option to withdraw up to one third of their total balance in their EPF account upon reaching 50 years old. The balance of two third in their EPF account may be withdrawn in one lump sum upon reaching the age 55 years old. Individual contributors are permitted to withdraw a portion of his or her EPF contribution, prior to reaching the age of 55, for certain reasons. These include buying a house and meeting the medical costs of a serious disease. The total balance can be withdrawn in the following instances: death, incapacitation and emigration or attaining the age of 55. Benefits for retirees are linked

directly to the contributions made by them and their employers during the period of employment, and the compounded annual dividend declared by the EPF. As a result,

relatively highly-paid workers who pay more into their EPF accounts would have higher retirement accumulations than those who earn less and consequently pay less into their EPF accounts.

2.10.2 Public Sector Pension Schemes

In Malaysia, only public sector employees are eligible for the government pension scheme. This provides for the welfare of retired civil servants and their dependents and survivors and is administered by the Public Services Department. Willmore (2000) posits that the purpose of pension is “to allow the elderly and disabled to retire from work in dignity”. The pension scheme is non-contributory social security scheme for government employees, and offer two types of benefits: a service pension and a gratuity payment. Pension expenditure is borne by the federal government. A government employee who has served at least 10 years is entitled to receive a life-long monthly pension upon retirement. An employee who has completed at least 25 years of service is entitled to receive a pension based on 50 percent of the last drawn salary; the scheme also provides survivor and disability pensions. Upon retirement, the service pension is paid and continued until death; upon death of the retiree, pension payment is transferred to the widow or widower and children. This derivative pension is reduced by approximately a third, 12.5 percent after the first payment. Payment ceases in the event the widow or widower remarries, the child attains the age of 21, marries or ceases studying in an institution of higher learning. A one-time service gratuity payment is available to the public servant upon retirement.

In 1991, the Malaysian government established the Pension Trust Fund (PTF) with the purpose to replace Government pension assistance. Federal government statutory bodies and local authorities contribute 5 and 17.5 percent respectively, of the basic salaries of pensionable employees to the Fund. Thus the pension scheme is now being funded, on a gradual basis. The Armed Forces Fund (AFF) was established through the Armed Forces Act 1973 to provide superannuation benefits for members of the armed forces who are not eligible for pensions. This fund is to protect the welfare of contributors and their dependents upon retirement, discharge from service, attainment of age 50 and death. The lower ranks of the armed forces are obliged to contribute to the scheme. Officers are permitted to participate voluntarily. Benefits take two forms: in the case of non-pensionable lower ranks, the benefit is in the form of a refund of the accumulated balance of each contributor's account minus the amount contributed by the Government. In addition, supplementary disability or death benefits and a facility that allows compulsory contributors to withdraw a portion of the accumulated balance to purchase a house or a piece of land subject to conditions are available.

2.10.3 Employees Social Security and Workmen's Compensation Schemes

The employee social security scheme (Socso) which forms the basis of the social insurance system in Malaysia was established under the Employees Social Security Act 1969. Socso covers employees receiving an initial monthly salary of less than RM2,000. Employees whose salaries subsequently exceed RM2,000 continue to be entitled to assistance. Certain categories of workers, namely domestic servants, tributers, spouse(s) of the employer, members of the armed forces, police personnel, and all public sector

employees, are not covered by Socso. Since its establishment, the number of members has increased to almost 10 million today.

Socso insures employees against injury in the workplace and any invalidity that results from such an injury. This insurance coverage against injury in the workplace requires a contribution of 1.25 percent of wages, which is borne by the employer; the contribution for invalidity is 1 percent of the wages, which is shared equally by the insured employee and the employer. Injury benefits cover industrial injuries, occupational diseases and commuting accidents. These benefits cover medical care, temporary disablement, permanent disablement, rehabilitation and in the event of the death of an employee, dependents' and funeral expenses. Invalidity benefits are in the form of pensions for the invalid employee, invalidity grants, rehabilitation expenses, funeral expenses and survivors' pensions.

The workers' compensation scheme established under the Workmen's Compensation Act 1952 covers manual and non-manual workers earning less than RM500 per month. This coverage does not extend to casual workers, domestic workers, outworkers, tributers and family workers, and those already covered by Socso, the armed forces, police personnel and other public servants who are entitled to service benefits in the event of employment injury. The employer is liable for payment of benefits under this scheme and must therefore take out insurance with an approved insurance firm. The scheme provides for four types of benefits: medical, temporary disablement, permanent disablement, and death resulting from an injury in the workplace

2.11 Summary

This chapter reviews definitions of retirement and how previous studies defined and measured retirement. A review of the research and literature on the concepts and theories relating to life-cycle consumption, saving and investing pertaining to financial planning for post-retirement was presented. Treussard's (2008) study on life-cycle planning focused on optimal career risk management and retirement planning from the perspective of human capital. Kim (2004) studied retirement transitions in terms of shocks to household resources. In Malaysia, Folk (2012) focused on financial education and filial piety factors, while Husniyah (2010) focused on financial well-being and risky investments among families. This study attempts to extend the literature by examining the extent Malaysians make financial preparations and the predictors of financial planning for post-retirement by incorporating key principles of the life-course perspective adopted from the life-cycle theory in a socialhistorical and contextual framework. The following Chapter 3 will detail the formulation of the research framework for the study.

3.1 Introduction

This chapter outlines the research questions for the study and the formulation of hypothesis development. The chapter also presents the research framework for the thesis i.e. financial planning for post-retirement encompassing theories of consumption, saving, and investing. The life-cycle theory is adopted to provide a theoretical framework to study the concept of financial planning for post-retirement among urban Malaysians in the Klang Valley area in Malaysia.

3.2 Research Questions

To address the research objectives as outlined in Chapter 1 (1.3), the study attempted to answer the following research questions:

1. What are the perceptions among urban Malaysians from different age cohorts relating to financial planning for post-retirement?
2. Is there a relationship between personal orientations and financial planning for post-retirement?
3. Does expected retirement age moderates the relationship between personal orientations toward retirement planning and financial planning for post-retirement?
4. Is there a relationship between current financial resources and financial planning for post-retirement?
5. Does parental retirement planning influence financial planning for post-retirement?
6. Is there a relationship between consumption during work life and consumption during post-retirement?

Figure 3.1 below shows a mapping of the research objectives to the research questions.

Figure 3.1: Mapping Research Objectives to Research Questions



3.3 Research Framework

The research framework for this study builds on the standard life-cycle hypothesis and the critical issues surrounding the study of retirement based on the life-cycle theories of savings, consumption, investing and financing consumption during the post-retirement period. The life-cycle theory views retirement behaviour as a result of decisions about consumption and labour supply. The main building block of life-cycle models is the

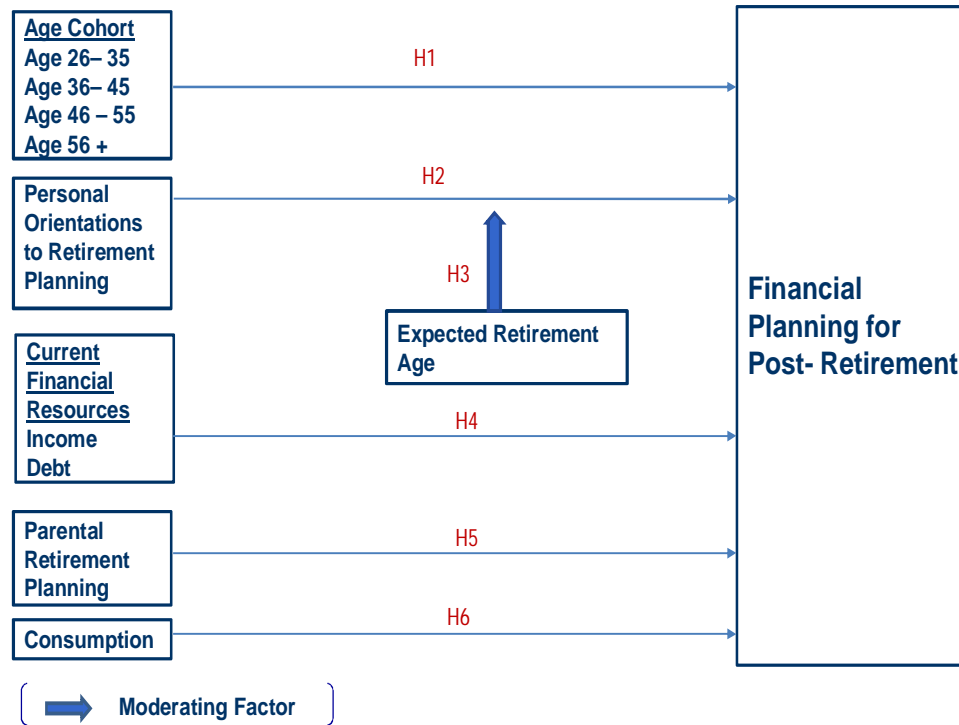
divisions of income between consumption and saving. The saving decision is driven by preferences between present and future consumption. The basic assumption is that people find an optimal retirement age and consumption level to maximise their utility over a lifetime. Rather than current income, expected permanent income helps to explain why people have high consumption even with low income and vice versa. Economic theory suggests consumption and leisure increase with increased wealth. This hypothesis has justified an early retirement trend during the bull market years (Kim and Phyllis 2001)..

Life-cycle factors include the relationship between wealth and labour supply, and life expectancy. Perceived longevity helps to determine the working life expectancy and non-working life (Wolfe, 1983). Since people make decisions to maximise their utility over their lifetimes through labour supply and consumption, income and wealth have been common determinants when they make decisions about the timing of retirement. Previous research based on life-cycle models (Hammermesh, 1984) identifies four categories of explanatory factors – financial characteristics, demographic characteristics, health characteristics and occupation characteristics. Most studies assumed that education and health status are important in explaining retirement decisions. Health status reflects not only remaining life expectancy, but also a person's ability to work. In terms of financial characteristics, most studies have focused on the impact of retirement income including social security benefits. The life-cycle theory implies that the level of wealth decreases after reaching a peak. However, maximum wealth is not necessarily achieved right before retirement.

Financial planning for post-retirement focuses inter alia on how individuals care most about lifetime consumption, not just wealth (Bodie, 2003). In the life-cycle model, accumulation for retirement is the prime motive for saving, and the model is built around the consumption/saving behaviour of a rational individual who is assumed to maximise the present value of lifetime utility, subject to budget constraint. The starting point of the life-cycle model of consumption in financial planning is the use of financial assets as means to transfer consumption from points in the individual's life-cycle when consumption has relatively little value to points when consumption has relatively more value.

The research framework is outlined in Figure 3.2 below. The research framework posits that several life-cycle factors affect retirement orientations, expectations and plans: the cohort one belongs to, personal orientations to retirement planning, expected retirement age, current financial resources, parental retirement planning, and consumption. The research framework will study the effects of these different life-cycle factors on financial planning for post-retirement.

Figure 3.2: Research Framework



Income has been shown to be the main factor to determine both savings and asset holdings (Avery and Kennickell, 1991; Browning and Lusardi, 1996). Age also exerts a significant effect on savings and wealth – older households tend to have more assets (Blau and Graham, 1990; Hurst, Luoh, and Stafford, 1998). Older households save more as well, though this relationship also follows a “hump-shape” curve, with savings rates lowest for the youngest and oldest households (Bosworth, Burtless, and Sabelhaus, 1991; Attanasio, 1993).

Based on the life-cycle model and the various life-cycle factors discussed further under 3.4 below, the following six hypotheses have been developed to study the relevant research areas:

1. H1: There is a difference in the perceptions towards financial planning for post-retirement among the different age cohorts.
2. H2: There is a relationship between personal orientations and financial planning for post-retirement.
3. H3: Expected retirement age moderates the relationship between personal orientations toward retirement planning and financial planning for post-retirement.
4. H4: There is a positive relationship between current financial resources and financial planning for post-retirement.
5. H5: There is a positive relationship between parental retirement planning and financial planning for post-retirement.
6. H6: There is a positive relationship between consumption and financial planning for post-retirement.

3.4 The Development of Hypotheses

Each component of the research framework will be defined, relevant previous research will be summarized, and hypothesized relationships between the model components are outlined. Demographic characteristics (marital status and retirement age) as well as financial characteristics (pre-retirement income, retirement plans and investment portfolio composition) have been found to impact the likelihood of a household having adequate income for retirement (Cole and Liebenberg, 2008). Several studies have

accounted for life-cycle factors in different ways: some include the proportions of the population who are respectively young (the youth dependency ratio) and old (the elderly dependency ratio) (Modigliani, 1970; Feldstein, 1980; Miles and Patel, 1996), life expectancy (Hamermesh, 1985), and bequest motive (Hurd, 1987).

3.4.1 Life-Cycle Theory as a Theoretical Framework for Study

The life-cycle model suggests that people will save while young and working, and dissave when old and retired. This implies an accounting effect – when societies have many elderly people, savings will be low – and motivates the study of the interaction between demography and aggregate savings. In theory, in the absence of a bequest motive, the dissavings of the old should offset the savings of the young, so that in a stationary population (with a stable age distribution and no population growth) there is no aggregate saving. However, if the age structure of the population is unbalanced (from population growth), or if the economy is undergoing rapid economic growth and wage incomes of the young are high relative to the retirement incomes of the old, the savings of different cohorts may not cancel out, and aggregate saving, or dissaving, may occur (Ando and Modigliani, 1963, Bloom *et al.*, 2007).

While there may be a typical financial life-cycle pattern that applies to most people, each family and individual might encounter unexpected events at any time that are difficult to predict if and when they might occur, and are not planned for in their financial life-cycle. Lifestyle situations will affect the financial situation and requirements at different stages in life. The global economic meltdown in 2008/2009

resulting in a rout in most stock markets around the world has ignited a crisis of confidence for millions of people in the world who manage their own retirement savings plans.

The life-cycle theory of saving predicts that consumption and saving behaviour of an individual changes greatly with income, wealth, age, marital status, and other socioeconomic conditions during the various stages of the individual's life (Tin, 2000). Individuals work and save when they are young and run down their savings during retirement (Thornton, 2001). It has been suggested that the age structure of the population has a major impact on savings behaviour (Sarantis and Stewart, 2001). Alessie, Lusardi and Aldershof (1997) find that people in the Netherlands save for different reasons that vary by age and the differences match life stages. People seem to have saving motives that are appropriate for a certain life stage.

More life-cycle saving will probably be needed for people not to suffer a decline in their standard of living when they retire. To meet their financial needs during retirement, people would have to make periodic cash withdrawals from their retirement portfolio to finance their consumption and maintain their desired standard of living. The better the investment portfolio performs, the longer the portfolio can sustain these periodic withdrawals in retirement. However, portfolio performance is a function of asset allocation strategy and individual investment returns. For example, what percentage of a portfolio should be invested in stocks? A rule of thumb suggests an equity percentage equal to 100 minus the person's age. Consequently, a 50-year individual should invest 50 percent in stocks in his portfolio. Therefore, a sound asset allocation strategy and

good portfolio returns are the vital determinants of success for a retirement plan and individual retirement experience. A life-cycle investment model requires investing before retirement to emphasise on capital growth (the accumulation phase). Conversely, investing after retirement (the liquidation phase) should emphasise current income and give less priority to growth. These emphases should vary based on the person's age, financial needs, and financial goals. This point is relevant in the life-cycle theory which posits that the main objective of saving is to accumulate for retirement during one's working life and to drawdown down on savings for consumption during the post-retirement period.

People planning and saving for retirement face the challenge of deciding not only how much to save, but also how to allocate their retirement savings across different kinds of investments, such as stocks, bonds, bank and insurance accounts, and real estate. Determining how much to save requires making several key decisions: the amount the individual intends to withdraw and spend each year during retirement, the portfolio balance needed upon retirement to meet and sustain the annual spending requirement, and how much is required to save annually from now until the expected retirement age to achieve this portfolio target. Investing for retirement is important as dramatic improvements in living standards and medical and health care have led to a significant increase in life expectancy. This has increased the number of people who live for much longer periods after their retirement. There are several reasons why one may be interested to study the saving for retirement and related consumption behaviour of households. Saving is related to growth and economic development of a country. There is a close link between household and national saving rates over time (Deaton, 1997).

Millions of people around the world today are relying on self-directed investment accounts to provide future retirement income. Since many of these people lack knowledge about how to invest the money accumulating in these accounts, they are seeking the help of experts. This advice is currently provided by the investment industry, financial planners, and by government according to Markowitz (1952). The Markowitz portfolio-selection model is based on a set of risky assets characterized by their means, standard deviations, and correlations, from which are derived outputs in the form of a menu of risk-return choices arrayed along an “efficient portfolio frontier” (Bodie, 2001). Merton (1969, 1971, 1975, 1992) and Bodie (2001) showed that hedging can be as important as diversifying in the demand for assets.

Bodie (2001) suggests ways to take full advantage of these theoretical advances and market innovations to improve the risk/reward opportunities available to individuals in self-directed investment accounts. First, he suggests hedging with inflation-protected bonds and annuities as the way to guarantee a minimum standard of living in retirement. Second, he suggests assessing investors’ willingness to postpone retirement in determining their optimal asset allocation. Third, he suggests a way to use call options to leverage potential income gains while protecting one’s minimum standard of living. Markowitz mean-variance model of portfolio choice assumes that individuals make decisions in a static single-period framework (Jaconetti, 2009). Merton’s continuous-time model framework contains several distinct time horizons. The planning horizon is the total length of time for which one plans. For a 25-year-old who expects to live to age 85, the retirement planning horizon would be 60 years. As one ages, the planning horizon typically gets shorter and shorter. When considering life’s priorities, the

individual is likely to have several competing financial goals – buying a first or second home, saving for a child tertiary education, taking a vacation, etc. The individuals are required to envisage the lifestyle they want when they are no longer working full time or fully retired. To achieve a comfortable, financially secure retirement, the key is to plan early – and to monitor the chosen strategy on a regular basis. The time horizon over which a retiree expects to spend his or her investment portfolio is critical. For most retirees, the time horizon equals the life expectancy of his or her spouse. Given the many uncertainties, a common practice suggested by financial planners is to plan up to age 95-100 (Jaconetti, 2009).

Life-cycle investing identifies that a person's welfare depends not only on her end-of-period wealth but also on the consumption of goods and leisure over her entire lifetime (Bodie, 2003). In recent years, financial planners recommended an optimal or required replacement ratio, which is the percentage of current income an individual will need to replace during retirement. The estimates of replacement income required range anywhere from 50 to 90 percent of the pre-retirement income. Another method is to focus on consumption – the amount of money actually spent each year (not the amount earned) to determine retirement needs (Jaconetti, 2009). However, saving more now require a trade-off between current consumption and future consumption. Saving more requires the individual to live more frugally than he or she would like in order to adequately fund retirement. Therefore, the individual needs to determine the right balance between current and future consumption for his or her situation.

3.4.2 Age Cohort

People today are getting a late start on saving for their retirement. They stay longer in school, postpone marriages, and start families later than earlier generations (Wills and Ross, 2002). This study will examine whether belonging to a particular age cohort relates to differences in attitudes and financial preparation toward retirement. The study will examine differences among four age cohorts designated under different age groupings: age 26-35, 36-45, 46-55, and age above 56 years old. By having respondents at different stages of the life-cycle, this study will examine the attitude and the general level of preparedness of Malaysians towards preparing for their retirement – focusing on how Malaysians plan and save for their retirement vis-à-vis the life-cycle theories, how Malaysians invest their savings and their asset allocation strategies, portfolio choice, and whether pre-retirement financial planning has an impact on their post-retirement experience.

A cohort refers to a group of people with unique shared experiences or characteristics. The concept of cohort (Ryder, 1965; Rosow, 1978) has been recognised as an important way of assessing the influence of social change and historical circumstances on individuals (Elder and Caspi, 1990). In this study, a cohort will designate a group of people born during a similar period who move through historical time together (Rosow, 1978). A cohort effect occurs where people come into maturity in different times may have different attitudes to risk, thrift, and borrowing, among other things (Browning and Lusardi, 1996); social or historical changes differentiate the life patterns of groups of people. Lusardi and Mitchell (2006) find a decline in financial knowledge after age 50. Lusardi and Mitchell (2007a) also find an inverse U-shape in the mastery of basic

financial concepts, such as the ability to calculate percentages or simple divisions (as cited in Agarwal *et al.*, 2007). Luigi Guiso (2007) and Agarwal *et al.* (2007) finds that, when picking stocks, people achieve their best Sharpe ratios at about age 43.

In measuring the wealth accumulation of specific age cohorts, Sabelhaus and Pence (1999) find strong life-cycle impact on saving, with very large rates of dissaving among the oldest cohorts even after adjusting for bequests. Similarly, Hildebrand (2001) shows a strong hump-shaped age distribution of wealth in the cross section that vanishes in the cohort analysis. Highlighting the usefulness of the cohort perspective, the Hildebrand study indicates older households have less wealth than younger households at a point in time not because they dissave but because they had lower lifetime earnings.

Life-cycle consumption smoothing implies that young cohorts (26-35) should borrow, prime (36-45) and middle aged (46-55) save and amortize, while the elderly (56+) spend savings. The indicated age brackets operationalize an age structure corresponding to these cohorts (Lindh, 1999). Cohort 1 (age 26-35) may have less years in the labour market compared to members of Cohort 2 (36-45). Members of Cohort 1 are not likely to be eligible for any retirement or pension benefits, and are also unlikely to be thinking much about retirement yet. Cohorts 1 and 2 entered the labour market under similar conditions: a culture of individual responsibility, the continuing trend toward DC social security systems, the era of technology and service jobs, and more job mobility. Cohort 3 (born between years 1954-1963), the younger Baby Boomers, entered the labour market in the 1970s to 1980s. Cohort 4 (born in 1953 and before) comprises of the older Baby Boomers (1944-1953) (Dailey, 1998) and older people born in and before 1943. Some older people had live through the war years and depression; having gone through

these periods of severe economic hardships which imposed extreme financial distress even among the wealthiest of individuals, people in this cohort tended to be more prudent and save throughout their lives to protect against financial exigencies (Schewe and Meredith, 1995). Hence this cohort places a higher value on job loyalty, occupational stability, savings and investments. This cohort has the lowest rate of working women, who thus rely largely on their spouses and family members for their retirement income.

This leads to the formulation of Hypothesis 1:

It is hypothesised that there is a difference in the perceptions towards financial planning for post-retirement among the different age cohorts.

3.4.3 Personal Orientations to Retirement Planning

As more Malaysians move into retirement, it is crucial to learn whether families know how to plan for retirement and whether they can execute these plans effectively. Saving for retirement requires a degree of self-control in order to balance current spending against future financial security. Anderson and Weber (1993) investigated the impact of pre-retirement planning on life satisfaction during retirement. Their findings indicate that retirement preparatory programs are most useful if they are performed or provided in a timely manner; that there are significant differences in the life satisfaction expressed by retirees who planned retirement on their own, compared with those who participated in structured pre-retirement programs, and those who did not plan for retirement. Higher retirement income means a greater likelihood of continuing a pre-retirement lifestyle. While financial education may impact the intention to invest,

retirement savings is an area in which individuals may procrastinate (Thaler and Bernartzi, 2001; Choi *et al.*, 2001). Failure to recognise the need and consequently a lack of motivation is among the reasons cited as to why people did not save for their retirement (Dawson, 2002).

In a study on American workers' retirement planning and saving behaviour, Lusardi, (2001) report that a large proportion of workers have done little or no planning for retirement; only 36 percent of workers have tried to determine how much they would need to save to fund a comfortable retirement. In their survey, it was found that as many as three-quarter of the workers have little idea regarding how much money they would need to accumulate for retirement. Most respondents reported that they could not save more or retirement was too distant to know what would be needed. A significant proportion reported they could not find the time; while others find the process is either too complicated or they could not find help to do it (Lusardi, 2001).

As planning is an important predictor of saving and investment success, this may account for why household wealth holdings differ, and why some people enter retirement with very low wealth (Lusardi, 1999; Venti and Wise, 2001). Personal orientation to financial planning in Figure 3.2 (Chapter 3) comprises of: (1) confidence in the economy; (2) confidence in the social security and pension systems; (3) attitude toward retirement; and (4) future orientation. Confidence in the economy and the country's social security and pension system will be explored.

This leads to the formulation of Hypothesis 2:

It is hypothesised that there is a relationship between personal orientation and financial planning for post-retirement.

3.4.3 (i) Confidence in the Economy

When data is collected about retirement plans and orientations is important. The year 2008 followed by the early part of 2009 represented one of the worst period of global economic downturn since the great depression of the 1930s. A collapse of the US sub-prime mortgage market and the reversal of the housing boom in other industrialised economies had a ripple effect around the world which also adversely impacted Malaysia (Mahani and Rajah, 2009). Other weaknesses in the global financial system have surfaced. Some financial products and instruments have become so complex and twisted, that as things start to unravel, trust in the whole financial and banking system in the West started to fail, symbolised by the bankruptcy of the venerable Lehman Brothers, the Madoff scandal, and numerous other colossal financial collapses.

Many investors lost their savings in their retirement investment accounts and financial products structured by leading international banks and financial institutions not only in the United States but also Asian countries such as Singapore and Hongkong. It was reported that pension funds in the OECD countries lost over \$4.0 trillion in market capitalization in 2008 (Whitehouse and Yermo, OECD 2008) Workers close to retirement face the prospects of drawing down their retirement savings at time of diminished asset values. If there is a recession, generally older workers are often the first to be made redundant, dealing a double blow to their finances. These circumstances

may therefore impact negatively people's views and plans about their retirement planning and the adequacy of their savings and investments.

The 2009 Retirement Confidence Survey in the US found the lowest level in confidence among American workers who are confident about having enough money for a comfortable retirement. Retirees also posted new low in confidence about having a financially secure retirement, with only 20 percent saying they are confident (down from 41 percent in 2007). Most respondents cited the recent economic uncertainty, inflation, and the cost of living as primary factors, which may cause them to work longer and defer their expected retirement. Retirees also plan to work to supplement their income in retirement (Helman, Copeland and VanDerhei, 2009).

As a result of the collapse of the housing bubble in the US, millions of middle class homeowners ended up with little, no equity or even negative equity in their homes (Rosnick and Baker, 2009). The plunge in house and stock prices caused massive loss of wealth and confidence among millions of individuals and households. Many among the baby boomer generations who have had much of their wealth saved over their working lifetime erased, for the most part have insufficient time remaining before retirement to recover and accumulate adequate savings. In any economic recession, the average individuals and households have generally have to cut back on consumption in an effort to restore their savings, touching off a vicious cycle of falling demand and increased unemployment.

3.4.3 (ii) Confidence in Social Security and Pension

The global trend is toward shifting responsibility for old age financial security from the state and employers to the individuals. Given the growth in defined contribution pensions and provident funds, and the concomitant dependency on the capital market performance, recent negative economic circumstances may cause individuals, especially those close to retirement age, to worry about their post-retirement financial security. Individuals who are less confident about the adequacy of their retirement savings and assets may have to start saving more, defer their retirement plans, or to seek new employment to supplement their post-retirement income.

3.4.3 (iii) Attitude toward Retirement

The question of how much to save for retirement touches on many issues in economics, psychology, and health. Most people accept retirement as a normative phase of their life-cycle. The greatest evidence is the trend toward early voluntary retirement. Prior to the 1930s depression in the US, the concept of retirement was often viewed negatively – as a period of declining health and greater dependency, even symbolizing worthlessness (Hareven, 1995).

Views and attitude toward retirement may affect plans for the transition. Individual attitude toward retirement is closely allied to the financial situation. According to Atchley (1972), the higher the expected income, the more favourable the attitude. Glasmer (1981) found that those who prepared for retirement may view the event more

positively. A worker's evaluation of his present financial situation, social activity level, close friends, and perceptions of preparedness for retirement are determinants of a positive attitude toward retirement (Glasmer, 1976).

People spent thirty or more years of their adult life working, and retirement represents a sharp social, psychological, and economic break with life as they know it. Individuals who do not want to retire and who think negatively about retirement are less likely to make preparations to retire compared to people who view retirement as a desirable period of life (Fretz *et al.*, 1989). People with negative views toward retirement are less likely to think about retirement. Individuals who think about their retirement are likely to make preparations for their retirement. Preparations such as attending financial planning and pre-retirement seminars or consulting a financial planner may stimulate thoughts about retirement.

Studies in the United States revealed that one-third of people nearing retirement age have hardly thought about retirement (Lusardi, 1999). Consequently many people who reported that they think little about retirement expected to have few assets at retirement and are less likely to save for retirement (Lusardi, 1999). Lusardi (2001) reported that households who do not plan for retirement end up having much lower savings than households who have thought about retirement. Households who have taken steps toward retirement planning accumulate more wealth. Thus, planning continues to have an effect, even after accounting for many of the variables that can explain savings. Respondents that do not plan have about 100 percent less savings than respondents that have done some planning. Attitudes toward retirement and retirement plans are likely to

be reciprocal – by not preparing for the transition toward retirement, people are likely to view retirement less positively.

3.4.3 (iv) Future Orientation

Future orientation or concern for future consequences has been found to influence a range of behaviours involving inter-temporal choice (Webley and Nyhus, 2006). The ability to delay gratification and exercise self-control is often cited as an important determinant of individual saving and spending in the economic and economic psychological literature (Strolz, 1956; Ainslie, 1975; Wood, 1998; Warneryd, 1999, as cited in Webley and Nyhus, 2006). Future orientation is included in this study as financial and retirement planning is expectation regarding a future event in the form of savings is inherently related to the future (Lusardi, 2003). Saving for retirement is a long-term process, unless retirement is relatively close. Concern for future orientation or future consequences has been found to influence a range of other behaviours involving inter-temporal choice.

The planning process in preparing for a major life transition such as retirement should begin early in life because of the long term preparation needed (Atchley, 1981; Wehrenberg, 1984; Singleton, 1985). Most retirement planning focus on the material aspects of the transition from full time employment into retirement, and less attention to the psychological factors that are of increasing importance in the post-retirement period. Previous studies indicate that planning for retirement is positively related to satisfaction during retirement (Thompson, 1958; Glasmer, 1981). People generally think more about

the immediate future, instead of the distant future (Eson and Greenfeld, 1962; Fingerman and Perlmutter, 1995).

Lusardi (1999) reported that one-third of Americans aged 51-61 have not begun to think about their retirement and therefore approach retirement with very small wealth holdings. Again, Lusardi (2002b) found that one out of three of households nearing retirement report that they have hardly thought about retirement. Lusardi (1999) reported that thinking about retirement is an important predictor of wealth holdings of household nearing retirement. In examining the wealth holdings of households whose head is close to retirement, Lusardi (2001) finds that a large share of households have not thought about retirement or made any plans for retirement, contrary to the predictions of many traditional models of saving. The lack of planning results in low wealth holdings and also in portfolios that is less likely to contain high return assets, such as stocks. Other studies also show future orientation or time horizon is important for economic behaviour (Lea, Webley, and Walker, 1995; Webley and Nyhus, 2001, 2006).

People's preferences for the long-run are often in conflict with their short-run behaviour. When planning for the long term, people often express intentions to save. However, when asked about actual saving, people frequently admit to saving less than planned (Katona, 1975, Webley and Nyhus (2006).

3.4.4 Expected Retirement Age

Studies of retirement preparedness typically assume that people will retire at a fixed age. While there are still standard retirement ages, increasingly there is flexibility over the actual retirement age. At the same time, it is also the case that retirement is no longer a strict discrete choice variable: some people are less than fully employed prior to normal retirement age; others continue to work after this age (Blake, 2004).

Earlier-than-expected retirement has been associated with adverse health and labour market shocks (Anderson, Burkhauser, and Quinn, 1986; Disney and Tanner, 1999; Laughran *et al.*, 2001). Barring injury or illness, the timing of retirement can be a matter of choice; workers can choose when to retire, just as they choose how much to save. The longer they work *ceteris paribus*, the more prepared for retirement they are likely to be. Working additional years and saving more of their income can greatly improve the retirees' financial status, even if they have not saved much until they near retirement. By extending their asset accumulation period, retirees are better able to replace pre-retirement income (Cole and Liebenberg, 2008).

In Malaysia, the retirement age for employees in the public sector has been extended to 60 years old effective from 2012 (from 58 years old). The Malaysian government has also raised the compulsory minimum retirement in the private sector to 60 years effective from July 2013 (from 55 years old) (Samy, 2013). Because Malaysians can expect to live another 15 or more years after retirement, each year they postpone retirement reduces their need for retirement savings. The additional year gives them time to save more and earn returns on the assets they have already accumulated. As a

result, Malaysians can make up for earlier shortfalls in retirement savings with surprisingly modest changes in behaviour such as adjusting their expected retirement age. Understanding the determinants of retirement age is crucial i.e.: (1) the financial resources available to the individual and household for retirement; (2) the marginal net earnings from an extra year of work and for retirement; and (3) the health of the individual nearing retirement.

So, are people retiring at a reasonable age? Do they save enough to afford the retirement ages they choose? The expected retirement age is important for two reasons: the older the retirement age, the more years an individual will have in the work force, thus increasing the probability of having adequate financial resources for retirement. Longer employment may increase the types and amounts of retirement benefits. Retiring at an older age increases the number of years to accumulate savings for retirement; at the same time it reduces the number of years spent in retirement. Therefore, the higher the expected retirement age, the higher the probability of having adequate financial resources for retirement.

However, without financial resources, retirement is not possible. Confidence in one's financial preparedness and savings encourages retirement at younger ages (Campione, 1987; Quinn, Burkhauser and Myers, 1990; Taylor and Shore, 1995; Henkens, 1999; Culter, 2001). While most people expect to retire, many are uncertain of the timing and form retirement will take (Ekerdt *et al.*, 2001) – as to people's expected, actual and preferred retirement age. Differences between expected and actual retirement ages may arise due to unforeseen circumstances, such as job redundancy, poor health, realization

that one is not financially prepared to retire, and mental state of health. In this study, the relation between preferred and expected retirement age will be examined with reference to retirement plans. Are individuals who plan financially for retirement more likely to have congruence in their preferred and planned retirement age? What types of financial plans relate to greater congruence? Individuals who anticipate retiring in the near future are more likely to be making financial preparations for retirement (Sorensen and Zarit, 1996; Ekerdt *et al.*, 2001). Consequently, people who are closer to retirement are likely to be thinking about and planning for retirement. Also, higher levels of financial planning allow individuals to expect to retire younger.

Some studies use age and work status as a proxy for retirement. The ability to retire at an age and in a manner of one's choosing depends on the individual's ability to retain or find alternative employment at older ages. Others assume a person is retired if their hours worked are less than a specific amount (Fisher *et al.*, 2005). In countries where social security provisions create strong incentives to retire, the retirement age may effectively be fixed, so that longer life spans lead to longer periods of retirement and greater pre-retirement savings (Bloom *et al.*, 2007). Gruber and Wise (1998) and Blondal and Scarpetta (1997) show that social security rules in OECD countries create powerful financial incentives to retire at a particular age and that many workers appear to respond to these incentives. Some countries allow workers to begin drawing public pensions at age 60 years or earlier, while others do not make old-age benefits available until much later (Burtless, 2004). In Taiwan, covered workers are eligible upon retirement to receive a lump sum payment based on their contributions to the social

security system; the rules set an incentive for workers not to extend their working careers past 65.

The term retirement age is used in a variety of ways (Diamond, 2002, Cremer and Pestieau, 2003). There is the age at which a worker is entitled to benefits labelled full or normal benefits. This is referred to as the normal age of retirement (65 for men in most European countries). There is also the age at which a worker is first eligible for some retirement benefits; this is called the early entitlement age (60 in most countries). Bodie *et al.* (1992) explored the relationship between optimal investing and the flexibility a person has in choosing how much to work. The theory suggests that the effect of labour supply flexibility on the optimal portfolio mix can be quite large (Viceira, 2001, Bodie, 2001). Bodie (2001) illustrates that the higher the fraction invested in stocks, the lower the expected retirement age and the higher the standard deviation. By increasing the proportion invested in stocks from 50 to 100 percent, the expected retirement age drops to 57, and the standard deviation rises to 4 years. Bodie (2001) suggests that the greater an individual's willingness to postpone retirement date, the higher the fraction he or she should invest in stocks.

Generally, the younger the retirement age, the shorter will be the period of employment and, consequently, the longer the period of retirement. Therefore, inflation has a greater impact on post-retirement income by reducing first the amount that can be saved and then drastically decreasing the retirement income derived from savings (England, 1988). Delaying retirement increases social security benefits and may increase employer-

provided benefits. Delayed retirement also means greater savings and more retirement income provided by savings.

Gough and Adami (2008) define an individual as retired if he or she define themselves as retired or if they have receive a public pension in the preceding 12 months combined with retirement from economic activity. The choice to consider self selection was made primarily to eliminate the effect of different effective ages in different countries. Bloom *et al.* (2007) suggest a rise in life expectancy increases saving which is based on the assumption of a fixed or inelastic retirement age, whereas in practice retirement age is endogenous and may be chosen. This raises the question of why people should respond to longer life spans by saving more rather than retiring later, with little effect on required savings (Deaton and Paxson, 2000 as cited by Bloom *et al.*, 2007). In countries with strong incentives to retire in order to get access to social security, the retirement age may be essentially fixed, so that longer life spans lead to greater saving. Burtless (2004) suggests that one explanation for workers' ignorance and for the reported absence of planning is that many people anticipate using simple rules of thumb to choose their retirement age. In individual cases, the consequences of a poor choice of retirement age can lead to very poor outcomes in old age.

Postponing retirement is frequently recommended to address numerous concerns related to well-being in old age including inadequate retirement savings. Delaying retirement increases lifetime earnings and the ability to support, and possibly increase current and future consumption (Butrica *et al.*, 2006). Delaying retirement help to reduce the period of retirement that they need to finance while giving themselves more time to save and to

earn returns on any assets they have already accumulated. Every year they continue to work reduces their likely period of retirement by several percent and increases the value of their assets by the annual rate of return, plus any additional saving. Butrica *et al.* (2004) estimates that people could increase their annual consumption at older ages by more than 25 percent by simply retiring at age 67 instead of age 62. Workers with DC pension plans will continue to build up the assets in their accounts through their own contributions, and possibly their employers' contributions. In the case of DB pension plan, however, additional work does not necessary translate into higher benefits. Instead, most DB plans penalize those who continue on the job after they qualify for full retirement benefits, reducing the lifetime benefits they receive from the plan (Butrica *et al.*, 2006).

As a moderator is a third variable that modifies a causal effect (Wu and Zumbo, 2007). Here, a causal model refers to a theoretical hypothesis about how changes in one variable results in changes in another. The study hypothesised that expected retirement age is a moderating factor between personal orientation towards financial planning and the financial planning for post-retirement. It is expected that the individual's personal orientation towards financial planning become stronger when expected retirement age is more certain or known.

This leads to the formulation of Hypothesis 3:

It is hypothesised that expected retirement age moderates the relationship between personal orientations towards retirement planning and financial planning for post-retirement.

3.4.5 Current Financial Resources

The life-cycle theory assumes that people divide income between personal consumption and saving. If financial resources accumulated for retirement are sufficient to meet the financial needs of retirement, an individual may choose to retire. However, if the accumulated financial resources are insufficient, retirement may have to be deferred to a later date to allow time to accumulate additional financial resources or the retiree will have to accept a lower level of living in retirement. An individual's retirement timing responds to expected changes in wealth (Sevak, 2002). A household's saving is defined as adequate if it is accumulating enough wealth to be able to smooth its marginal utility of consumption over time (Engen *et al.*, 2004). Moore and Mitchell (2000) suggest that delaying retirement can substantially reduce the savings shortfalls.

Empirical evidence indicates that higher-income households save a larger portion of their incomes, and accumulate greater wealth, than lower-income households. Most low-income households have very low or negative saving rates and limited or negative asset accumulation (Bunting, 1991; Bernheim and Scholz, 1993; Hubbard, Skinner, and Zeldes, 1994). Higher income is associated with a greater likelihood of having savings and retirement investments (Poterba *et al.*, 1994; Hubbard and Skinner, 1996). Higher income is associated with a greater likelihood of home ownership (George, 1992; Pynoos and Golant, 1996).

The literature shows that many households have very little savings or wealth as they approach retirement (Burtless, 2004). Warshawsky and Ameriks (2000) find that about

half of working middle class American households will not have fully funded retirements; and some will run out of resources very shortly after retirement. They find that many households have limited resources until late in their life-cycle or start very late, up to the point where it is not possible to do much accumulation. Moore and Mitchell (2000) conclude that the majority of older households will not be able to maintain current levels of consumption into retirement without additional saving. The empirical work on consumption suggests that these predictions may turn out to be accurate; there is mounting set of evidence that consumption falls sharply at retirement.

Hamermesh (1984) reports that consumption for retirees early in retirement exceeds by 14 percent the income from their financial, pension, and social security wealth; these retirees are not able to sustain the level of consumption into their retirement. Thus, households respond to the insufficiency of resources by reducing their consumption as they age (Mariger, 1987; Hausman and Paquette, 1987; Banks *et al.*, 1998, Lusardi, 2001). Bernheim *et al.* (2001) shows that consumption exhibits a sharp drop at the time of retirement and an even more pronounced decline post-retirement. They find a strong negative correlation between retirement savings and the magnitude of the consumption drop; consumption falls sharply for those with little wealth. While planning is found to affect private wealth and portfolio choice, it could well be that household who do not plan still manage a comfortable retirement, because of other variables not accounted for such as help from children, other sources of support, etc. (Lusardi, 2001).

Several US studies on savings emphasise there is huge heterogeneity in household savings and wealth holdings, even among households close to retirement. A quarter of

US households have less than \$30,000 (in 1992 dollars) in total net worth (Smith, 1995; Venti and Wise, 1998, 2001; Lusardi, 1999). Engen, Gale and Uccello (1999) found that up to one quarter of the pre-retired population seem to under-save for retirement. Moore and Mitchell (2000) conclude that the majority of older households will not be able to maintain current levels of consumption into retirement without additional savings. Similarly, an Australian study shows that the emphasis among Australians appears to be on current consumption: using money to create the lifestyle people want to live, here and now (Mackay, 2001). This is reflected in a deterioration of the attitude toward saving; due to a disinclination to sacrifice current spending for future savings.

Many households have limited resources until late in their life-cycle or start saving very late, up to the point where it is not possible to do much accumulation (Lusardi, 2003). According to Hurd and Rohwedder (2006), the less well-to-do tend to die earlier than average; in a life-cycle model with forward looking behavior, the less well-to-do would consume more than the average consumption level conditional on their resources because they expect to die sooner than average. Bodie posits (2007 as cited by Kotlikoff, 2008) that saving is all about insuring and not about speculating. Work entails income. Employed persons are earning income and some are accumulating retirement savings and benefits. An individual's work status (employed or unemployed) can affect consumption behaviour (Blake, 2004). Unemployed persons, on the other hand, have to resort to living off their savings from past earnings, support from family members or to seek assistance from state social and welfare assistance. The accumulative effect of prolonged unemployment is lower or no retirement savings and income (Kijakazi, 2002).

A working life runs from the completion of schooling up to retirement (Browning and Crossley, 2001). Most people spend a significant part of their adult lives in some form of employment and work. Through their job, people derive and build their value system, personal relationships, self-esteem and financial security. The economic status of older adults affects where they live, how they relate to the community, with whom they socialise, and even how they vote. Income and employment greatly impact the way older adults live their lives. For many, work brings structure to their lives, defines roles, expertise, purpose, pride and self-esteem, economic resources, and social interaction.

Employed persons may be working full-time or engaged in part-time or temporary assignments. Full time employees are likely to earn higher income and more likely to be eligible for pension benefits (in the case of civil servants) or retirement benefits such as EPF contributions. Among individuals who are not employed, some are unemployed, disabled, still schooling, homemaker, or caregiver. Homemakers and family caregivers are not compensated for their work, which means they are not having any income or accumulating any retirement benefits and savings. Typically homemakers and caregivers are females, who must depend on spousal support or past savings for later-life income. Disabled persons are sometimes eligible for welfare assistance, but the majority will have to depend on family members for support.

While retirement preparations may involve the work sphere, the family considerations are important. Time spent out of the labour market that is devoted to marriage, family life, and child bearing, caring for sick family members, and as a homemaker, impact financial planning for post-retirement due to discontinuity in work and income. Family

responsibilities and commitments may involve work decisions such as choosing to work part-time to be able to spend more time with family. This is particularly critical in the case of female members of the family who typically assume more responsibility for caring for the family – giving up their own career opportunities to devote to their spouse as homemaker after marriage, devoting their time to look after their children and often times as caregivers to the elderly members of their family. These sacrifices can therefore undermine their own career advancements and in turn reduce their lifetime earnings, retirement savings, and financial independence.

However, time spent out of the labour force pursuing educational goals should not be considered negative factor in terms of retirement income as further education may enhance knowledge, skills and career advancements leading to promotions and better income opportunities. Therefore, one cannot understand the effects of work on retirement preparations without also considering the processes operating in both the realms of education and family.

This leads to the formulation of Hypothesis 4:

It is hypothesised that there is a positive relationship between current financial resources and financial planning for post-retirement.

To delve into the nature of financial resources, Hypothesis 4 was split further into the following sub-hypotheses (as a result of the factor analysis as tabulated in Chapter 5):

Hypothesis 4_a: There is a positive relationship between current financial resources (SaveIndex) and financial planning for post-retirement (FinPlanIndex).

Hypothesis 4_b : There is a positive relationship between current financial resources (SavPortIndex) financial planning for post-retirement (FinPlanIndex).

Hypothesis 4_c : There is a positive relationship between current financial resources (SavValIndex) financial planning for post-retirement (FinPlanIndex).

3.4.6 Parental Retirement Planning

Saving behaviour can be influenced by the behaviour of others, in particular, by the experience of other family members such as parents and older siblings. Bernheim *et al.* (2001) found that people, who, as children, have been encouraged to save using a bank account, save more than others in their adult life. Similarly, those who characterised their parents as having saved more than average saved more than others.

Webley and Nyhus (2006) suggest that the future orientation of adults is significantly associated with their experience as children. These features of economic socialisation (such as discussing financial matters with one's parents) do have an impact on the future orientation of children. Hence, we can see evidence of an overall economic orientations being passed down through the generations. Shea (2002) finds that children whose fathers were displaced from their jobs have more wealth as adults than children with otherwise similar fathers who do not experience job loss. Planning for retirement has been found to be shaped by the experience of older siblings and the experience of parents; in particular, unpleasant events such as financial difficulties and health shocks at the end of life, induce people to plan. Households whose head does not plan have substantially lower wealth holdings than households whose head has made some

retirement plans. This shows that children learn from the experience of parents and in particular from negative shocks (Lusardi, 2001, 2003).

Similarly, some researchers argued that people who grew up during the great depression learned to be more frugal and financially savvy than those who grew up during more recent and affluent times. Cox, Ng and Waldkirch (2003) find that children whose parents experience a large drop in consumption upon retirement tend to subsequently reduce their own consumption and learn the need to save. Healthy parents are likely to place a high value on the future and to save at an above average rate. This tendency to save could have been passed down to children, along with attitudes about health (Lusardi, 2003). Parental health may affect savings directly. Parents may compensate the children in worst financial conditions by leaving larger bequests. Households accumulate more wealth when they witness their parents spend time in a nursing home before death (Lusardi, 2003).

This leads to the formulation of Hypothesis 5:

It is hypothesised that there is a positive relationship between parental retirement planning and financial planning for post-retirement.

To delve into the nature of parental retirement planning, Hypothesis 5 was split further into the following sub-hypotheses (as a result of the factor analysis as tabulated in Chapter 5).:

H5_a : There is a positive relationship between parental retirement planning (ParRetireIndex) and financial planning for post-retirement (FinPlanIndex).

H5_b : It is hypothesised that there is a positive relationship between parental retirement planning (ParRetStatus) and financial planning for post-retirement (FinPlanIndex).

H5_c : It is hypothesised that there is a positive relationship between parental retirement planning (ParRetPlan) and financial planning for post-retirement (FinPlanIndex).

3.4.7 Consumption

The life-cycle hypothesis predicts that consumption remains smooth during the transition from work to retirement (Modigliani and Brumberg, 1954). According to the standard life-cycle model of consumption, forward looking agents will smooth their marginal utility of consumption across predictable income changes such as retirement (Hurst, 2007).

The literature on consumption identify two types of agents in the economy: one that behaves according to the predictions of the classical life-cycle permanent income model, and the second type called “rule of thumb” consumers, simply consume according to their current income. Empirically, the fraction of “rule of thumb” consumers in the economy has been estimated to range from 20 to 50 percent (Campbell and Mankiw, 1990, as cited in Lusardi, 2001). For example, many younger people start out as “rule of thumb” consumers; as they witness shocks to older siblings (who go through retirement) or to parents, they switch to the other group. This phenomenon is consistent with the fact that we do not see much saving until age 50 or more, which is also the time when older siblings start to retire and parents are more likely to experience

health problems. Bernheim *et al.* (2001) stated that “contrary to the central tenets of life-cycle theory, there is little evidence that households use savings to smooth effects on consumption of predictable income discontinuities” such as retirement. Understanding consumption changes is important for individuals who are trying to assess how much income they will need in retirement, and what more they need to do before retirement to continue to enjoy the same level of economic well-being that they now experience (Fisher *et al.*, 2005).

In life-cycle financial planning, it is consumption over a lifetime that is of primary interest to individuals and families, rather than wealth. People care more about their lifetime consumption, not wealth. Consumption is a measure of ultimate economic well-being (Shapiro, 2009). This is an important distinction because optimising wealth at various life stages is considerably different than optimising utility or welfare from consumption. Lifetime consumption smoothing implies that deploying resources most efficiently typically results in the need for a contingent contract. Within this context, it is always more efficient to buy a lifetime annuity, rather than a stream of income that is paid whether or not you are alive (Bodie, 2007 as cited in Kotlikoff, 2008). Households who accumulated too little wealth for retirement would either have to: (1) reduce their consumption in retirement; and/or (2) delay their retirement or take up a part time job after retirement (Hurst 2004). Bernheim, Skinner, and Weinberg (1997 as cited in Lusardi, 2003) show that the drop in consumption is much sharper for those households that arrive at retirement with little wealth.

In the context of the Malaysian economy, the life-cycle hypothesis would imply that the age profile of the Malaysian population has a bearing on the private consumption-income ratio given that an individual's position in his life-cycle would determine his consumption and savings. The young in the work force may have relatively low income and consequently lower or even negative saving rates. As their income rises in their middle-age years, their saving rates may increase correspondingly. Then upon retirement, their incomes would drop and they start dissaving. Thus, in the early stage of his life, the individual is a net borrower. In the mid-stage, he has sufficient income to repay debts and make provisions for retirement after meeting his consumption needs. In the late stage, he dissaves.

The presence of children increases the consumption requirements of young families, so that high rates of youth dependency can depress savings and lower the impact of economic growth on savings rates (Fry and Mason, 1982, Mason, 1988 as cited in Bloom *et al.*, 2007). Current spending should reflect everything known about future income and interest rates (Wilcox, 1989). Hubbard, Skinner, and Zeldes (1994) and Carroll (1997) show that consumption and income age profiles are both significantly hump-shaped, and consumption tracks income over the early part of life. However, liquidity constraints restrict individuals to consuming their current income which is inconsistent with the life-cycle model (Hall, 1978; Flavin, 1985; Zeldes, 1989; Cushing, 1992). Thurow (1969) suggested that households are liquidity-constrained: that they would like to spend more than their current income when they are younger, but they cannot borrow. Nagatani (1972) argued that instead of liquidity-constrained, households are just being "prudent". Prudence leads households to treat future uncertain income

cautiously and not to spend as much currently as they would if future income were certain. Thus, prudence is the precautionary motive for saving (Browning and Crossley, 2001).

Aguiar and Hurst (2005) find that the gap between consumption and expenditure grows by 30 percent between the ages of 45-49 and 65-74; they find that the majority of the divergence between consumption and expenditure results from increased time spent in home production. As the opportunity cost of time starts to decline after middle age, households invest more time in both shopping and home production, thus reducing the market cost of their consumption basket. In a later study, Aguiar and Hurst (2008) specify that after accounting for changes in family size, consumption expenditure increases through middle age and then declines sharply thereafter; and that this holds for nondurable expenditure as well as total expenditure. They find that conditional on family size and cohort fixed effects, non-durable expenditure (excluding education and health) increases by roughly 30 percent between the ages of 25 and 45, and falls by nearly the same amount between 45 and 70.

Some authors argued that the lifecycle profile represents evidence against the forward-looking consumption “smoothing” behaviour implied by permanent income models, since the hump in expenditures tracks the hump in labour income as documented by Carroll and Summers (1991). Several studies have shown decline in expenditure post-middle age, attributing this behaviour to impatience (Gourinchas and Parker, 2002), non-separability between consumption and leisure in preferences (Heckman, 1974), preferences that shift with family size (Attanasio *et al.*, 1999). This view interprets

expenditure declines in the latter half of the lifecycle as evidence of poor financial planning (Aguiar and Hurst, 2008). People need to build a buffer stock of assets early in their lifecycle, generating the increasing expenditure profile found during the first half of the lifecycle. Others focused on the drop in consumption expenditures at retirement, suggesting poor planning (Bernheim, Skinner and Weinberg, 2001).

Before retirement, consumption may be financed by labour earnings, decumulations of previous savings, or inheritances. After retirement, consumption is financed by savings and assets accumulated earlier (Engen *et al.*, 2004; Butrica *et al.*, 2006). Based on the life-cycle model, following retirement households will run down asset-holdings in order to maintain consumption (Banks, Blundell, and Tanner, 1995). Bernheim (1987) found that individuals did run down their assets following retirement albeit the rate of decumulation was low – less than 2 percent a year. Hurd (1990) argued the wealth decumulation could be explained by allowing for the uncertainty over the date of death. This would cause risk-adverse individuals to start running down their assets at a later date, not necessarily at retirement. The slow rate of wealth decumulation after retirement may be attributable to a bequest motive (Kotlikoff and Summers, 1981; Alessie, Lusardi and Kapteyn, 1995).

A fall in expenditure on retirement is expected as households no longer have to pay work-related costs, travel fares to and from work, and working clothes (Banks, Blundell, and Tanner, 1995). Borsch-Supan and Stalh (1991) argue that unexpected age and health-related consumption constraints can account for falling consumption and hence wealth accumulation during retirement among the retired elderly. Another possible

explanation for falling expenditure is that individuals are able to substitute leisure for consumption after they retire (Banks, Blundell, and Tanner, 1995).

However, there are households who enter retirement with very low wealth even after controlling for differences in income, demographic, employment and health histories. These households experience a large consumption decline at the onset of retirement. Their consumption profiles are consistent with either “rule-of-thumb consumption” (Campbell and Mankiw, 1989) or hyperbolic (Laibson, 1997), where the households display a lack of planning behaviour. Under the former theory, the households are said to be myopic and do not attempt to plan for the future (Aguila, Attanasio and Meghir, 2008). In the latter theory, the households attempt to plan, but are incapable of committing themselves to carry out their plans (Hurst, 2004). Households that experienced real consumption declines upon retirement often had experienced involuntary retirement such as severe health shocks prior to their planned retirement date. The early retirement reduces their lifetime resources as they work lesser years, and the health shock often is accompanied by increased medical costs (Hurst, 2007).

Individuals may be able to smooth their consumption as they transition into retirement; however, as individuals live longer, the real question is whether they can maintain their consumption and quality of life over the remaining period of their life? Scholz *et al.* (2006) found that roughly 20 percent of households in the US are ill-prepared to sustain consumption during retirement, while the remaining 80 percent of households have accumulated enough wealth to maintain their marginal utility of consumption through

retirement. It is possible that households who planned insufficiently would not learn about their saving shortfall until after they retired (Hurst, 2007).

This leads to the formulation of Hypothesis 6:

It is hypothesised that there is a positive relationship between consumption and financial planning for post-retirement.

To delve into the nature of consumption, Hypothesis 6 was split further into the following sub-hypotheses (as a result of the factor analysis as tabulated in Chapter 5):

H6_a: There is a positive relationship between consumption (ConsIndex) and financial planning for post-retirement (FinPlanIndex).

H6_b: There is a positive relationship between consumption (ConsLowIndex) and financial planning for post-retirement (FinPlanIndex).

H6_c: There is a positive relationship between consumption (ConsMedIndex) and financial planning for post-retirement (FinPlanIndex).

H6_d: There is a positive relationship between consumption (ConsHighIndex) and financial planning for post-retirement (FinPlanIndex).

3.5 Demographic Factors

In this study on financial planning for post-retirement among urban Malaysians, several demographic factors will be examined to give better insights into the background of the respondents and possible differences among the age cohorts, particularly demographics pertaining to social location and household composition.

3.5.1 Social Location

The relationships between socioeconomic status with education and occupation is an important indicator of the degree of social equity and the success of government policies aimed at reducing social inequality. In this study, social location is examined by considering gender, race/ethnicity, and education.

Socioeconomic background is an important concept among social researchers. The American sociologist, William Lloyd Warner (1949) observed that American social class was largely based on attitudes and the type of work they perform. Weber (1924 as cited in Wright, 2003) also emphasised on the type of work, focusing on the market value of skills and other attributes that the individuals bring to the labour market. Income equality is an important consequence of the individuals' social class. Social location recognises the existing hierarchies and divisions (age, class, ethnicity, gender, sexual orientation) which structure experience. A social location framework attempts to understand the balance between an assigned identity and selected identity (Grenier, 2005). The diversity of individuals in a community is accounted by examining from a social location perspective – diverse and varying backgrounds, ability, age, culture, ethnicity, and socioeconomic status. According to Stoller and Gibson (2000), hierarchies based on gender, race or ethnicity, and social class create systems of disadvantage and privilege in society. A lifetime spent in the systems of inequality leads to considerable diversity in old age (consistent with cumulative advantages and disadvantages hypothesis). Social location impacts life-cycle experiences in terms of work and family spheres, retirement expectations and experiences, and is expected to influence financial and retirement planning behaviours.

3.5.1 (a) Gender

Gender issues are increasingly important in financial and retirement planning. Women make up about 50 percent of the population in Malaysia and about 48 percent of the country's labour force (Department of Statistics, Malaysia 2014). While the economic position of women has improved over the years, women in the labour force are in the lower paid work, and women own only 15 per cent of business enterprises in Malaysia (Source: Ministry of Women, Family and Community Development, Malaysia). This will have detrimental effects on their retirement income in terms of lower contribution rates to the EPF. As such and given the longer life expectancy, it is expected that Malaysian women will face higher risk from poverty in old age.

Much of the Malaysian economic policies had been directed towards distributional issues along ethnic lines, socio-economic groups, rather than gender-specific terms. Given the significant improvements in increasing women participation in the labour force, one can work on the assumption that there is no significant difference in job productivity between men and women. One issue that does seem to differ between the genders is the work status after marriage. There are gender differences in financial literacy, with women displaying a lower level of financial knowledge than men, particularly with regard to risk diversification. Lusardi and Mitchell (2007) find women, controlling for education have lower financial literacy than men, and warn about the difficulties women may face in making financial decisions, particularly after the death of a spouse.

Women earn less than men over their lifetimes and live longer. Most women have children during their vital career development years and drop out of the labour force to take care and raise their children. That means earning less and putting fewer years at work which affect their retirement savings and investment opportunities. Marriage and children were found to influence women's retirement and related decisions (Vinick and Ekerdt, 1989). Loughran and Zissimopoulos (2007) find that marriage has a negative effect on the earnings of women independent of the effect of children. Some women may enter the work force later in life, having to raise children after marriage. Childbearing and the need to work around family responsibilities can impact eventual retirement incomes (O'Rand and Landerman, 1984). The responsibility for children will potentially affect their retirement incomes. Widowhood may also steer a woman towards poverty in old age, from the untimely death of the husband. The loss of a husband can send an elderly widow into poverty as it causes the end of earnings or retirement benefits (Foreman, 1983). If the husband's retirement income was not adequate, the widow would be left financially destitute, if her own retirement income was inadequate. Because women live longer than men, women are more likely than men to spend their retirement years in poverty.

Since more widowed adults are females, gender itself is a risk factor (Muller, 1999). Women are more likely to spend their retirement years alone due to gender differences in mortality and remarriage rates after divorce (US Census Bureau, 2000). Sunden and Surette (1998) conclude that gender and marital status significantly affect how individuals choose to allocate assets in defined-contribution plans. Traditionally, women are more likely than men to work part-time and intermittently partly because

they may sometime withdraw from the labour force for a while after marriage or after having children. As a result, they had fewer incentives to invest in education and training that improved earnings and job skills giving rise to the so-called “gender gap” (Becker, 1992). However, the decline in family size, the growth in divorce rates, the rapid expansion of the service sector where most women are employed, the continuing economic development that raised the earnings of women along with men, and civil legislations have all encouraged greater labour force participation by women. As women are expected to live longer than men, meaning that wives are expected to outlive their spouses, having adequate financial resources to prepare for late life is critical.

Compared to men, women are more likely to be divorced or widowed in old age and consequently without a partner to share financial resources and responsibilities with (Rosenthal and Morith, 1993); are twice as likely to be in poverty (Clark and Quinn, 1999); have a longer life expectancy (Schulz and Beach, 1999); and are more likely to have health problems and be disabled in later life, which can be considerably costly (Rosenthal and Morith, 1993).

3.5.1 (b) Race/Ethnicity

Malaysia’s demographics are represented by multiple ethnic groups. Based on the 2010 national census, Malays and other Bumiputra groups make up 67.4% of the population, Chinese (24.6%), Indians (7.3%), and Others (0.7%) (Department of Statistics, Malaysia). Race/ethnicity forms a significant part in the discourse concerning virtually

any Malaysian social condition or issue. This also applies to personal interaction in personal financial planning.

Racial categorisation is biological but its significance is mainly social. Ethnicity, while related to race, refers primarily to social and cultural forms of identification and self-identification (Hinman, 2005). Studies in the United States have found that black households have less wealth; white households were at least twice as likely as black households to receive an inheritance and were about three times as likely to expect to receive an inheritance in the future (Menchik and Jianakoplos, 1997).

3.5.1 (c) Education

Education and financial literacy is an important predictor of financial and retirement planning. The shift from defined benefit to defined contribution retirement plans means that individuals have to decide how much they need to save for retirement, how to invest their savings, and during the post-retirement period, how to allocate their portfolios and draw down their savings and income. Individuals have had to become increasingly responsible for their own retirement security. However, financial products have become increasingly more complex and individuals are presented with new and ever more sophisticated financial instruments and decisions. Easy access to credit and opportunities to borrow are plentiful. Are individuals well equipped to make financial decisions? Do they have the necessary education and financial literacy to do so?

Several studies have argued that less educated households are more likely to be poor planners and exhibit time inconsistent preferences (Lusardi and Mitchell, 2007; Laibson *et al.*, 2007; Folk, 2011). The level of education has an effect on savings rate (Bernheim and Scholz, 1993; Attanasio, 1994) and on wealth (Keister, 2004) with higher levels of education associated with larger wealth and higher rates of savings. Lusardi and Mitchell (2007b) find that those who were financially literate when young are more likely to plan for retirement, showing that it is literacy that affects planning and not the other way around. Rooij *et al.* (2007) find that financial literacy affects financial decision-making: those with low literacy are more likely to rely on family and friends as their main source of financial advice and less likely to invest in stocks. And financial literacy differs substantially depending on education, age and gender.

Households with higher financial literacy are also more likely to rely on professional financial advisers (Rooij *et al.*, 2007). Lusardi (2003) find that households whose head has a high education have higher savings. Carroll and Summers (1991) find that lifecycle expenditure tracks income profiles across educational attainment. Bernheim and Scholz (1993), Attanasio (1994), and Hubbard, Skinner and Zeldes (1995) have documented wide disparities in wealth holdings across different education groups. Bernheim *et al.* (2001) document that food expenditures drop relatively more at retirement for low wealth and low income households. Households whose head has low education are less likely to plan; this may explain why they accumulate little wealth or why they do not invest in high return assets, such as stocks (Lusardi, 2003). Bayer *et al.* (1996) found that education can play an important part in determining the attitude towards investment and improve the quality of personal financial decision-making.

Education may have an effect on the type of investments people choose if they decide to save (Poterba and Wise, 1999). Financial education was found to have an impact on a person's willingness to invest (Bernheim and Garret, 1996); evidence suggests that financial education may affect household financial behaviour (Bernheim *et al.*, 1997).

Education facilitates individuals in the acquisition of new knowledge and skills that increases their productivity and value in the labour market, thus increasing their earnings (Schultz, 1961; Folk *et al.*, 2012). Many social scientists consider that investment in education is a major strategy in poverty reduction and educational achievement itself is central to future life chances. The amount of education an individual receives not only affects his earnings, but the quality of his employment as well (Mincer, 1991). Mincer stated that educated workers have three advantages relative to less-educated workers: higher wages, greater employment stability, and greater upward mobility in income. Education is becoming even more important in the new information economy. Edward Denison (1985) estimated that education per worker was the source of 16 percent of output growth in non-residential business. Becker (1975) refers to the knowledge, information, ideas, skills, and health of individuals as human capital. Human capital is the accumulation of investments in education, training, and health that raises the productive capacity of people and returns in future times from investments made at the present time. In life-cycle investing, human capital is as important if not more important than an individual's financial resources and assets.

The cumulative advantage and disadvantage hypothesis posits that individuals who come from wealthier backgrounds have greater access to quality education and higher-

paying jobs early in life, thus accumulating greater assets throughout the life course (Merton, 1968; Dannefer, 1987). Consequently, individuals who are more disadvantaged early in life typically lack access to resources that can help them climb out of their disadvantaged positions. Therefore, by later life, the income gap has widened rather than narrowed. On the other hand, people have on average, been devoting more time to their education, so their entrance into the labour market is delayed. In addition to the trend toward early retirement (Burtless, 1999) and increasing life expectancy, people are spending less time in the labour force and more time in retirement. This has important implications for retirement income; while people are in need of retirement income for more years in the post-retirement period, they are spending lesser years in the labour force.

Given the correlation between income and education, prior studies found evidence of a distinct pattern of higher saving for higher education groups (Avery and Kennickell, 1991; Bernheim and Scholz, 1993; and Attanasio, 1993). Beside the effect of education on increased earnings, studies have found that persons with higher levels of education tend to have better health than those with lower levels of education. Individuals with higher levels of human capital have made an investment in themselves, an investment that they protect by taking preventive measures to increase the probability of better health. Regular exercise, annual medical checkups, and mammograms can all be viewed as investments in the maintenance of human capital. Wolfe and Zuvekas (1995) found considerable evidence that there is a positive association between an individual's level of schooling and his health status. This effect of education on health extends to family

members as well. Grossman (1976) found that schooling has a positive and statistically significant effect on current health, even when controlling for past health.

3.5.2 Household Composition

Another demographic factor which is important for saving behaviour is the composition of the household. A household is defined as made up of one individual, or a single individual with dependents. Household composition refers to the household size: the number of individuals in family living at the same address with common housekeeping, presence of dependent children. Wang (1994) reports that saving of households is negatively correlated with the number of children and the age of the youngest child. A demographic transition can affect saving behaviour – a reduction in saving when children are younger and more numerous relative to adults. Household saving may be increased as the number of young dependents reduces and the number of working adults increases and frees financial resources to be saved as well as consume more. Younger adults staying with their parents may accumulate more savings. Saving rates are higher for married couples with no children and lower for households with children, while lone parents have the lowest saving rate (Browning and Lusardi, 1996).

On the other hand, Smith (1988, Zissimopoulos *et al.*, 2008) find that compared to unmarried individuals, married couples report greater average wealth, more than remarried couples, and singles. First, economies of scale may lead to more consumption with lower expenditures for married couples compared to singles. Second, the disruptions from divorce or widowhood may result in unexpected expenses and lost

income. Third, the health benefits of being married may lead to lower mortality risk, and consequently a greater motive to accumulate wealth. Consistent with a hypothesis of economies of scale, Zissimopoulos *et al.* (2008) reported that each year spent married increases wealth by 4 percent. Married couples may consume many goods and services jointly (e.g. entertainment, housing) for the same cost as a single person thus translating into additional wealth (or additional consumption).

Marriage disruption may involve unexpected expenses such as legal expenses related to a divorce or health care expenditures related to the death of a spouse. Women who experience a marital disruption between their mid-30's and 40's have 36 percent lower wealth than women who never experience a disruption or experience it at younger or older ages. On average, continuously married couples have the greatest amount of wealth, more than remarried couples, and singles. Singles experiencing more than one marital disruption have the lowest amount of wealth (Zissimopoulos *et al.*, 2008). However, remarriage has been found to partially offset the detrimental effects of a marital disruption but continuously married couple still have more wealth by comparison (Wilmoth and Koso, 2002).

Being married has been associated with better health throughout the lifespan (Coombs, 1991, Zissimopoulos *et al.*, 2008; Pienta, Hayward, and Jenkins, 2000) and significantly greater longevity (Gove, 1973, Zissimopoulos *et al.*, 2008; House, Landis, and Umberson, 1988). Hence married couples may save more to protect against outliving their resources. In addition, financial literacy may vary by marital status: first, if one spouse (e.g. husband) specializes in acquiring financial knowledge; then upon divorce

or death, the spouse who did not specialize (e.g. wife) will enter the unmarried state without this financial knowledge (Lusardi and Mitchell, 2007).

Another source of heterogeneity across marriage groups may be differences in the number of children (Zissimopoulos *et al.*, 2008). The presence of children has a large effect on household's net wealth and consequently is an important factor in understanding the wealth distribution. Since children increase household consumption requirements, the presence of children in the household and the timing of births may affect the length of the credit constrained period. Since larger households have children attached with them for longer period, than other households with fewer children, they will be borrowing constrained for a longer period of time. All else being equal, this reduces the optimal wealth at retirement (Scholz and Seshadri, 2007). Consequently, families with children would be expected to have lower retirement wealth than families without children.

Married couples with children, compared to never married individuals without children, may choose to accumulate wealth in order to leave a bequest to children. Alternatively, they may give to adult children while they are alive to ease liquidity constraints (higher education or purchase of a house), thereby lowering the wealth available for consumption during retirement (Zissimopoulos *et al.*, 2008). But households with many children may have larger positive late-career earnings shocks which may lead to higher optimal target replacement rates of pre-retirement income (Scholz and Seshadri, 2009). Family ties have been identified as an important source of support in retirement years

(Longino and Lipman, 1981). Financial support from children may help to reduce the need to continue working in old age.

Family size is correlated with lifetime earnings, so optimal asset accumulation will be correlated with children if wealth accumulation varies with a household's place in the income distribution. The number of children (and adults) in the household affects the utility of a given amount of (private) consumption, which in turn affects optimal consumption decisions. With uncertain earnings (and uncertainty in health and lifespan), the timing of fertility can affect optimal consumption decisions. Lusardi (2003) find that married couples have high savings, while children have a depressing effect on wealth. Households who experienced negative shocks in the past end up having lower wealth; while households receiving inheritances or other transfers leads to higher saving. Households with a bequest motive accumulate more, while those who are impatient accumulate less wealth. Households who do not plan for retirement end up having much lower savings than households who have thought and plan their retirement. Hurst (2004) finds that households that did not plan when young end up having much lower amounts of wealth at retirement.

3.6 Financial Planning Outcomes

The decision of how much to save for retirement is a complex one for an individual; it requires collecting and processing information on several variables such as pensions, retirement benefits, inflation, interest rates and asset returns, and to make predictions about future values of these variables. It would require some understanding of basic

fundamental economic and financial concepts including compound interest, inflation, financial markets, mortality tables, among others (Lusardi, 2006).

In this study, a wide range of activities that prepare one financially for retirement is considered. Financial planning for post-retirement is categorized into: (1) preparatory activities, (2) plan initiation, and (3) asset accumulation. Preparatory activities include ways individuals obtain information about or make assessments of their retirement needs and the financial options available to them. Plan initiation refers to the age at which individuals begin making financial preparations for retirement. Asset accumulation encompasses the types of assets people anticipate they will have from the government, employers, and what they personally are accumulating for retirement.

3.6.1 Financial Preparatory Activities

This study is cross-sectional, and preparatory behaviours and asset accumulation are treated as correlated because the relationship is likely reciprocal. Three financial preparatory behaviours are considered in this study: assessing one's financial situation and setting financial goals; obtaining financial planning and retirement information by attending seminars, from articles, magazines, books, and internet sites; and participating in formal financial planning program. Only a small body of research has examined these preparatory behaviours and their predictors. The literature has shown that retirement planning is a powerful predictor of wealth accumulation. Those who have not thought about retirement have much lower wealth holdings than those who thought about retirement (Lusardi, 1999, 2000; Ameriks, Caplin and Leahy, 2003). Lack of planning

has important consequences for savings and portfolio choice: those who do not plan are less likely to invest in stocks and tax-favoured assets (Lusardi, 2003). Those who plan have more than double the wealth of those who have not done any retirement planning (Lusardi, 2003; Lusardi and Mitchell, 2007a). Both Bernheim and Garrett (1996) and Lusardi (2003) find positive causal effects between attending firm sponsored retirement planning seminars and retirement wealth. These studies report evidence that planning can foster higher savings (Hurst, 2004).

3.6.2 Plan Initiation

One reason people fail to plan for retirement may be because they are financially illiterate. Financial knowledge and planning are interrelated (Lusardi, 2006). This study will research an important research question as to when and at what age members of various cohorts initiate financial planning for retirement, and whether people today are beginning to make financial plans for retirement earlier in life than did previous cohorts, given the shift toward defined contribution plans (Quadagno, 1999).

3.6.3 Asset Accumulation

Throughout their working lives, individuals must choose how to allocate income between consumption and savings and how to allocate savings among the different possible asset holdings (Dominitz and Hung, 2006). Asset accumulation refers to the accumulating of financial resources comprising of a combination of post-retirement income, housing wealth, and financial assets (stocks, bonds, private businesses, cash,

etc.) An individual's assets (savings) at retirement are influenced by his choice of when to retire, labour and capital markets until retirement, expenditures until retirement, and expectations about income and expenditures following retirement (Haider and Stephens Jr., 2006). The evaluation of these assets prior to and throughout the retirement years is an important determinant of financial security and well-being in old age (Dominitz and Hung, 2006).

To understand the consequences of financial planning for post-retirement, it is essential to know how people save and allocate their savings across different types of assets, such as bank deposits, stocks, bonds, life insurances, and housing. Similarly, it matters how people manage their mortgage and consumer debt. Savings and portfolio choice decisions determine the amount of wealth that people hold at retirement; saving/dissaving and portfolio choices after retirement determine how such needs develop in the years after retirement (Soest and Arie Kapetyn, 2006). Soest and Arie Kapetyn (2006) postulates that: (a) households with large social security entitlements need less saving for retirement i.e. they expect a negative correlation between expected social security entitlements and amounts invested in most types of assets; and (b) social security benefits are a relatively safe source of retirement income for most households, implying that those with high social security expectations should hold more risky portfolios of financial and non-financial assets. Lusardi (2001) finds that households who plan for retirement are more likely to hold stocks in their portfolios than households who did little or no planning.

How much resources are required in retirement is often expressed in terms of replacement rates of pre-retirement income. Most financial advisors adopt a pre-specified target replacement rate, proposing that households should ensure that retirement income exceeds 70 percent of pre-retirement income to finance consumption in retirement and therefore avoid a saving shortfall (McGill *et al.*, 2004; Munnell and Soto, 2005; Scholz and Seshadri, 2009). Moore and Mitchell (2000) extended this financial planning approach and determine a household's target replacement rate as a function of household earnings and current wealth, and demographics.

However, the replacement rate concept does account for several issues: the differing role of taxes for households at different points in their life-cycle; work-related expenses; financing consumption out of savings; the time horizon or survival curve of the household; the changing consumption profile with age; a household's use of its increased leisure in retirement which can either increase or decrease spending (Hurd and Rohwedder, 2006). Scholz and Seshadri (2009) posit that target replacement rates are less than 100 percent for three main reasons. First, upon retirement, households typically face lower taxes (than during their working years). Second, households typically save less in retirement (for retirement). Third, work-related expenses generally fall during retirement. Low income households are thought to need higher replacement rates than high income households because the reduction (relative to the levels during the working years) in saving and taxes in retirement would be smaller for low-income individuals and families. However if future taxes are to rise, then the optimal target replacement rates for high-income households would need to be higher to reflect these expectations.

Earnings shocks can have a substantial effect on optimal replacement rate targets. A household that gets a positive late-in-career earnings shock would be expected to have replacement rates that are higher than the average of pre-retirement earnings. Conversely, a negative late-in-career shock could cause living standards to be revised downward in retirement. Medical expenses can also push up optimal target replacement rates and cause a substantial variation in the replacement rates prescribed.

The World Bank advocates a multi-pillar approach to provide for old age income security: a state social security, employer-sponsored pension, and income from private savings. However, this metaphor does not apply in Malaysia which does not have a social security program. In Malaysia, there are basically only two types of retirement benefit plans: (1) a government pension system which is essentially a DB scheme for the civil servants; and (2) a state-run provident fund, EPF which works on a DC formula for employees in the private sector. Only civil servants are covered by the government pension system under which a retiree receives a pension income based on 50 per cent of their last drawn salary. The DB pension for civil servants is a pay-as-you-go public pension scheme funded by the present generation for the previous, older generation. A public pension may improve overall welfare for the retirees as it alleviates financial concerns that people may have over the uncertainty of when they are going to die. The private pension scheme is still in its infancy stage in Malaysia as the government has just launched the establishment of private retirement schemes in 2012 to provide employees and the self-employed with an additional avenue to save for their retirement (Lim, 2012).

3.6.3 (a) Pension

One institutional response to the difficulties faced by people in managing their own retirement income has been DB pension plans. Upon retirement, workers under a DB pension scheme receive a guaranteed pension payment based on their years of service and salary, for a fixed number of years or until death. The employee earns this lifelong annuity by working for the organisation for a certain minimum number of years. Plan participants do not worry about the risk of a shortfall, since this is the concern of the sponsor. But there is a global trend to switch to defined-contribution plans, which transfers the risk to the individuals, who may be least qualified to manage it. This switch to self-directed pension plans might therefore cause a decline in welfare, even when offset by other benefits of greater monetary value. Chan and Stevens (1999) find that individuals' planned retirement ages do respond to perceived changes in pensions.

3.6.3 (b) Employees Provident Fund (EPF)

The EPF works on a DC formula based on fixed percentages of monthly income contributed both by the employee and the employer. Benefits for retirees are linked directly to the contributions made by them and their employers during the period of employment, and the compounded annual dividend declared by the EPF. As a result, relatively highly-paid workers who pay more into their EPF accounts would have higher retirement accumulations than those who earn less and consequently pay less into their EPF accounts. Upon reaching 50 years old, contributors are eligible and have the option to withdraw up to one third of their total balance in their EPF account. The balance of

two third in their EPF account may be withdrawn in one lump sum upon reaching the age 55 years old. The majority of Malaysians relies on the little nest egg built up through mandatory contribution to the EPF which may no longer be enough. The situation can be more alarming for the self-employed who do not contribute to any statutory pension scheme and have not taken any prudent steps to provide for their golden years. It has been estimated that about 42.6 per cent of the working population does not make any contribution to the EPF, leaving them without a crucial source for retirement funds (see Chapter 1, 1.2).

3.6.3 (c) Personal Savings

Personal savings is an important component of retirement wealth. Personal saving, the amount (the residual after personal outlays or consumption) set aside by individuals out of income is essential to building retirement wealth. Wealth is a stock of assets, while the act of saving generates a flow of assets. Saving comes from deferring consumption out of earnings or out of other sources of income (Gist, 2009). Individuals save while working in order to finance their consumption and income shortfalls during retirement. By saving early, younger people can take advantage of the compounding over time that investment affords.

The life-cycle theory suggests that age has an impact on savings. The young and the retired dissave. A good starting point for calculating retirement saving is the standard life-cycle model in which consumption is flat over the life cycle and so is “smoothed” through retirement (Skinner, 2007). Initially, at the start of his working career, the

individual consumes more than his income, and wealth becomes negative. Eventually income increases exceeding consumption give rise to saving and an increase in his wealth. Saving continues and wealth increases as he reaches middle age. The individual retires at maximum wealth. He will then consume until his wealth is exhausted.

In addition to saving for retirement, people may also save to protect themselves against uncertain events such as the loss of a job, a cut in pay, or for medical expenses. This precautionary saving may account for most of the saving among younger workers for whom earnings are low and retirement distant (Browning and Lusardi, 1996; Carroll, 1997). Precautionary savings is the additional wealth owned that results from the knowledge that future income is risky. Another positive motive for saving is to provide bequests or gifts.

Bernheim (1992) suggested that many soon-to-retire Baby Boomers was saving just one-third of what they needed to retire comfortably and are woefully unprepared for their post-retirement period. A study by Aon Consulting/Georgia State University in 2008 finds that replacement ratios of 78 to 85 percent of the pre-retirement income for salaries ranging from \$50,000 (81%) to \$90,000 (78%) is generally sufficient to sustain current life styles for American families. Salaries below \$50,000 require replacement ratios of up to 94 percent (Ervin *et al.*, 2009).

Some households that accumulate little may rely on help from relatives and friends for financial support. Individuals who perceive they have saved inadequately attribute this mainly to having insufficient income. Under a life-cycle model of consumption with a

known income path, this is not unexpected (Hurd and Zissimopoulos, 2003). By some estimates, two-thirds of Americans who are retired and soon-to-retire have inadequate retirement wealth, as measured by personal savings, private pensions and social security (Wooff, 2007). The literature has identified several reasons why people might not save for their retirement, which has been discussed at length in Chapter 2.

3.6.3 (d) Inheritance Income

Intergenerational transfers of wealth have historically been an important source of wealth accumulation, and the “bequest motive” has been identified in the literature as one of the fundamental motives for saving (Kotlikoff and Summers, 1981; Dynan, Skinner and Zeldes, 2002). While inheritance can play an important role in savings and retirement wealth for the recipient, leaving a bequest is not always intentional. Bequests can be divided into intentional and unintentional bequests. Intentional bequests include those made for altruistic and strategic reasons. The altruistic motive is usually referred to as the “dynastic motive” i.e. extending to future generations. Strategic bequests refer to the price of being cared for by one’s children and family members in old age. Unintentional bequests are the result of excess precautionary savings from the need to prepare for unexpected major costs such as the possibility of substantial end-of-life medical and nursing home expenses (Kotlikoff, 1986). If such medical problems do not arise, a bequest will arise.

The rising life expectancy of those leaving bequests means wealth is being transferred to middle-aged or older people rather than the young. Expectations about inheritance

will affect individuals' savings rates throughout much of their working lives. If they overestimate the value of their inheritance, their ability to adequately recover and prepare for retirement may be limited. Holtz-Eakin *et al.* (1993) and Sevak (2002) find that individuals that receive large inheritances are more likely to leave the labour force. Gale and Scholz (1994) estimate that 80 percent of Americans' household wealth originates from intergenerational transfers – the retired and soon-to-retire may benefit handsomely from the frugality and savings of their parents that inheritances could significantly narrow or fill the shortfall between their personal savings and retirement needs.

3.6.3 (e) Post-Retirement Income

Household wealth at the time of retirement is a function of economic factors - income, demographics, health shocks, interest rates; and individual decision factors: saving propensities, portfolio allocation (Hurst, 2004). Decumulation of wealth after retirement is an essential part of the life-cycle theory. To show how well post-retirement income will allow retirees to maintain their standard of living, financial advisors and financial planners use replacement rates – the ratio of post-retirement income to pre-retirement earnings. Because some expenses are reduced or eliminated in retirement (work-related expenses and saving for retirement), financial advisers and financial planners generally advise that retirees need 70-80 percent of their pre-retirement earnings to maintain a comparable standard of living in retirement (Alford, Farnen and Schachet, 2004; Palmer *et. al.*, 2004). While replacement rates define income adequacy in terms of maintaining the retiree's prior standard of living, dollar thresholds define adequacy in terms of

meeting the cost of basic necessities. Low-income retirees may find that replacing a specified portion of prior income may fall short of meeting basic needs (Reno and Lavery, 2007).

Retirees' other sources of post-retirement income are pensions and income from assets (interest, dividends, rental income from real estate). While most retirees no longer have income from work, it has become increasingly common for some retirees to take up new employment, in which case employment income become a major source of income in retirement. The trend of post-retirement employment is expected to continue among future cohorts of retirees, both for financial reasons and because of the changing definition of retirement. To measure post-retirement income adequacy, Engen *et al.* (2005) compare the levels of post-retirement income to poverty rates among the elderly. First, poverty has been defined in different ways; Gough and Adami (2008) define as poor those individuals having resources (typically income) below 50 or 60 percent of the median income. They used 60 percent of median national income as poverty threshold (as indicated by Eurostat guidelines; Duncan *et al.*, 1993; Whelan *et al.*, 2003; Gough and Adami, 2008). The median definition has the advantage over the mean value of providing a better estimation of income, by avoiding small numbers of very high incomes. Yaari (1965) suggested that a rational retiree lacking a bequest motive would annuitize all his assets to protect against outliving one's money. Davidoff *et al.* (2005) conclude that a retiree will fully annuitize financial wealth in the presence of a complete market if there is no bequest motive, when the net return on the annuity is greater than that of the reference asset.

3.6.3 (f) Housing Wealth

The house is the largest single asset in most retired households (Dushi and Webb, 2004). Housing is a unique asset in that it serves a dual purpose: first, there is a consumption value from living in a home; second, housing is a store of wealth, from which the retiree can leave as a bequest. Previous studies in the US find that homeowners do not appear to be tapping into their housing wealth to support non-housing consumption in retirement. Retirees regard the house as “simply a place to live” and do not regard housing wealth as fungible wealth. The relationship between changes in household structure (widowhood, death, and nursing home entry) and housing sales has given rise to an “insurance” motive in housing wealth because these events are generally associated with changes in the household’s economic status (Walker, 2004). Most individuals value the option of remaining in their houses until declining health forces a move or a sale (Lusardi and Mitchell, 2006).

Housing is an important asset in many household portfolios, and many households have very little wealth holdings other than their home equity (Lusardi, 2001). There is a limited downsizing of housing after retirement (Venti and Wise, 1991; Sheiner and Weil, 1992, Lusardi, 2001). Several studies consider measures of wealth to include the equity in the primary residence (Moore and Mitchell, 1997; Gustman and Steinmeier, 1998; and Engen *et al.*, 2004). Venti and Wise (2001) find that retirees are unlikely to discontinue home ownership, and on average, increase their home equity when they move. However, Munnell and Soto (2005) do not consider home equity in the measurement of retirement wealth at all.

Households may tap into their housing equity in adverse circumstances such as widowhood or serious illness (Venti and Wise, 2004). Average housing equity tends to decline with age, particularly among older households (Hurd, 2003). Some financial advisers and financial planners have noted how much retirees could save by “unlocking” their housing equity – either by downsizing through buying a smaller housing units or simply moving to a cheaper location. However, older people prefer to remain in their homes, and are reluctant to move even when they could increase their standard of living by selling their homes (Butrica *et al.*, 2005). In the US, reverse mortgages allow retirees to borrow money against housing equity, to be repaid upon death (Sun, Triest and Webb, 2006). To date, very few people have taken advantage of these financial instruments (Butrica *et al.*, 2005). Home equity can still provide a bequest to children (Dynan, Skinner and Zeldes, 2002).

If the retirees “disregard” housing wealth when making consumption decisions in retirement, then the appropriate accounting of wealth for the elderly in models of saving and consumption should exclude housing wealth. And if housing wealth is incidental and the retirees die as homeowners, this would give rise to unintended bequest. The literature suggests that housing boom caused people to increase their borrowing, to extract equity from their homes, and to raise their level of consumption (Munnell and Soto, 2008). Studies in the US suggest a strong positive relationship between fluctuations in house values and consumption, that increases in housing wealth increases consumption (Skinner, 1996; Davis and Polumbo, 2001; Belsky and Prakken, 2004; Case, Quigler, and Shiller, 2005; and Carroll, Otsuka, and Slacalek, 2006). Similarly, Muellbauer and Murphy (1997) found that house price increases and financial

innovation stimulated a consumption boom in the UK in the late 1980s. Homeowners and those who hold stocks and bonds have been found to have higher saving (Borsworth, Burtless, and Sabelhaus, 1991; Avery and Kennickell, 1991; Browning and Lusardi, 1996). Homeowners with children might be more likely to increase their borrowing from mortgages to pay for education and other expenses (Munnell and Soto, 2008).

3.7 Summary

The chapter has outlined the research questions and the development of hypotheses for the study. The chapter has discussed at length the formulation of the research framework focusing on life-cycle theories that posit that several life-cycle factors affect retirement orientations, expectations and plans, the relevant previous research and literature on each research framework component, the relationships between the framework components, and the development of the hypotheses. The life-cycle variables affecting financial planning for post-retirement are summarised as they relate to these retirement outcomes. The following Chapter 4 will explain the research methodology adopted for the study.

4.1 Introduction

The conception of a study strongly influences the way in which the research methodology is selected. This chapter describes the research design and methods used, including the sampling frame, procedures for data collection, and representativeness of the sample, the measures used in the survey instrument, including assessments of validity and reliability. In formulating the research design, the study attempted to answer the research questions outlined in Chapter 3 (3.2).

4.2 Research Design

The study attempted to answer the research questions with quantitative methods, using questionnaire survey to obtain the primary information. The sampling method used was random sampling. A survey questionnaire is designed to capture information about attitudes, behaviours, and beliefs (Babbie, 2004). Questionnaire surveys were used to source primary data from a sample population on issues relating to the extent Malaysians make financial preparations and their readiness for retirement i.e. their attitudes and state of preparedness relating to the need for personal financial planning, EPF, current pension and retirement schemes in the country. Questionnaire surveys were selected for several reasons. First, respondents can complete the questionnaire at their own convenience. As the topic of personal finance is somewhat sensitive, respondents are more likely to feel at ease that there is more confidentiality in the survey exercise than a face-to-face personal interview or a telephone survey. Second, surveys are flexible in that they allow several different issues to be captured in the same document and allow for standardized information to capture concepts (Higgins, 2009). Third, questionnaire surveys are an efficient way of collecting quantitative information

from a large number of respondents. Survey questionnaires were used because the survey could easily be completed via distribution by research assistants. Statistical techniques can be used to determine validity, reliability and statistical significance. Finally, questionnaire surveys permit a large number of respondents to be sampled in a relatively short period of time for comparatively little costs compared to telephone or face-to-face interviews. In-person interviews are considered more time-consuming to conduct and more costly. Web-based are inexpensive but web surveys have a disadvantage because of the problem of sample representativeness. Individuals and families without computers or access to the web will not have the opportunity to participate.

The reason that quantitative research is typically considered to be the more “scientific” approach to doing social science lies in its predictive advantages (Worrall, 2000 as cited in Tewksbury, 2009). Quantitative methods allow researchers to be deductive in stating their research questions and hypotheses a priori from established theory, allowing researchers to test theories and examine relationships for cause and effects. The issues of reliability are important in research; reliability being the consistency of a result over time (Babbie, 2004). The use of quantitative methods is more likely to generate results that are consistent over time - reliability (Higgins, 2009).

Quantitative research is designed to test hypotheses. Factors to be considered in assessing quantitative research designs include external validity (does a proxy really approximate what it is supposed to?), the construction of the sample, the presence of confounding factors, the appropriateness of the pool from which the sample is drawn,

selection effects that may arise in forming a sample, the generalizability of the findings, the falsifiability of the hypotheses to be tested, the replicability of the study. These factors center on whether or not the “test” conditions – whether experimental, a survey, or an aggregate data set – accurately mirror broader reality.

4.3 Questionnaire Design

The first step before conducting a questionnaire survey is the planning and designing of the relevant questions for the survey. Questions have to be phrased in a simple and easy to understand format. The questions were developed based on the literature review and the reading of various journals and articles relating to life-cycle theories, savings and consumption, financial and retirement planning (Punch, 2005). The questions were mostly developed and modified from questionnaire surveys from two different studies (Maser & Pineau, 1999; La Trobe University, 2003). The questionnaire total eight pages that take approximately 20-30 minutes to complete and consisted of mainly Likert-like and close-ended questions (see Appendix B and C for a copy of the questionnaire in English and in Bahasa Malaysia).

For the research to be accurate, within the limits of the study, the findings must be valid and reliable. Findings are only acceptable to the degree to which they are determined valid. Kelly (1999 as cited in Mohammadi, 2008) defines validity as: “the degree to which the data support the inference that are made from the measurement”; i.e. validity refers to the accuracy of a measurement, and a measurement is valid when it measures what it is supposed to measure (Mohammadi, 2008). In addition, the research findings should be reliable i.e. the degree of consistency within the measurement. Joppe (2000 as

cited in Golafshani, 2003) defines reliability as: “the extent to which results are consistent over time and accurately represent the total population under study and if the results of a study can be reproduced under similar methodology, then the research instrument is considered to be reliable”.

It was important that the questionnaire survey would gather valid response and address the issue of reliability. It was imperative to ascertain whether the same response was or would be given, if the respondent had answered the questionnaire earlier or later? The instrument’s ability to accurately measure variability in stimuli or responses was also significant. To reflect subtle attitude changes, instead of a dichotomous response category such as “agree or disagree”, a more sensitive measure would involve the use of one with numerous items on the scale such as the following: “neither strongly agree”, “mildly agree”, “neither agree nor disagree”, “mildly disagree” and “strongly disagree” in order to increase a scale’s sensitivity. The majority of the survey questions in this study had been structured to fall within the Likert-like response categories. This approach assumed that each item had about the “same intensity” as the rest, and that the overall scores (summation of weights) were used for analysis purposes resulting in the selection of the best items. In the course of subsequent analysis, each of the items was correlated with the composite measure, while items, correlating highest with the composite measure were assumed to provide the best indicators of the variable, which will in turn be included in the index ultimately used for analyses of the variable. The study had also used the itemised rating scale offering a category of responses out of which the respondent would be able to pick the one being the most relevant to him/her for answering the question.

The questions in the questionnaire are structured and standardized. The structure is intended to reduce bias; for example, questions are structured in such a way that they do not influence the response to subsequent question. Questions are also standardized to ensure reliability, generalizability, and validity. Every respondent is presented with the same questions and in the same order as other respondents. The questionnaires were formulated in such way as to guide data collection and analysis. The choices of answers may be a simple Yes/No, Male/Female or may involve a range of different choices. The questionnaire consisted of primarily closed-ended questions, limiting the possible answers to those identified. This can be more manageable at the analysis stage. However, closed questions may lead to bias because respondents are led by the answers supplied for each question. This can be removed by using “other” option included which allow for any answer that has not been thought of. In addition, the study would use as many “multiple choice” questions as possible, so that respondents would have a choice to pick only those, which were considered most appropriate.

For this study, the questionnaire was printed in two languages for distribution to maximise response probability, i.e. in English (see Appendix B) and Bahasa Malaysia (see Appendix C). The questionnaire was first prepared in English and then translated into Bahasa Malaysia.

The questionnaire was divided into seven parts:

- Section A Demographics.
- Section B Satisfaction with life.
- Section C Income sources.

Section D	Expenditures (consumption).
Section E	Financial Planning.
Section F	Savings and Investments.
Section G	Retirement Expectations.

In designing the questionnaire, first, the study focus on the research objectives outlined in Chapter1 (1.3), and consider how the data is to be analyzed before collecting it. This is to ensure that the questions are in a format which is suitable for analysis by the statistical package chosen. The three main elements to consider are: (1) determine the questions to be asked; (2) select the appropriate question type and wording for each question; and (3) the overall layout and question sequence. The questions asked relate directly back to the research objectives. For example, in seeking answers relating to financial planning for post-retirement, answers pertaining to the demographics of the sample population are particularly relevant. Therefore, questions included are:

- (1) What is your age?
- (2) Are you male or female?
- (3) What is your ethnicity?
- (4) What is your present marital status?
- (5) What is the education level achieved?

Ranked responses are also useful to indicate the strength of respondent's preferences.

For example, please rank the following of what worries you most about retirement?

(indicate 1 – least worried to 5 = being the most worried):

- (1) Poor health;
- (2) Financial problems;

- (3) Boredom;
- (4) Alienation; and
- (5) Neglected.

Rated responses like the Likert scale are also a good complement to ranked responses. The respondent considers each option individually and can give a more accurate response. For example, compared to your parents' generation, do you expect to be worse off or better off in the following areas during your retirement? (Tick: "very bad"; "little worse"; "uncertain"; "little better"; and "much better"):

- (1) Health Care;
- (2) Being Independent;
- (3) Having Enough Money;
- (4) Personal Health; and
- (5) Ability to stay involved.

A variety of question formats were used so that the respondents don't get bored or mechanically tick the same boxes for all questions. Whichever format is chosen, the wording of the questions had to be clear, unambiguous, and jargon free, being specific rather than vague. It is important to avoid asking too many questions as this will put respondents off and end up with a lot of (probably irrelevant) data to analyse.

Among the advantages of using questionnaires are:

- (1) data gathered is standardised and therefore, easy to analyze with software packages such as Statistical Package for Social Scientists (SPSS);
- (2) data can be gathered more quickly from a large number of respondents;

- (3) questionnaires are less intrusive and reduce bias; respondents can answer anonymously which may produce more honest and reliable answers;
- (4) questionnaires are cost effective when compared to face-to-face interviews, especially for large sample sizes, and written questionnaires become even more cost effective as the number of research questions increases.

This has to be measured against the following disadvantages of using questionnaires:

- (1) responses may be inaccurate, especially through mis-interpretation of questions in self-completing questionnaires;
- (2) a reasonable sample size is needed before the responses can be used to represent the population as a whole; and
- (3) although respondents chosen to participate in surveys are randomly sampled, errors due to nonresponse may exist; response rates can be poor, people may lack the motivation to complete or return the questionnaire. Consequently, some sort of incentive may have to be included.

The link between each section of the Questionnaire to the Research Hypotheses is summarised in Table 4.1 below:

Table 4.1: Linkage of Questionnaire Survey to Research Hypotheses

Questionnaire Survey	Section	Research Hypotheses
Age cohorts	Section A: Demographics	H1
Personal Orientations towards retirement planning	Section E: Financial Planning	H2
Expected retirement age	Section G: Retirement Expectations	H3
Current financial resources	Section F: Savings and Investments	H4
Parental retirement planning	Section E: Financial Planning	H5
Consumption	Section D: Expenditures (Consumption)	H6

4.4 Data Collection

Well-established data collection protocols were followed (Babbie, 2004). The accompanying letter includes guarantees of confidentiality to reassure respondents. Questionnaires were mainly distributed by research assistants. These research assistants were engaged to hand out questionnaires to target sample population and to collect them back after completion. All potential respondents were given an accompanying letter explaining the nature and purpose of the study and why it is important, so that the respondents can see that it is a worthwhile exercise (see Appendix A for a copy of the letter).. A return rate of 55.2% was achieved. To prevent any likely error to occur in the designing of the questionnaire, proper steps were taken to ensure the credibility of the following: (1) the question must be read; (2) the question must be understood; (3) the respondent must create a response; and (4) the response must be translatable into the categories or values present for the question.

In using questionnaires, the honesty and accuracy of participants' responses has to be relied on. Although this limits the usefulness of questionnaires for delving into the tacit beliefs and deeply held values, there are still many occasions when surveying can be useful. The questions are examined (quite vigorously) for bias, sequence, clarity, and face-validity. Surveys may result in an invasion of privacy or produce questionable effects in the respondents or the community. Information of a personal or highly sensitive nature may be difficult to obtain from respondents. Examples of sensitive topics include money, family life, political and religious beliefs, and involvement in accidents or crimes. The respondents may be embarrassed to answer such questions because accurate responses may threaten their prestige of self-image. To increase the likelihood of obtaining sensitive information, such topics were placed at the end of the questionnaire. By then, rapport has been created and legitimacy of the project established, making respondents more willing to give information. Where appropriate, sensitive information was obtained in the form of response categories rather than asking for specific figures. They may be willing to check the appropriate income category.

4.5 Sample

For this study, the survey was designed as random sampling, targeting the different major ethnic groups in the country, Malay, Chinese, and Indian. This is a sampling method of gathering representative data from the population. A questionnaire survey was conducted from a sample size of about 990 Malaysians residing in the Klang Valley area. Klang Valley in Malaysia is an area comprising of the federal capital city of Kuala Lumpur and its suburbs, and adjoining cities and towns in the adjacent state of Selangor.

Klang Valley is diverse in terms of economic, occupation, and personal characteristics. Financial planning for post-retirement is particularly connected with urban economics.

This study helps policy makers to address the retirement income shortfall in urban areas. Rural areas basically can sustain their daily needs more easily as many of them grow their own food on their own family land. It was also selected because people in this area were expected to be inclined to participate in a study conducted by a local university. This metropolitan area is the heartland of Malaysia's industry and commerce and was selected because people in this area represent the demographics of the country; Malaysians coming from all over the country for their tertiary education and seeking employment opportunities and career advancement, and were expected to be more inclined to participate in a research study relating to financial planning for post-retirement. The public in the US tend to be more educated than in Malaysia; so collecting samples from the rural areas is more difficult. The population in the Klang Valley had expanded from 4.7 million in the last population census (Malaysia) in 2000 to an estimated 8.0 million in 2010, about 29% of the country's total population (Department of Statistics, Malaysia). By targeting the different major ethnic groups, Malay, Chinese and Indians, it was anticipated that the study design will result in a diverse sample and in a large enough representative sample to test the research framework.

The sample population are adult Malaysian individuals above age 26 years old living and working in the Klang Valley. Those over 26 years old are targeted as there is a higher chance that this age group has started thinking and preparing for their retirement

compared to a younger age group. The sampling frame refers to the respondents from age 26 upwards and designated into four Age Cohorts i.e. age 26-35, 36-45, 46-55, and age above 56 years. Invariably, the target population had most likely included persons who were inaccessible or unidentifiable in advance, with the result that compromises were sometimes required to be made in developing the sampling frame (Diamond, 1986). Notwithstanding these weaknesses, the questionnaire survey had only involved a sample population, not the entire Malaysian population residing and working in the Klang Valley, and conducted on the basis of the following selection criteria:

- (1) Coverage of Malaysian households residing in the Klang Valley;
- (2) The head of the households (or the spouse/partner) would be responsible for answering the household questionnaire; and
- (3) All working Malaysian adults age 26 years and above would be included in the sampling frame.

Accordingly, questionnaires were distributed to Malaysian individuals by research assistants at numerous locations such as shopping complexes and other “heavy” traffic areas. At the shopping malls, all kinds of people congregate there as it is the culture of Malaysians to frequent and visit such large shopping malls. This multi-pronged approach method had significantly increased the response rate. The data collection was carried out over a three months period from April to June 2013.

In order to have confidence that the survey results are representative, it is crucial that a large enough number of randomly-selected respondents are selected. According to Creative Research Systems (2003), a random sample of at least 363 people was as valid

as it is “equally useful in examining the opinions of a state of 15,000,000 as it would a city of 100,000”, with the margin of error of $\pm 5\%$, provided that the sample was truly random. Drawing on the previous research findings, this study used a sample of Malaysians residing in the Klang Valley as representative of urban Malaysians.

It is important to note that design differences still influence response rates and should be considered when interpreting rates based on initial contact (e.g., length of field period and survey subject). The missing by design items confound the choice for measuring item “missingness” because they are handled by a logical assignment of values just like missing items can be. Item non-response reflects very different measures each having a unique set of assumptions and definitions. The challenge is to establish common definitions and uses across surveys so that the same concepts are applied and the resulting measure serves as an appropriate data quality indicator. A prerequisite for the statistical treatment of missing data is that more is known on how and why the missing data occur. For instance, a missing value that originates from the purely accidental skipping of a question differs from a missing value that originates from the reluctance of a respondent to reveal sensitive information. Reduction of item non-response will lead to less imputation in a data set, to more data to investigate patterns of item non-response and select the best treatment, and finally do more data to base a correct imputation on.

4.6 Representativeness of Sample

The study chooses probability sampling procedures because they satisfactorily meet the sampling objectives and there are technical advantages of probability sampling over

nonprobability sampling (Cooper and Schindler, 2003). A random sample will give a true cross section of the population. The total population may not be available for study in certain cases. If a sample has the same distribution on these characteristics, then it is likely to be representative of the population regarding other variables which we have no control. For example, as an exploratory research on financial planning for the post-retirement period, the sampling objective is focused on certain age cohorts i.e. Malaysian individuals age 26 years and above, working and residing within the Klang Valley area.

Random sampling was chosen as probability samples provide better estimates of precision (Cooper and Schindler, 2003). Sample characteristics are important to examine because they contribute to external validity, or the degree to which findings can be generalized to the population from which the sample was taken (Berk, 1983; Henry, 1998). The 990 questionnaires (340 in Malay and 650 in English) sent out were hand-delivered (by enumerators) to respondents. The total response rate was 55.2%, which represents a total of 546 questionnaires that were completed and returned. Although 546 completed questionnaires were returned, the final total number of responses for some questionnaire items was not equal to 546, because there was some missing information on some questionnaire items or that the demographic characteristics did not appear serious enough to make any useful deductions.

Respondent characteristics are compared to those of the Klang Valley population. A higher proportion of Chinese in the survey responded, while a lower proportion of Malay and Indians responded. While there is a wide range of education levels, the

sample contains more well-educated individuals than in the population. The higher levels of education correspond to a higher proportion of respondents in the Klang Valley being in the professional and managerial sector, with lower proportions in the service sector and the production, transportation, and material moving sector. Consistent with these biases, the sample's median income is slightly higher than the population from which the sample was drawn. Findings will be interpreted with these biases in mind.

4.7 Pilot Study

For the purpose of eliciting feedback on clarity and the communication of instructions and survey instrument items to respondents, a pre-test of the initial questionnaires was carried out and all constructive comments and suggestions from the feedback were incorporated into the final questionnaire in order to improve its format, content and quality to facilitate easier understanding and comprehension by them. A pilot study was conducted as a trial run of the questionnaire designed to spot any flaws which can be corrected before going to the expense of implementing the main survey. The following are some of the questions included in the survey questionnaire: (1) age grouping of respondents; (2) ethnicity; (3) level of education; (4) household size; (5) income level; (6) consumption expenditure; (7) state of financial planning; (8) sources of expected retirement income; (9) savings and asset allocation; and (10) expected retirement age.

The pilot included the questionnaire completion, analysis and feedback from respondents. Personal interviews were conducted in the pilot for data collection.

Questions that were complex and vague were identified and studied. Feedback was received from 61 interviewees. This feedback was used to gauge the extent of redesigning the questionnaire to gather data, test the research hypotheses, and validate the scientific approach and methodology in the main survey.

The pilot study is used as a feasibility study in preparation for the main study and for the pre-testing or trying out of a particular research instrument (van Teijlingen and Hundley, 2001). A pilot study precedes the main research study and form an important component for the research design (Forgasz and Kaur, 1997). Wiersma (1991 as cited in Forgasz and Kaur, 1997) considered a pilot study as a small-scale study of the major study, conducted for the purpose of gaining additional information by which the main study can be improved, for example, an exploratory use of the measurement instrument with a small group for the purpose of refining the instrument. Henk (1987 as cited in Forgasz and Kaur, 1997) noted that the research methodology can be enhanced considerably by conducting pilot studies.

4.8 Data Coding

Data extracted from useable questionnaires were coded into a SPSS for Windows data sheet, which had a fixed column format. The first column was for the order in which the returned questionnaires were received. From the second column onwards, actual data were entered according to the questionnaire's question numbers. All the missing values were coded as 99 in the SPSS data sheet.

4.9 Dummy Variables

For regression analysis, several demographic variables need to be recoded as dummy variables. The coding was accomplished by assigning “1” if the respondent was a member of a group and “0” for non-membership. The questionnaire has included five categories of marital status: married, single, widowed, separated/divorced, and co-habitat. Marital status has been combined into two groups: single and non-single. Because the majority of the respondents were married, married was coded as “1”. Respondents that were not married or fall under all other categories were assigned “0” (DMarr1). Education level has also been combined into two groups: tertiary level and non-tertiary level. In view of the majority of the respondents being at the tertiary level, tertiary level was coded as “1”. In the event of the respondents having secondary, primary or no education, they were assigned “0” (DEduc).

Similarly, employment type has also been combined into two groups: private sector and non-private sector. As the majority of the respondents were in the private sector, private sector was coded as “1”. If, on the other hand, the respondents were public sector employees, self-employed and others, they were assigned “0” (DEmp 1). To check whether the public sector was a significant variable, employment type has been further combined into two groups: public sector and non-public sector, with the public sector being coded as “1” and the other sector as “0” (DEmp2). Age group categories have been combined into two groups for each dummy variable resulting in four dummy variables, age groups 26-35, 36-45, 46-55, and over 56.

4.10 Data Transformation

Some of the questionnaire items were computed to create indexes or scales. Those items related to the main areas of research: current financial resources, consumption, financial planning, savings, and confidence in the economy, all of which were discussed below and further refined into sub-scales after various tests have been conducted.

4.11 Measurement of Variables

The main variables are measured in this section, namely: age cohorts, personal orientations, expected retirement age, current financial resources, parental retirement planning, consumption as independent variables and financial planning for post-retirement as dependent variable. The eight-page survey instrument included questions to measure all components in Figure 3.2 (Chapter 3). Multiple indicators of constructs were included wherever possible. Priority was given to constructs that were of central interest and that were not likely to be as reliable with one or two items (for example, age versus orientation toward financial planning). A pilot survey was conducted to assess the suitability of the questionnaire designed. The pilot study was conducted with a convenience sampling of 100 respondents, with diverse personal characteristics and work backgrounds, using the “snowballing” technique with 61 usable questionnaires returned. Personal interviews were conducted after completing the survey to understand how the respondents understood and interpreted the various questions, to learn whether they had difficulty with any question, items, and to receive suggestions to improve the quality and understanding of the survey questionnaire (Sudman, Bradburn and Schwarz,

1996). Questions that were found to be complex and vague were identified and redesigned more precisely for the main survey. The pilot study proved invaluable in improving the questionnaire for the final survey that more accurately measured constructs and that are more user-friendly for respondents.

4.12 Establishing Validity and Reliability of Measures

Before examining the study hypotheses, the reliability and validity of measures were assessed. Measures, consisting of multiple indicators whose psychometric properties have been established, were selected when possible because single items are generally less reliable than composite scales (Kercher, 2000). To establish construct validity (Cronbach and Meehl, 1955), these measures were first examined using exploratory factor analysis (EFA) and then with confirmatory factory analysis (CFA). Factor analysis is a data reduction technique used to determine the number and nature of factors (i.e. latent constructs). Factor analysis identifies clusters of items that are highly correlated, with each cluster thought to represent a distinct construct. Each set of items hypothesised to form a distinct scale were tested first separately with exploratory factor analysis. After these preliminary examinations of factor structures, items from all composite scales were examined with EFA together to test the distinctiveness of the factors from other constructs. Only those scales believed to be reflector indicators were examined with EFA. EFA assumes that items forming a factor are caused by a common force, so the items are thus the outcome of the underlying latent constructs (that is reflector or effect indicators). In some cases, items drive or cause an underlying factor rather than being caused by an underlying construct; these are called cause or producer

indicators (Bollen and Lonnex, 1991). For cause indicators, items may not even be much correlated, so EFA is not appropriate. In this, a mix of cause and effect indicators exists.

For each EFA, multiple factor solutions were tested, with the cleanest, most theoretically and logically based factor solution chosen. In addition to logic, theory, and prior empirical evidence, the scree plot and the residual correlation matrix were used to help identify good fitting factor solutions. The scree plot indicates the approximate number of factors underlying a set of indicators. The residual correlation matrix is used to help determine the correct number of factors and the items to be retained for each factor. This is a less often used approach that McDonald (1999) has recently advocated as being helpful in determining the fit of factor solutions. The residual correlations reflect the difference between the reproduced/implied (the correlations when the factor loadings for pairs of indicators are multiplied) and the observed correlations.

Items with primary factor loadings greater than 0.4 with no substantial secondary loadings (less than 0.3) on other factors were judged as sufficient (Fabrigar *et al.*, 1999). Once indicators of constructs were identified, examination of how the scales correlated with other variables was undertaken to establish that the latent constructs are indeed unique (“external correlate tests”) (Carmines and Zeller, 1979). Once EFA and external correlate tests were completed, confirmatory factor analysis (CFA) was conducted. Reliability of scales was examined with Cronbach’s alpha. Cronbach alpha coefficient for reliability analysis (internal consistency) of above 0.6 is used (Nunnally, 1978). EFA and CFA results are summarised below under descriptions of particular measures. When

creating composite scales resulting from the factor analysis solutions, the mean score was typically taken.

4.13 Determining Statistical Significance with ANOVA

An analysis of variance (ANOVA) is an inferential statistic used to analyze data from an experiment that has either multiple factors or more than two levels of the independent variable. In dissertation data, the value of any score on a variable may be due to one or more of three factors: the independent variable, the individual differences of the subjects, and experimental error. Within even the best-designed experiments, scores on a measure will vary because the subjects are different from one another. Measurement error, too, will vary, even if all the subjects are exposed to the same treatment conditions.

Total variability in experiment scores can be split into "between-groups" and "within groups" variability. Between-groups variability in research may be caused by the variation in the independent variable, individual differences in the subjects, experimental error, or a combination of any of these. Within-groups variability in research is often referred to as random or error variance. This variability is caused by individual differences between subjects that are treated alike within groups and/or experimental error.

For meaningful findings, check has to be made to determine if the experimental manipulations were significantly different from each other. A one-way ANOVA was

carried out for the effect of the preretirement score by each of the following variables in turn: marital, sex, race, housing, education, income, etc. This analysis was used to determine if there were any significant differences of mean preretirement scores between the groups. ANOVA allows one to consider data from several samples at the same time to determine whether there is a systematic difference between the means of the sample groups.

ANOVA requires the computation of a F ratio (Minium *et al.*, 1993), which is shown in the following formula:

$$F = \frac{\text{between groups variance}}{\text{within groups variance}}$$

and the hypothesis of equal population means is rejected if F is too big. The ANOVA statistic uses an F-ratio to determine the statistical significance of the results. The F-ratio is simply the ratio of the between-groups variability to the within-groups variability. A one-factor between-subjects ANOVA is used when research involves only one factor with more than two levels and different subjects in each of the experimental conditions. The significance level chosen was .05 to indicate a significant difference. The study took into consideration of not being overly dependent on statistical significance but also take into account substantive significance, hence a higher sample size than required (Ziliak, S.T. and McCloskey, D.N., 2004; Ziliak, S.T. and McCloskey, D.N., 2009). ANOVA requires the assumption that the variances in the several populations (e.g. in the different levels of marital status) are equal. Then the within groups estimate of this variance is compared to the between groups estimate of the variance. If the populations have different means, then the latter estimate will tend to be larger than the former. To do this, comparisons must be made between these

experimental conditions. These comparisons can be planned in advance or unplanned. After the ANOVA analysis, a t-test is run for each pair of means for the different groups.

4.14 Research Variables

4.14.1 Cohort

The study identifies four age cohorts as described in Chapter 3 i.e. Cohort 1 (ages 26-35), Cohort 2 (ages 36-45), Cohort 3 (ages 46-55), and Cohort 4 (ages 56+). Four dummy variables were created, from Cohort 1 to Cohort 4 as the reference category in multivariate analyses, depending on the nature of the analysis.

4.14.2 Personal Orientations to Retirement Planning

The personal orientations include: confidence in the economy, confidence in the social security and pension systems, attitude toward retirement, and future orientation. The measurement was adopted from Prenda and Lachman (2001).

4.14.2(a) Confidence in the Economy

Respondents were asked, “How confident are you with the present economy?” which was measured on a scale ranging from (1) “not confident at all”; (2) “little confident”; (3) “neutral”; (4) “confident”; to (5) “very confident”. The other two questions were “At what rate do you expect the economy to grow on an average over the next 10 years?” and “At what rate do you expect the inflation rate to grow on an average over the next 10 years?” Exploratory and confirmatory factor analyses indicate that these three items tap an underlying attitude about the current economic conditions.

4.14.2 (b) Confidence in Social Security and Pensions

Confidence in social security and pension system was measured through four questions. Respondents indicated what percentages they expect their EPF contributions or the government pension to provide for their retirement income: from “less than 50%” to “more than 50%”. Another two questions asked concern the respondent’s and his spouse’s expected monthly EPF withdrawal or government pension benefit at retirement. Response categories range from (1) “less than RM1,000”; (2) “RM1,001-2,000”; (3) “RM2,001-3,000”; (4) “RM3,001-4,000”; and (5) “more than RM4,000”. Respondents were also asked whether “uncertainty over the future of the EPF and government pension system likely influence their expected retirement age”. Response categories range from (1) “yes, will delay”; (2) “uncertain”; (3) “No, even though expect level to be lower”; (4) “no, even though structure remains unchanged”; and (5) “no, do not need it”.

4.14.2 (c) Attitudes toward Retirement

Attitudes toward retirement were measured by four questions. Respondents indicated whether they “ever think about retirement at all in the last five years with a simple dichotomous response: “Yes” or “No”. The second question on what worries them most about retirement concerning the following factors i.e. “poor health”, “financial problems”, “boredom”, “alienation”, and “neglected” was measured on a five-point scale from (1) “least worried” to (5) “most worried”. Respondents were asked to indicate that compared to their parents’ generation, whether they expected to be worse off or better off in the following areas during their retirement: “healthcare”, “being independent”, “having enough money”, “personal health” and “ability to stay involved”,

measured on a five-point scale from (1) “very bad”; (2) “little worse”; (3) “uncertain”; (4) “little better”; and (5) “much better”. Respondents were asked to indicate from a range of activities what they think they will be spending on after retirement: reading, concerts/theatres/movies, volunteer work, sports/exercise, travel, spectator sports, part-time employment, continuing education, and others.

4.14.2 (d) Future Orientation

Respondents were asked to rank on a five-point scale from “1 = least important” to “5 = most important” on a range of factors that are important in your retirement decision: (1) health status; (2) dissatisfaction with job/superiors; (3) qualify for retirement benefits; (4) financial ability to retire; (5) more leisure time/time for family; and (6) pursue other employment activity. Respondents also indicated whether they expect their retirement income to be adequate to meet their family’s current standard of living during retirement on a five-point scale ranging from: (1) “very inadequate”; (2) “inadequate”; (3) “neutral”; (4) “adequate” to (5) “very adequate”.

4.14.3 Expected Retirement Age

Respondents indicated the expected age they plan to retire: (1) less than 56 years old; 56-60; 61-65; 66-70; and more than 70 years. Respondents were asked whether uncertainty over the future of the EPF and government pension system will likely influence their expected retirement age.

4.14.4 Current Financial Resources

Respondents indicated their “gross salary for the current year” and their “estimated total gross income from all sources for the current year.” Five response options were provided, ranging from (1) “less than RM24,000”; (2) RM25,000 to RM49,000; (3) RM50,000 to RM74,000; (4) RM75,000 to RM99,000; to (5) “more than RM100,000.” The same questions were posed for their spouse’s income. Respondents were asked the percentage of their “total income from all sources that they estimate to save or invest” and whether they are eligible for government pension or contribute to the employees provident fund (for employees in the private sector). Respondents were asked about household debts (if any): credit cards; bank loans; and mortgage loans with a dichotomous “Yes or No”. Another question asked the respondents on what percentages of their household income go towards repaying their debts under five categories: (1) “less than 20%”; (2) “21-40%”; (3) “41-60%”; (4) “61-80%”; and (5) “81-100%”. In the case of mortgage loans, respondents were asked the remaining tenure and balance of their loans.

4.14.5 Parental Retirement Planning

The extent parents planned for their retirement financial needs was measured on a scale ranging from (1) “very poor”; (2) “poor”; (3) “neutral”; (4) “good”; to (5) “very good.” Respondents were asked how financially well-off they think their parents are and whether their parents need not depend on them for financial support from a scale ranging from (1) “very poor” to (5) “very good”.

4.14.6 Consumption

Respondents were asked to estimate how much they spent on the following expenditures: (i) accommodation / rental; (ii) car rental / instalments; (iii) personal education; (iv) life assurance; (v) food and beverage; (vi) children education; (vii) electricity and water; (viii) telephone; (ix) personal accident insurance; (x) gifts to family members; (xi) medical insurance; entertainment; and (xiii) holiday travel. Based on the value of cost estimates, consumption was measured under three categories i.e. Low Value Items, Medium Value Items, and High Value Items.

4.14.7 Outcomes: Financial Planning for Post-Retirement

4.14.7 (a) Preparatory Activities

The perceived preparedness for retirement is not presented in Figure 3.2 (Chapter 3) because the main focus of this study is examining the extent Malaysians make financial preparations for their post-retirement period and the predictors of retirement plans. However, questions measuring financial preparedness were included in the survey questionnaire because of the following important research question i.e: “Is there a relationship between consumption during work life and consumption during post-retirement?”

Questions on the following retirement planning actions are used to assess the extent respondents engage in retirement planning actions: (1) “figured out how much money they would need in retirement to be able to maintain the standard of living they want”;

(2) “prepared an estimate of likely retirement income and expenses”; (3) “established a program to save for retirement (other than EPF and government pension)”; (4) “looked into healthcare coverage they will have during retirement”; (5) “decide where to live in retirement”; (6) “purchased long-term insurance”; and (7) “have a formal financial plan prepared by a professional financial planner”.

Respondents indicated whether they generally make some kind of plan before they spend their money based on a simple dichotomous: “yes or no”; the time period any such plan cover: “few days”, “few weeks”, “few months”, “one year”, or “more than one year”. To measure overall perceived adequacy of retirement income, respondents indicated whether they expect their EPF contributions or government pension to provide more or less than 50 percent of their retirement income: “less than 50 percent” or “more than 50 percent”. Respondents were asked to mark out their major sources of expected retirement income: government pension, EPF, help from family members, private savings, private pension, rental income, dividends from shares, and interest income.

4.14.7 (b) Plan Initiation

Respondents were asked on a range of financial planning activities and whether they have started making any financial plans for retirement based on a five-point scale ranging from (1) “not planning to do”, (2) “not certain”, (3) “planning to do in few years time”, (4) “planning to do very soon” and (5) “already done”.

4.14.7 (c) Asset Accumulation

Respondents were asked five questions. One is to estimate what they expect the total value of all their personal savings and investments to be when they retire ranging from: (1) “less than RM200,000”; (2) “RM201,000-RM400,000”; (3) “401,000-RM600,000”; (4) “RM601,000-RM800,000”; and (5) “more than RM800,000”. Second, to give an approximate distribution of their savings and investments in percentages into: (1) property; (2) shares; (3) unit trusts; (4) savings, fixed deposits, cash; (5) unlisted company shares/business; and (6) others.

Third, respondents were asked to indicate the estimated value of their spouse’s personal savings and investments ranging from (1) “less than RM200,000” to (5) “more than RM800,000”. Four, respondents were asked to identify among eight possible sources of their expected retirement income, namely: (1) government pension; (2) EPF; (3) help from family sources; (4) private savings; (5) private pension; (6) rental income; (7) dividend income; and (8) interest income. Finally, respondents were asked to indicate whether they expect their EPF withdrawal or government pension (if any) would provide more or less than 50 percent of their retirement income.

4.15 Summary

This chapter has described the procedures used for research design, questionnaire design, sample selection and data collection. In the following Chapter 5, the survey results are analysed and the research findings summarised, including a description of the sample population and the tests of the research framework outlined in Figure 3.2 (Chapter 3).

5.1 Introduction

This chapter presents the data analysis and research findings. This includes discussions of: (1) respondents' demographic characteristics; (2) scale development; (3) hypothesis testing results from areas of - (i) age cohort and perception of financial planning for post-retirement; (ii) personal orientations and financial planning for post-retirement; (iii) expected retirement age and personal orientations toward financial planning for post-retirement; (iv) current financial resources and consumption; (v) parental retirement planning and financial planning for post-retirement; and (vi) consumption and financial planning for post-retirement. The discussions are presented in four sections, i.e.: 5.2 Respondents' demographic characteristics; 5.3 Scale development; 5.4 Results from the hypothesis testing; and 5.5 Summary of results.

5.2 Respondents' Demographic Characteristics

This section presents respondents' demographic characteristics, i.e. age, gender, ethnicity, marital status, education level, occupation, health, life expectancy, employment, working ability, home ownership and children. Table 5.1 below shows that the majority of the respondents are between the age bracket of 26-35 (42.7%) and 46-55 (26.2%). Respondents above 56 years of age made up a lesser 14.1%. This was probably due to the fact that older retirees are less active and also a lesser need to shop for non-essential items. This observation could be unique in the Malaysian context as older retirees in some developed countries generally still pursue more active lifestyles.

Table 5.1: Demographic Characteristics of the Respondents (N=546)

Demographic Characteristics		n^a	%
Age Group		N=545	
	26 to 35 years	233	42.7
	36 to 45 years	92	16.8
	46 to 55 years	143	26.2
	56 & Above	77	14.1
Gender		N=545	
	Male	228	41.8
	Female	317	58.0
Ethnicity		N=544	
	Malay	283	51.8
	Chinese	194	35.5
	Indian	57	10.4
	Others	10	1.9
Marital Status		N=545	
	Married	370	67.8
	Single	151	27.7
	Widowed	15	2.6
	Divorced	7	1.3
	Co-habitat	2	0.4
Education Level		N=543	
	Primary	61	11.2
	Secondary	164	30.0
	Tertiary	318	58.2
Occupation		N=501	
	Non professional self-employment	117	21.4
	Professional self-employment	96	17.6
	Junior staff/Temps	47	8.6
	Non-Executive	91	16.7
	Executive/Management	150	27.5
Health Status		N=544	
	Very Poor	3	0.5
	Poor	14	2.6
	Fair	160	29.3
	Good	282	51.6
	Excellent	85	15.6
Life Expectancy Age Group		N=509	
	65 to 70 years	158	28.9
	71 to 75 years	137	25.1
	76 to 80 years	141	25.8
	81 to 85 years	46	8.4
	Over 85 years	29	5.3

a. Number of respondents may not add to 546 due to non-response or non-applicability of the question.

Table 5.1: (Continued)

Demographic Characteristics		n^a	%
Employment Status		N=542	
	Not Working	120	22.0
	Part-Time	51	9.3
	Full-Time	371	67.9
Inability to Work		N=536	
	No	466	85.3
	Yes	70	12.8
Home Ownership		N=531	
	Free Stay	81	14.8
	Own	316	57.9
	Rent	134	24.6
No. of Children		N=474	
	0	120	22.0
	1	59	10.8
	2	108	19.8
	3	75	13.7
	4 or More	112	20.5

a. Number of respondents may not add to 546 due to non-response or non-applicability of the question.

Table 5.1 above shows that 58.0% of the respondents are female and 41.8% are male. The majority of the respondents that participated in this questionnaire survey are Malay (51.8%), Chinese (35.5%), followed by Indian (10.4%) and others (1.9%). As shown in Table 5.1, the majority of the respondents are married. As can be seen from the age grouping in Table 5.1, 42.7% of the respondents are between the ages of 26-35. At this age, many are still at the early stage of their working career. There may be no time for relationships or family commitments, as this might hinder their opportunities for promotions. This clearly explained why 27.7% of the respondents are still single. Only 4.3% of the respondents are either separated/divorced/widowed. Table 5.1 shows that more than half of the respondents have tertiary education (58.2%). It can be deduced from this the importance of education. At least 30.0% of the respondents had completed up to secondary education.

Table 5.1 shows that self-employment constitute 39.0% and under employment is 61%. In today society, many people may have chosen to set up own business, become insurance agents and unit trust agents, or by joining multi-level companies doing direct selling and marketing rather than working for people. Self-employment offer time flexibility and may enable them more time for socializing, networking and time for family. Table 5.1 shows that overall respondents have fairly good health. This could reflect that people today are generally more health conscious, exercising regularly and by being generally better informed. The majority of the respondents expect their life expectancy to be within the range of 65-75 years (54%). This can be collaborated by looking at the health status as majority of them possesses fairly good health. Only 13.7% of the respondents expect to live above 80 years old.

Table 5.1 shows that employment made up of 77.2%. From a total of 77.2%, 67.9% work full-time and 9.3% work part-time. This is not surprising as most of the respondents (85.7%) are still within the working age (i.e. 26-55); 22.0% of the respondents do not work, possibly due to age factor and having skill sets not suitable to the employers. Table 5.1 shows that 22.0% of the respondents were not working. The question is whether it was due to their inability to work. This statement does not hold as 85.3% indicated that it was not due to their inability to work. It is possible that they are still studying or in the process of seeking employment or some may have already retired.

Table 5.1 shows that 57.9% of the respondents owned a home; 24.6% of the respondents are still renting as they may not have the ability to own one due to financial constraint as prices of houses have escalated upward; 14.8% of the respondents may still

be staying with family for this reason. The majority of the respondents do not have more than three children. With increasing urbanization and more instances of both husband and wife working, more families are moving toward having fewer children. Another reason could be attributable to the high cost of education. Only 20.5% of the respondents have more than 4 children.

Table 5.2: Demographic Cross Tabulation of the Respondents (N=546)

Demographic Cross Tabulation		n ^a	%	Age Cohorts			
				26-35	36-45	46-55	> 55
Gender		N=545					
	Male	228	41.8	74	37	66	45
	Female	317	58.2	159	55	77	24
	Total			233	92	143	69
	%			42.8	16.9	26.2	12.7
Ethnicity		N=544					
	Malay	283	52.0	140	42	64	34
	Chinese	194	35.7	79	36	50	26
	Indian & Others	67	12.3	14	14	28	9
	Total			233	92	142	69
	%			42.8	16.9	26.1	12.7
Marital Status		N=545					
	Married/Co-habitat	370	67.9	109	71	120	64
	Single/Widow/Divorce	175	32.1	124	21	23	5
	Total			233	92	143	69
	%			42.8	16.9	26.2	12.7
Education Level		N=543					
	Non-tertiary	225	41.4	50	38	75	57
	Tertiary	318	58.6	182	53	68	12
	Total			232	91	143	69
	%			42.7	16.8	26.3	12.7
Occupation		N=501					
	Owner	138	27.5	71	25	27	14
	Employee	363	72.5	136	64	104	53
	Total			207	89	131	67
	%			41.3	17.8	26.1	13.4
Health Status		N=544					
	Good Health	527	96.9	229	88	141	61
	Poor Health	17	3.1	3	4	2	8
	Total			232	92	143	69
	%			42.6	16.9	26.3	12.7
Life Expectancy Age Group		N=511					
	65 to 70 years	158	30.9	71	18	45	22
	71 to 75 years	137	26.8	70	24	34	8
	76 to 80 years	141	27.6	50	38	34	17
	81 to 85 years	46	9.0	13	6	17	9
	Over 85 years	29	5.7	16	2	7	3
	Total			220	88	137	59
	%			43.1	17.2	26.8	11.5

a. Number of respondents may not add to 546 due to non-response or non-applicability of the question.

Table 5.2: (Continued)

Demographic Cross Tabulation		n ^a	%	Age Cohorts			
				26-35	36-45	46-55	> 55
Employment Status		N=542					
	Not Employed	120	22.1	59	9	21	27
	Employed	422	77.9	173	83	121	41
	Total			232	92	142	68
	%			42.8	17.0	26.2	12.5
Home Ownership		N=531					
	Renter	134	25.2	93	13	22	6
	Own/Free Stay	397	74.8	131	79	120	60
	Total			224	92	142	66
	%			42.2	17.3	26.7	12.4
No. of Children		N=473					
	1 child or less	167	35.3	66	38	42	19
	2 or more child	306	64.7	112	48	91	49
	Total			178	86	133	68
	%			37.6	18.2	28.1	14.4

a. Number of respondents may not add to 546 due to non-response or non-applicability of the question.

Table 5.2 above shows that the majority of the respondents were in the 26-35 years and 46-55 years old age groups. In the 26-35 years old age group, over 67% of the respondents were female. 52% of the respondents were Malays reflecting quite closely the ethnic composition of Malaysia. Married respondents were largely in the 46-55 years old group. The majority of the non-tertiary educated group were in the over 46 years old group. The largest tertiary educated group were 26-35 years old respondents. This indicated that higher education has been made more available in this generation. 72% of the respondents were employees so the amount of savings they can raise is dependent on how much salary increase in the career life cycle. Most respondents felt that they have good health including those over 55 years old. As healthcare cost is very expensive and can take up the largest portion of a retiree's annual expenditures, their perception of being in good health augurs well for their financial

planning. Only 14.7% of respondents felt they can live to over 80 years old. This is just slightly above the average lifespan of Malaysians which is 76 years old. The longer one expects to live will mean that they have to plan for more savings and in this case not too many more expect to live longer so less savings can be targeted. The majority of the respondents are employed (77.9%), hence they have the ability to save some money for retirement. 74.8% of respondents have their own home or free stay. As accommodation is probably one of the largest annual expenditure and can be on par with healthcare cost, owning your own home will help out with future savings. 42.5% of the respondents over 45 years old have children. By this time, the majority of the children would have become adults. As filial piety is practiced broadly in Asian societies, having children can also help with their parents' retirement plans.

5.3 Scale Development from Sample

Indexes are multi-item instruments (composite measures) used to measure a single concept with several attributes. Asking different questions in order to measure the same thing provides a more accurate cumulative measure compared to one based on a single-item. This was conducted through a survey questionnaire pilot study of 60 respondents distributed by friends and acquaintances. The reliability of the measure was established by testing for both consistency and stability. Cronbach's alpha is a reliability coefficient that indicates how well the items in a set are positively correlated to one another. Based on Nunnally's (1978) approach, the study has used Cronbach's alpha of 0.6 and above as the acceptable level, especially for initial investigations. Establishing the quality of data lends credibility to all subsequent analyses and findings in the present study. Wherever the index's reliability was weak, the questions were re-looked at and refined with a view to improving the degree of reliability. Questions with high missing data

were re-examined and reworded to make them more understandable and simple to elicit responses. All data was thoroughly screened and cleaned before processing.

The main thrust of the research questions was financial planning for post-retirement among urban Malaysians in the Klang Valley area and how they make financial preparations for their retirement during the life span of the individuals. Within this context, financial planning for post-retirement was the dependent variable for the formulation of some of the hypotheses as the fundamental basis for the study. In this respect, efforts were principally focused on the construction of various constructs applicable for use in the study. Factor analysis has helped determine the number of latent constructs underlying a set of items (variables). This variable reduction technique has identified the number of latent constructs and the underlying factor structure of a set of variables as can be seen from the constructs or scale mentioned in the subsequent sub-sections.

5.3.1 Financial Planning Index

In constructing the Financial Planning Index (FPI), respondents were required to answer a number of questions (Section E, Appendix B) and rank 5 of them on a five-point scale ranging from – “Not planning to do = 1” to “Already done = 5”. For purposes of consistency, the results of the five-point scale were checked for internal consistency using the Cronbach’s alpha coefficient. Cronbach’s Alpha was the most popular measurement to test the internal consistency of instrument’s reliability (Peterson, 1996). The FPI was found to have a Cronbach Alpha of 0.848 indicating its high reliability. Applying the Factor Analysis Test to the FPI using Kaiser-Meyer-Olkin Measure of Sampling Adequacy or the rotated component matrix (KMO – 0.854), it was found that

there were two components which fitted well separately as shown in Table 5.3. This had given rise to the following two scales (which had in turn further led to the testing of two sub-hypothesis as discussed later) (questionnaire items used are quoted in parenthesis):

- (a) Financial Planning Index (Q.E1 to E7) (Coded as “FinPIIndex”);
and
- (b) Financial Planning Time Index (Q.E9) (Coded as “FinPITimeIndex”).

Table 5.3:
Factor Analysis – Financial Planning

Kaiser-Meyer-Olkin Measure – Fin Planning		.854
Bartlett’s Test of Sphericity	Approx.Chi-Square	1306.389
	Df	28
	Sig.	.000
Rotated Component Matrix		
	1	2
E1	.821	
E2	.855	
E3	.775	
E4	.798	
E5	.710	
E6	.679	
E7	.523	
E9		.837

5.3.2 Financial Resources Scale

The study had also used the Financial Resources Scale consisting of 12 questionnaire items (Section F, Appendix B) such as the following questions: (a) “What do you expect your personal savings and investments to be when you retire?”; (b) “How are your savings and investments distributed?”; (c) “What do you expect your spouse’s personal savings and investments to be when you retire?”; (d) “What is your monthly EPF or other pension withdrawals to be at retirement?” and others. These items were used to measure the respondent’s financial resources from their regular income as well as income from other sources. The Cronbach Alpha of 0.879 shows high reliability. Applying the Factor Analysis Test using the rotated component matrix (KMO – 0.809)

as stated earlier, the study had found two components or scales which had fitted well separately as displayed below in Table 5.4. The two scales which would subsequently be used to test two sub-hypotheses as explained in the subsequent paragraphs are (questionnaire items used are quoted in parenthesis):

- (a) Saving Portfolio Index (Q.F2(i) to F2(vi)) (Coded as “SavPortIndex”)
- (b) Saving Valuation Index (Q.F1, F3 to F6) (Coded as “SavValIndex”)

Table 5.4:
Factor Analysis – Financial Resources

Kaiser-Meyer-Olkin Measure – Fin Resources		.809
Bartlett's Test of Sphericity	Approx. Chi-Square	681.664
	Df	55
	Sig.	.000

	Rotated Component Matrix	
	1	2
F2ii	.807	
F2iii	.743	
F2vi	.662	
F2iv	.762	
F2v	.701	
F2i	.639	
F4		.803
F6		.730
F3		.771
F5		.669
F1		.700

5.3.3 Consumption Scale

The study had used the Consumption Scale (briefly referred to as the ‘CS’ construct) to deal with the issue of different levels of consumption from the respondent’s perspective. For purposes of measuring the different levels of consumption by different age cohorts at different times in their life, the CS was devised and found appropriate. The CS construct would be used to cover expenditures for 13 items (Section D, Appendix B) of various categories of value such as: (a) Accommodation, (b) Car Instalments, (c) Education Fund, (d) Life Assurance, (e) Food & Drinks, (f) Utilities, (g) Telephone, (h)

Personal Accident Insurance, (i) Gifts, (j) Medical, (k) Entertainment, and (l) Holidays. In analysing the data on the issue of consumption at various levels relative to their confidence in the economy, the Cronbach Alpha had shown 0.884 indicating fairly high reliability. Applying the rotated component matrix (KMO - 0.852), the results had also revealed three different components referred to as scales which had fitted well separately. The three scales (extracted from Table 5.5 below), which would be discussed later in this section, are tabulated below (questionnaire items used are quoted in parenthesis):-

- (a) Consumption Low Value Index (Q.D3(vii) to (x)) (Coded as “ConsLowIndex”);
- (b) Consumption Medium Value Index (Q.D3(xi) to (xiii)) (Coded as “ConsMedIndex”); and
- (c) Consumption High Value Index (Q.D3(i) to (vi)) (Coded as “ConsHighIndex”).

Table 5.5:
Factor Analysis - Consumption

KMO – Consumption			.852
Bartlett’s Test of Sphericity	Approx. Chi-Sq.	2562.685	
	Df	78	
	Sig.	.000	
	Rotated Component Matrix		
	1	2	3
D3i	.668		
D3ii	.758		
D3iii	.782		
D3iv	.677		
D3v	.546		
D3vi	.544		
D3vii		.885	
D3viii		.900	
D3ix		.762	
D3x		.597	
D3xi			.679
D3xii			.862
D3xiii			.842

5.3.4 Parental Retirement Scale

The study had also used the Parental Retirement Scale consisting of 7 questionnaire items (Section E, Appendix B) such as the following questions: (a) “How do you rate your parents planning for their retirement?”; (b) “How financially well-off do you think your parents are and need not depend on you for financial support?”; (c) “Compared to your parents' generation, do you expect to be worse off or better off in the following areas during your retirement - Health Care, Being Independent, Having Enough Money, Personal Health, Ability to Stay Involved?”. These items were used to measure the respondent's view of his/her parents retirement planning. The Cronbach Alpha of 0.782 shows high reliability. Applying the Factor Analysis Test using the rotated component matrix (KMO – 0.807), the study had found two components or scales which had fitted well separately as displayed below in Table 4.5. The two scales which would subsequently be used to test two sub-hypotheses as explained in the subsequent paragraphs are (questionnaire items used are quoted in parenthesis):

- (a) Parental Retirement Status Index (Q.E14(i) to E14(v)) (Coded as “ParRetStatus”)
- (b) Parental Retirement Planning Index (Q.E17, E18) (Coded as “ParRetPlan”)

Table 5.6:
Factor Analysis – Parental Retirement

Kaiser-Meyer-Olkin Measure – Fin Resources		.807
Bartlett's Test of Sphericity	Approx. Chi-Square	1,607.705
	Df	21
	Sig.	.000

	Rotated Component Matrix	
	1	2
E14ii	.868	
E14iii	.861	
E14iv	.833	
E14i	.819	
E14v	.789	
E17		.871
E18		.861

5.3.5 Income Scale

The study had used the Income Scale consisting of five questionnaire items (Section C, Appendix B) such as the following: (a) Gross annual salary; (b) Income from all sources; (c) Spouse gross annual salary; (d) How much is saved; and others. These statements were used to measure the respondent's income sources from their regular income as well as income from other sources. The Cronbach Alpha has shown 0.693 indicating high reliability. Applying the Factor Analysis Test using the rotated component matrix (KMO – 0.703) as stated earlier, the study had found that the scale had fitted well. Hence, no variable was discarded.

5.4 Testing of Hypotheses

There are altogether 6 main hypotheses to be tested in the whole study. In view of the different complications of the problems and their different nature involved, more than half of the hypotheses were split into 2 to 5 sub-hypotheses in order to delve in the problems while the rest had remained in their original form, for testing purposes. The testing of hypotheses in its original form will be dealt with first with the later part dealing on the sub-hypotheses as a result of the factor analysis. Notwithstanding these

changes, hypothesis 3 was tested using the hierarchical regression analysis. Hierarchical multiple regression analysis was adopted following a statistical procedure described in Cohen and Cohen (1982) and Butler *et al.* (2004). With respect to the use of multiple regressions on an ordinal variable, it is arguable but generally accepted that regression is rather robust when an ordinal dependent variable with a Likert-like scaling ranging from 1 to 5, is used. Hypothesis 1 was tested using Analysis of Variance (ANOVA) to analyse data from more than two levels of the independent variable and at the same time to determine whether there is a systematic difference between the means of the different sample groups. Hypotheses 2, 4, 5 and 6 were tested using the ordinary multiple regression analysis. Detailed explanations of the various steps and the testing results are described below. Table 5.7 below tabulates the explanation for the coding of the variables.

Table 5.7:
Explanation on Coding of Variables

Coding	Variables
ParRetStatus	Parental Retirement Status Index
ParRetPlan	Parental Retirement Planning Index
ConsLowIndex	Consumption Low Value Index
ConsMedIndex	Consumption Medium Value Index
ConsHighIndex	Consumption High Value Index
SavPortIndex	Saving Portfolio Index
SavValIndex	Saving Valuation Index
FinPIIndex	Financial Planning Index
FinPITimeIndex	Financial Planning Time Index
DAge	Dummy variable for age cohorts
DSAge	Dummy variable for spouse age cohorts
DRAge	Dummy variable for expected retirement age cohorts
DLEAge	Dummy variable for life expectancy age cohorts
DEmp	Dummy variable for employment category
DSEmp	Dummy variable for spouse employment category
DMgmt	Dummy variable for management category
DMarr	Dummy variable for marriage
DEduc	Dummy variable for educational level
DHea	Dummy variable for own health
DSHea	Dummy variable for spouse health
F1	Income
F11	Personal orientation toward financial planning
DEthnic	Dummy variable for race ethnicity
DHome	Dummy variable for home ownership status
DChildren	Dummy variable for number of children

Hypothesis 1: Age Cohort and Perception toward Financial Planning

The hypothesis was formulated in order to gain an insight into the intricacy of age cohort effect on retirement planning, and the best approach to this subject would be to examine the inter-relationship between age cohort and financial planning for post-retirement as their inter-relationship might have an effect on financial planning for retirement purposes. The long form of the hypothesis was: “There is a difference in the perceptions towards financial planning for post-retirement among the different age cohorts”.

H1: There is a difference in the perceptions towards financial planning for post-retirement for age cohorts

Analysis of Variance (ANOVA) would be used to describe financial planning for post-retirement according to demographic characteristics. Financial planning variables comprised items Q.E1 to Q.E9. ANOVA is used to determine whether the means of the different age cohorts are all equal. Equal variances were assumed when conducting ANOVA, therefore if homogeneity of variance is violated and the desire is to use the results provided, Welch t-test and Tukey HSD were used. When variance is homogenous the post hoc test used is Bonferoni as it assumes unequal N among the groups. For heterogeneity of variance, Tamhane T2 will be used. While the Games-Howell test was taken into account during the data analysis, the possibility exists that this test will be too liberal for large unequal sample sizes. Therefore Tamhane T2 was chosen. To obtain an in-depth knowledge, these financial planning variables were investigated with the four levels of age cohorts. Full discussions are tabulated below.

ANOVA Results

Table 5.8 below shows the Analysis of Variance results on financial planning ("FinPIIndex"). Before conducting the ANOVAs, the sample was evaluated to verify that all of the assumptions of ANOVA (i.e., independent observations, normally distributed populations, and homogeneous variances) were satisfied. In all cases, the observations were independent as a result of the design of the survey. An analysis of variance showed that the effect of age cohort 3 (46-55 years old) was significant, $F(33,353) = 1.580, p = .025$. The effect of age cohort 4 (56 years old and above) was significant, $F(33,353) = 1.635, p = .017$. DAge1 (age 26-35 years old) and DAge2 (age 36-45 years old) were found to be not significant from the results $F(33,353) = 1.082, p = .352$ and $F(33,353) = 0.909, p = .616$ respectively. The detailed results are tabulated in Appendices C and D.

Post hoc analyses using the Welch t-test post hoc criterion for significance indicated that the tests of equality of means cannot be performed because at least one group has the sum of case weights less than or equal to 1. However, in Table 5.9, post hoc criterion using Tukey HSD indicated that those in age cohort DAge3 (age 46-55 years old) can be fairly significant. The results indicated that the hypothesis was not supported in respect of age cohort 1 (age 26-35 years old) and age cohort 2 (age 36-45 years old) (Appendix D). For the older age cohorts, namely DAge3 (age 46-55 years old) and DAge4 (age 56 years and above), the results indicate that the hypothesis was supported (Appendix D).

Table 5.8: ANOVA Results

ANOVA of Financial Planning When Grouped by Age Cohort

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	662.349	4	165.587	2.988	.019
Within Groups	21166.571	382	55.410		
Total	21828.920	386			

**Table 5.9 : Post Hoc Tests
Multiple Comparisons When Grouped by Age Cohort**

Dependent Variable: FinPlIndex	(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.
Tukey HSD	26-35	36-45	-1.904	1.115	.431
		46-55	-.853	.929	.890
		>55	-3.405*	1.211	.041
		5	-5.834	2.873	.253
	36-45	26-35	1.904	1.115	.431
		46-55	1.051	1.198	.905
		>55	-1.501	1.428	.831
		5	-3.930	2.971	.677
	46-55	26-35	.853	.929	.890
		36-45	-1.051	1.198	.905
		>55	-2.552	1.288	.277
		5	-4.981	2.906	.426
	>55	26-35	3.405*	1.211	.041
		36-45	1.501	1.428	.831
		46-55	2.552	1.288	.277
		5	-2.429	3.008	.928
	5	26-35	5.834	2.873	.253
		36-45	3.930	2.971	.677
		46-55	4.981	2.906	.426
		>55	2.429	3.008	.928
	26-35	36-45	-1.904	1.070	.390
		46-55	-.853	.944	.895
		>55	-3.405	1.227	.053
		5	-5.834	3.353	.475

* p < 0.05. ** p < 0.01

Hypothesis 2: Personal Orientation and Financial Planning

The hypothesis was formulated in order to gain an insight into the intricacy of personal orientation towards retirement planning in the study. The long form of the hypothesis was: “There is a relationship between personal orientation and financial planning for post-retirement (FinPlanIndex)”.

H2: There is a relationship between personal orientation and financial planning for post-retirement FinPlanIndex.

Ordinary multiple regression analysis would be used to describe orientation towards financial planning for retirement according to demographic characteristics. Orientation towards financial planning variable comprised of item Q.F11. Financial planning variable, FinPlanIndex comprised of item Q.E1 to 7 and Q.E9. Full discussions are tabulated below.

Regression Results

Hypothesis 2: Personal Orientation and Financial Planning

H2: There is a relationship between personal orientation and financial planning for post-retirement (FinPlanIndex).

Table 5.10 (model 2) below shows the ordinary multiple regression results on orientation toward financial planning. The detailed results are tabulated in Appendix D. The table (Appendix D) shows that independent variables have explained 7.7% of the variance of the dependent variable. The R square suggested that there are other factors explaining orientation towards financial planning for post-retirement. The personal orientation toward financial planning index was significant ($R^2 = .267$; Adj. $R^2 = .206$; $\Delta R^2 = .077$, $p < .01$) at the 0.01 level. The variables, education, spouse aged 46 to 55 years old and employment ($t = 4.310$, $p < .01$; $t = 3.049$, $p < .01$; $t = -2.394$, $p < .05$ respectively) were positive and significant predictors of the financial planning index with education being a relatively more significant predictor of financial planning (detailed results tabulated in Appendices D and E). The results show that the hypothesis

that “there is a relationship between personal orientation and financial planning for post-retirement” was supported.

Table 5.10: Regression Results

	Model 1 (Control)	Model 2 (Plus F11)	Model 3 (Plus SaveIndex)	Model 4 (Plus ParentalIndex)	Model 5 (Plus ConsIndex)	Model 6 (Plus DRAge)	Model 6 (moderating F11xDRAge)
Panel 1 R square	0.198	0.267	0.453	0.516	0.594	0.657	0.695
Adj R Square	0.132	0.206	0.273	0.347	0.409	0.462	0.482
Panel 2 Constant	5.310** (0.000)	4.552** (0.000)	1.374** (0.174)	0.140 (0.889)	-0.460 (0.648)	-0.708 (0.482)	-1.467 (0.149)
DAge2	-0.817 (0.414)	-0.176 (0.861)	0.173 (0.863)	0.621 (0.537)	0.073 (0.942)	-0.058 (0.954)	0.301 (0.765)
DAge3	-2.067* (0.040)	-1.384 (0.167)	-0.706 (0.483)	0.408 (0.684)	0.727 (0.470)	1.507 (0.138)	1.914 (0.062)
DAge4	-0.481 (0.631)	-0.235 (0.815)	0.225 (0.823)	1.162 (0.249)	1.297 (0.200)	1.798 (0.078)	2.261* (0.028)
DGender	-0.603 (0.547)	-0.651 (0.516)	-2.655** (0.010)	-2.746** (0.008)	-3.059** (0.003)	-3.332** (0.002)	-2.843** (0.007)
DEthnic2	-1.511 (0.132)	-1.460 (0.146)	-1.142 (0.257)	-1.170 (0.246)	-1.454 (0.152)	0.145 (0.885)	0.436 (0.665)
DEthnic3	0.792 (0.429)	1.211 (0.227)	1.272 (0.207)	0.992 (0.325)	0.299 (0.766)	0.076 (0.940)	-0.197 (0.845)
DMar	-1.745 (0.082)	-1.942 (0.053)	-1.220 (0.226)	-0.997 (0.322)	-0.653 (0.517)	-0.750 (0.457)	-0.692 (0.493)
DEduc	4.972** (0.000)	4.310** (0.000)	1.510** (0.135)	0.915 (0.363)	0.666 (0.508)	0.056 (0.956)	-0.137 (0.892)
DMgmt	1.232 (0.219)	0.982 (0.327)	1.780 (0.079)	1.354 (0.180)	2.149* (0.036)	3.215** (0.002)	3.476** (0.001)
DHea	1.461 (0.145)	1.118 (0.264)	1.805 (0.075)	2.085* (0.041)	2.426 (0.019)	2.620* (0.012)	2.458* (0.018)
DSHea	-0.125 (0.901)	-0.780 (0.436)	0.732 (0.467)	-1.441 (0.154)	-1.358 (0.180)	-1.610 (0.114)	-1.448 (0.154)
DLEAge2	0.515 (0.607)	0.848 (0.397)	0.977 (0.332)	1.883 (0.064)	1.501 (0.139)	1.061 (0.294)	1.124 (0.267)
DLEAge3	1.301 (0.194)	1.457 (0.146)	0.685 (0.495)	1.119 (0.267)	1.247 (0.218)	0.682 (0.499)	0.833 (0.409)
DLEAge4	0.923 (0.357)	-0.275 (0.784)	-0.135 (0.893)	0.033 (0.973)	-0.015 (0.988)	-0.032 (0.974)	0.167 (0.868)
DLEAge5	-0.104 (0.917)	0.810 (0.419)	0.894 (0.374)	0.827 (0.411)	0.991 (0.326)	0.395 (0.695)	0.585 (0.561)
DSAge2	1.315 (0.190)	1.407 (0.160)	1.257 (0.213)	0.809 (0.421)	0.959 (0.342)	0.440 (0.662)	0.065 (0.948)
DSAge3	1.771 (0.078)	1.745 (0.082)	1.015 (0.314)	0.209 (0.835)	0.545 (0.588)	-0.733 (0.467)	-1.294 (0.202)
DSAge4	2.596** (0.010)	3.049** (0.003)	1.513** (0.135)	0.255 (0.799)	0.239 (0.812)	-0.798 (0.428)	-1.288 (0.204)
DSAge5	0.082 (0.934)	-0.118 (0.906)	-1.067 (0.289)	-1.346 (0.183)	NA	NA	NA
DEmp	-1.766	-2.394*	-0.643*	-0.797	-0.798	-1.125	-1.071

	(0.079)	(0.017)	(0.522)	(0.428)	(0.428)	(0.266)	(0.289)
DSEmp	-0.328 (0.743)	-0.715 (0.475)	-0.317 (0.752)	-0.369 (0.713)	-0.356 (0.723)	-0.598 (0.553)	-0.477 (0.636)
DHome	2.317* (0.021)	NA	NA	NA	NA	NA	NA
DChild	-0.555 (0.579)	-0.700 (0.485)	-0.251 (0.802)	-0.224 (0.824)	0.070 (0.945)	0.808 (0.423)	0.691 (0.493)
F11		5.600** (0.000)	1.932 (0.057)	1.543 (0.127)	0.969 (0.337)	0.213 (0.832)	1.606 (0.115)
SaveIndex			3.208** (0.002)	2.933** (0.005)	1.765 (0.083)	1.818 (0.075)	1.431 (0.159)
ParRetireIndex				3.060** (0.003)	3.186** (0.002)	3.914** (0.000)	4.222** (0.000)
ConsIndex					1.691 (0.097)	1.355 (0.181)	0.910 (0.367)
DRAge2						0.862 (0.393)	2.148* (0.037)
DRAge3						0.063 (0.950)	0.482 (0.632)
DRAge4						2.293* (0.026)	1.592 (0.118)
DRAge5						-0.613 (0.543)	0.932 (0.356)
F11xDRAge2							-1.949 (0.057)
F11xDRAge3							-0.516 (0.608)
F11xDRAge4							-0.981 (0.332)
F11xDRAge5							-1.159 (0.252)

* Significant at 5% ** significant at 1%

Hypothesis 3: Expected Retirement Age and Personal Orientation Toward Financial Planning for Post-Retirement

The hypothesis was formulated in order to gain an insight into the intricacy of personal orientation toward financial planning effect on expected retirement age in the present study. The long form of the hypothesis was: “Expected retirement age moderates the relationship between personal orientation toward retirement planning and financial planning for post-retirement”. The expected retirement age variables used are DRAge 1 (< 56 years old), DRAge 2 (56-60 years old), DRAge 3 (61-65 years old), DRAge 4 (66-70 years old) and DRAge 5 (over 70 years old).

H3: Expected retirement age (DRAge) moderates the relationship between personal orientation toward retirement planning and financial planning for post-retirement (FinPlanIndex).

Hypothesis 3 was tested using hierarchical multiple regression analysis following a statistical procedure described in Cohen and Cohen (1982) and Butler et al. (2004). Specifically, in the first step, all the demographic variables were entered into the regression equation as independent variables to predict financial planning for post-retirement. Personal orientation toward retirement planning was entered into the equation at the second step. The demographic variables were age dummy variable (DAge), education, ethnicity, gender, home ownership, income (F1), marital status dummy variable (DMarr1), number of children, health dummy variable (DHea), spouse health dummy variable (DSHea), life expectancy dummy variable (DLEAge), spouse age dummy variable (DSAge), spouse employment (DSEmp), spouse employment type (DSTE), employment type (DMgmt) and employment status dummy variable (DEmp). Orientation towards financial planning variables comprised of item Q.F11. Detailed results of the above test are tabulated in Appendix D. Further tests were conducted for H3_a to H3_e whereby a planned retirement age cohort, namely DRAge1 which was used as a base category, was omitted, and the other planned retirement age cohorts used as dummy variables. Detailed results for this additional test are tabulated in Appendix D. After choosing DRAge 1 (< 56 years old) as the base category, the following tests were conducted as below.

**Hypothesis 3b: Expected Retirement Age (DRAge2) and Personal Orientation
Toward Financial Planning for Post-Retirement**

H3_b: Expected retirement age (DRAge2) moderates the relationship between personal orientation toward retirement planning and financial planning for post-retirement (FinPlanIndex).

Table 5.10 above shows the hierarchical multiple regression results on expected retirement age. In Appendix D, the table shows that sixteen demographic characteristics have explained 16.1% of the variance of the dependent variable. The R square suggested that there are other factors explaining orientation towards retirement planning besides the sixteen demographic characteristics used in this research. The variables, gender, management type, and health ($t = -3.332$, $p < .01$; $t = 3.215$, $p < .01$; $t = 2.620$, $p < .05$ respectively) were positive and significant predictors of the financial planning index, education being a relatively more significant predictor of financial planning. The regression coefficient associated with the demographic variables ($\Delta R^2 = .161$, $p < .01$) in Model 1 was very significant, and that, with the addition of the variable personal orientation toward retirement planning, the regression coefficient associated with the financial planning for post-retirement FinPlanIndex ($\Delta R^2 = .067$, $p < .01$) was very significant at the 0.01 level. However, when the moderating variable, expected retirement age DRAge2 (56-60 years old) was added, it was significant ($t = 2.148$, $p < .05$) (refer to Appendices D and E). The results indicate that there is moderating effect by expected retirement age DRAge2 between personal orientation toward retirement planning and financial planning for post-retirement FinPlanIndex. The results also indicated that the hypothesis was supported.

**Hypothesis 3c: Expected Retirement Age (DRAge3) and Personal Orientation
Toward Financial Planning for Post-Retirement**

H3_c: Expected retirement age (DRAge3) moderates the relationship between personal orientation toward retirement planning and financial planning for post-retirement (FinPlanIndex).

Table 5.10 shows the hierarchical multiple regression results on expected retirement age. In Appendix D, the table shows that sixteen demographic characteristics have explained 16.1% of the variance of the dependent variable. The R square suggested that there are other factors explaining orientation towards retirement planning besides the sixteen demographic characteristics used in this research. The variables, gender, management type and health ($t = -3.332, p < .01$; $t = 3.215, p < .01$; $t = 2.620, p < .05$ respectively) were positive and significant predictors of the financial planning index with education being a relatively more significant predictor of financial planning. The regression coefficient associated with the demographic variables ($\Delta R^2 = .161, p < .01$) in Model 1 was very significant, and that, with the addition of the variable personal orientation toward retirement planning, the regression coefficient associated with the financial planning for post-retirement FinPlanIndex ($\Delta R^2 = .067, p < .01$) was very significant at the 0.01 level. However, when the moderating variable, expected retirement age DRAge3 (61-65 years old) was added, it was not significant ($\Delta R^2 = .001, p = .440$) (refer to Appendices D and E). The results indicate that there is no moderating effect by expected retirement age DRAge3 between personal orientation toward retirement planning and financial planning for post-retirement FinPlanIndex. The results also indicated that the hypothesis was not supported.

**Hypothesis 3d: Expected Retirement Age (DRAge4) and Personal Orientation
Toward Financial Planning for Post-Retirement**

H3_d: Expected retirement age (DRAge4) moderates the relationship between personal orientation toward retirement planning and financial planning for post-retirement (FinPlanIndex).

Table 5.10 shows the hierarchical multiple regression results on expected retirement age. In Appendix D, the table shows that sixteen demographic characteristics have explained 16.1% of the variance of the dependent variable. The R square suggested that there are other factors explaining orientation towards retirement planning besides the sixteen demographic characteristics used in this research. The variables, gender, management type and health ($t = -3.332, p < .01$; $t = 3.215, p < .01$; $t = 2.620, p < .05$ respectively) were positive and significant predictors of the financial planning index with education being a relatively more significant predictor of financial planning. The regression coefficient associated with the demographic variables ($\Delta R^2 = .161, p < .01$) in Model 1 was very significant, and that, with the addition of the variable, personal orientation toward retirement planning, the regression coefficient associated with the financial planning for post-retirement FinPlanIndex. ($\Delta R^2 = .067, p < .01$) was very significant at the 0.01 level. However, when the moderating variable, expected retirement age DRAge4 (66-70 years old) was added, it was not significant ($\Delta R^2 = .002, p = .379$) (refer to Appendices D and E). The results indicate that there is no moderating effect by expected retirement age DRAge4 between personal orientation toward retirement planning and financial planning for post-retirement FinPlanIndex. The results also indicated that the hypothesis was not supported.

**Hypothesis 3e: Expected Retirement Age (DRAge5) and Personal Orientation
Toward Financial Planning for Post-Retirement**

H3_e: Expected retirement age (DRAge5) moderates the relationship between personal orientation toward retirement planning and financial planning for post-retirement (FinPlanIndex).

Table 5.10 shows the hierarchical multiple regression results on expected retirement age. In Appendix D, the table shows that sixteen demographic characteristics have explained 16.1% of the variance of the dependent variable. The R square suggested that there are other factors explaining orientation towards retirement planning besides the sixteen demographic characteristics used in this research. The variables, gender, management type and health ($t = -3.332, p < .01$; $t = 3.215, p < .01$; $t = 2.620, p < .05$ respectively) were positive and significant predictors of the financial planning index with education being a relatively more significant predictor of financial planning. The regression coefficient associated with the demographic variables ($\Delta R^2 = .161, p < .01$) in Model 1 was very significant, and that, with the addition of the variable, personal orientation toward retirement planning, the regression coefficient associated with the financial planning for post-retirement FinPlanIndex variable ($\Delta R^2 = .067, p < .01$) was very significant at the 0.01 level. However, when the moderating variable, expected retirement age DRAge5 (over 70 years old) was added, it was not significant ($\Delta R^2 = .007, p = .091$) (refer to Appendices D and E). The results indicate that there is no moderating effect by expected retirement age DRAge5 between personal orientation toward retirement planning and financial planning for post-retirement FinPlanIndex. The results also indicated that the hypothesis was not supported.

Table 5.11: Regression Results with Sub-Hypotheses

	Model 1 (Control)	Model 2 (Plus F11)	Model 3 (Plus SavPortIndex/ SavValIndex)	Model 4 (plus SavPortIndex/ SavValIndex; ParRetStatus/ ParRetPlan)	Model 5 (plus SavPortIndex/ SavValIndex; ParRetStatus/ ParRetPlan; ConsLowIndex/ ConsMedIndex/ConsHighIndex)
Panel 1					
R square	0.198	0.267	0.477	0.536	0.611
Adj R Square	0.132	0.206	0.300	0.361	0.398
Panel 2					
Constant	5.310** (0.000)	4.552** (0.000)	2.191* (0.032)	0.757 (0.452)	0.103 (0.918)
DAge2	-0.817 (0.414)	-0.176 (0.861)	0.327 (0.744)	0.824 (0.413)	0.421 (0.676)
DAge3	-2.067* (0.040)	-1.384 (0.167)	-0.363 (0.717)	0.808 (0.422)	1.346 (0.184)
DAge4	-0.481 (0.631)	-0.235 (0.815)	0.732 (0.467)	1.709 (0.092)	1.969 (0.054)
DGender	-0.603 (0.547)	-0.651 (0.516)	-2.725** (0.008)	-2.804** (0.006)	-2.714** (0.009)
DEthnic2	-1.511 (0.132)	-1.460 (0.146)	-1.597 (0.115)	-1.760 (0.083)	-1.692 (0.096)
DEthnic3	0.792 (0.429)	1.211 (0.227)	0.823 (0.413)	0.488 (0.627)	-0.039 (0.969)
DMar	-1.745 (0.082)	-1.942 (0.053)	-1.291 (0.201)	-1.145 (0.256)	-0.544 (0.589)
DEduc	4.972** (0.000)	4.310** (0.000)	1.710 (0.092)	1.045 (0.299)	0.976 (0.333)
DMgmt	1.232 (0.219)	0.982 (0.327)	1.440 (0.154)	0.962 (0.339)	1.685 (0.098)
DHea	1.461 (0.145)	1.118 (0.264)	1.542 (0.127)	1.901 (0.061)	1.910 (0.061)
DSHea	-0.125 (0.901)	-0.780 (0.436)	-1.273 (0.207)	-2.034* (0.046)	-1.788 (0.080)
DLEAge2	0.515 (0.607)	0.848 (0.397)	1.258 (0.212)	2.154* (0.035)	1.762 (0.084)
DLEAge3	1.301 (0.194)	1.457 (0.146)	0.868 (0.388)	1.391 (0.169)	1.424 (0.160)
DLEAge4	0.923 (0.357)	-0.275 (0.784)	-0.036 (0.972)	0.219 (0.827)	0.121 (0.904)
DLEAge5	-0.104 (0.917)	0.810 (0.419)	1.082 (0.283)	1.088 (0.280)	1.316 (0.194)
DSAge2	1.315 (0.190)	1.407 (0.160)	1.174 (0.244)	0.791 (0.432)	0.931 (0.356)
DSAge3	1.771 (0.078)	1.745 (0.082)	0.911 (0.365)	0.081 (0.936)	0.175 (0.862)
DSAge4	2.596** (0.010)	3.049** (0.003)	1.267 (0.209)	-0.052 (0.959)	-0.331 (0.742)
DSAge5	0.082 (0.934)	-0.118 (0.906)	-1.630 (0.107)	-1.857 (0.067)	NA
DEmp	-1.766 (0.079)	-2.394* (0.017)	-1.053 (0.296)	-1.160 (0.250)	-1.244 (0.219)
DSEmp	-0.328 (0.743)	-0.715 (0.475)	-0.444 (0.659)	-0.255 (0.799)	-0.214 (0.832)
DHome	2.317* (0.010)	NA	NA	NA	NA

	(0.021)				
DChild	-0.555 (0.579)	-0.700 (0.485)	-0.466 (0.642)	-0.513 (0.609)	-0.195 (0.846)
F11		5.600** (0.000)	1.892 (0.062)	1.407 (0.164)	0.803 (0.426)
SavPortIndex			0.082 (0.935)	-.038 (0.970)	-0.378 (0.707)
SavVallIndex			3.166** (0.002)	2.913** (0.005)	1.742 (0.087)
ParRetStatus				2.616* (0.011)	2.901** (0.005)
ParRetPlan				1.590 (0.116)	1.884 (0.065)
ConsLowIndex					-0.389 (0.699)
ConsMedIndex					1.085 (0.283)
ConsHighIndex					0.115 (0.909)

*Significant at 5% ** significant at 1%

Hypothesis 4: Current Financial Resources and Financial Planning

The hypothesis was introduced to test whether current financial resources affect the orientation towards retirement planning. The hypothesis would assume this form: “There is a positive relationship between current financial resources and financial planning for post-retirement”.

Hypothesis 4a: Current Financial Resources (SaveIndex) and Financial Planning (FinPlanIndex)

H_{4a}: There is a positive relationship between current financial resources (SaveIndex) and financial planning for post-retirement (FinPlanIndex).

Discussions here are focused on the issue of current financial resources and the related issue of financial planning. The current financial resources were measured with three constructs comprising SaveIndex, SavPortIndex and SavValueIndex. SaveIndex comprised of Q.F1 to F6, SavPortIndex comprised of Q.F2(i) to (vi) and SavValueIndex comprised of Q.F1 and F3 to F6. Full discussions are tabulated below.

Regression Results

The ordinary multiple regression results of the current financial resources are shown in Table 5.11 above. In Appendix D, the table shows that the independent variables have explained 6.1% of the variance of the financial planning for retirement. Table 5.10 has indicated that the current financial resources SaveIndex was significant ($\Delta R^2 = .061$, $p < .01$; $\Delta F = 7.93$, $p < .01$) at the 0.01 level. The variables, gender, education, spouse aged 46 to 55 years old and employment ($t = -2.655$, $p < .01$; $t = 1.510$, $p < .01$; $t = 1.513$, $p < .01$; $t = -0.643$, $p < 0.05$ respectively) were positive and significant predictors of the financial planning index (refer to Appendices D and E for detailed results). Consequently, the hypothesis was supported.

Hypothesis 4b: Current financial resources (SavPortIndex) and financial planning for post-retirement (FinPlanIndex)

H4_b: There is a positive relationship between current financial resources (SavPortIndex) financial planning for post-retirement (FinPlanIndex).

Regression Results

The regression results of the current financial resources are shown in Table 5.11. In Appendix D, the table shows that the independent variables have explained 8.0% of the variance of the financial planning for retirement. The Table also indicated that the current financial resources SavPortIndex was not significant ($\Delta R^2 = .008$, $p = .195$; $\Delta F = 1.690$, $p = .195$) at the 0.05 level. The variables, gender, education, spouse aged 46 to 55 years old and employment ($t = -2.655$, $p < .01$; $t = 1.510$, $p < .01$; $t = 1.513$, $p < .01$; $t = -.643$, $p < 0.05$ respectively) were positive and significant predictors of the financial

planning index (refer to Appendices D and E for detailed results). Consequently, the hypothesis was not supported.

Hypothesis 4c: Current financial resources (SavValIndex) and financial planning for post-retirement (FinPlanIndex)

H4_c: There is a positive relationship between current financial resources (SavValIndex) and financial planning for post-retirement (FinPlanIndex).

The regression results of the current financial resources are shown in Table 5.11. In Appendix D, the table shows that the independent variables have explained 8.4% of the variance of the financial planning for retirement. The Table also indicated that the current financial resources SavValIndex was significant ($\Delta R^2 = .084$, $p < .01$; $\Delta F = 30.629$, $p < .01$) at the 0.01 level. The variables, gender, education, spouse aged 46 to 55 years old and employment ($t = -2.655$, $p < .01$; $t = 1.510$, $p < .01$; $t = 1.513$, $p < .01$; $t = -0.643$, $p < 0.05$ respectively) were positive and significant predictors of the financial planning index (refer to Appendices D and E for detailed results). Consequently, the hypothesis was supported.

Hypothesis 5: Parental Retirement Planning and Financial Planning

The hypothesis was introduced to study the influence of parental retirement planning and the effect on the children financial planning preparation. The hypothesis would assume this form: “There is a positive relationship between parental retirement planning and financial planning for post-retirement”.

Hypothesis 5a: Parental Retirement Planning (ParRetireIndex) and Financial Planning (FinPlanIndex)

Discussions here are focused on the issue of parents' bequest and the related issue of children financial planning preparation. The parents' retirement planning was measured with three items comprising Q.E14(i) to (v), Q.E17 and E18. Full discussions are tabulated below.

H5_a: There is a positive relationship between parental retirement planning (ParRetireIndex) and financial planning for post-retirement (FinPlanIndex).

Regression Results

The regression results of the parents retirement planning are shown in Table 5.10 above. In Appendix D, the table shows that the independent variables have explained 13.8% of the variance of the financial planning for post-retirement FinPlanIndex. Table 5.10 and the detailed results in Appendix D have indicated that the parents with retirement planning was very significant ($\Delta R^2 = .138$, $\Delta F = 57.830$, $p < .01$) at the 0.01 level. The variables, gender and health ($t = -2.746$, $p < .01$; $t = 2.085$, $p < .05$ respectively) were positive and significant predictors of the financial planning index, with gender being relatively a more significant predictor (refer to Appendices D and E for detailed results). Consequently, the hypothesis was supported.

Hypothesis 5b: Parental Retirement Planning (ParRetStatus) and Financial Planning (FinPlanIndex)

H5_b: There is a positive relationship between parental retirement planning (ParRetStatus) and financial planning for post-retirement (FinPlanIndex).

The regression results of the parents retirement planning are shown in Table 5.11. In Appendix D, the table shows that the independent variables have explained 9.4% of the variance of the children financial planning preparation. The table also indicated that the parents with retirement planning was also significant ($\Delta R^2 = .094$, $p < .01$; $\Delta F = 51.109$, $p < .01$) at the 0.01 level. The variables, gender and health ($t = -2.746$, $p < .01$; $t = 2.085$, $p < .05$ respectively) were positive and significant predictors of the financial planning index, with gender being relatively a more significant predictor (refer to Appendices D and E for detailed results). Consequently, the hypothesis was supported.

Hypothesis 5c: Parental Retirement Planning (ParRetirePlan) and Financial Planning (FinPlanIndex)

H5_c: There is a positive relationship between parental retirement planning (ParRetPlan) and financial planning for post-retirement (FinPlanIndex).

The regression results of the parents retirement planning are shown in Table 5.11. In Appendix D, the table shows that the independent variables have explained 7.0% of the variance of the children financial planning preparation. The table also indicated that the parents with retirement planning was also very significant ($\Delta R^2 = .070$, $p < .01$; $\Delta F = 36.911$, $p < .01$) at the 0.01 level. The variables, gender and health ($t = -2.746$, $p < .01$; $t = 2.085$, $p < .05$ respectively) were positive and significant predictors of the financial planning index, with gender being relatively a more significant predictor (refer to Appendices D and E for detailed results). Consequently, the hypothesis was supported.

Hypothesis 6: Consumption and Financial Planning for Post-Retirement

There was a need to introduce a hypothesis in order to test the effect of consumption and financial planning for post-retirement in the present study. The long form of the hypothesis was: “There is a positive relationship between consumption and financial planning for post-retirement”.

H6: There is a positive relationship between consumption and financial planning for post-retirement.

Ordinary multiple regression analysis would be used to describe consumption and financial planning. Consumption variables, ConsIndex comprised of questionnaire items Q.D3(i) to Q.D3(xiii). To obtain an in-depth knowledge, these consumption variables would be investigated from three perspectives: (a) Consumption of low value (ConsLowIndex) using Q.D3(vii) to (x), (b) Consumption of medium value (ConsMedIndex) using Q.D3(xi) to (xiii) and (c) Consumption of high value (ConsHighIndex) using Q.D3(i) to (vi) through the testing of sub-hypotheses (H6_b to H6_e). Full discussions are tabulated below.

Regression Results

Hypothesis 6a: Consumption (ConsIndex) and Financial Planning for Post-Retirement (FinPlanIndex)

H6_a: There is a positive relationship between consumption (ConsIndex) and financial planning for post-retirement (FinPlanIndex).

Table 5.10 above shows the ordinary multiple regression results on consumption (“ConsIndex”). In Appendix D, the table shows that the independent variable explained

7.4% of the variance of the dependent variable. The R square suggested that there are other factors explaining consumption ConsIndex besides the sixteen demographic characteristics used in this research. The consumption variables ($\Delta R^2 = .074$; F change = 25.375, $p < .01$) were significant at the 0.01 level. The variables, gender and management type ($t = -3.059$, $p < .01$; $t = 2.149$, $p < .05$ respectively) were positive and significant predictors of the financial planning index, with gender being relatively a more significant predictor (refer to Appendices D and E for detailed results). The results indicate that the hypothesis was supported.

Hypothesis 6b: Consumption (ConsLowIndex) and Financial Planning for Post-Retirement (FinPlanIndex)

H6_b: There is a positive relationship between consumption (ConsLowIndex) financial planning for post-retirement (FinPlanIndex).

Table 5.11 above shows the multiple regression results on consumption (“ConsLowIndex”). In Appendix D, the table shows that the independent variables have explained 4.1% of the variance of the dependent variable. The R square suggested that there are other factors explaining consumption ConsLowIndex besides the sixteen demographic characteristics used in this research. The consumption variables ($\Delta R^2 = .041$; F change = 18.102, $p < .01$) were significant at the 0.01 level. The variables, gender and management type ($t = -3.059$, $p < .01$; $t = 2.149$, $p < .05$ respectively) were positive and significant predictor (refer to Appendices D and E for detailed results). The results indicate that the hypothesis was supported.

Hypothesis 6c: Consumption (ConsMedIndex) and Financial Planning for Post-Retirement (FinPlanIndex)

H6_c: There is a positive relationship between consumption (ConsMedIndex) and financial planning for post-retirement (FinPlanIndex).

Table 5.11 above shows the multiple regression results on consumption (“ConsMedIndex”). In Appendix D, the table shows that the independent variables have explained 5.4% of the variance of the dependent variable. The R square suggested that there are other factors explaining consumption ConsMedIndex besides the sixteen demographic characteristics used in this research. The consumption variables ($\Delta R^2 = .054$; $F \text{ change} = 23.343$, $p < .01$) were significant at the 0.01 level. The variables, gender and management type ($t = -3.059$, $p < .01$; $t = 2.149$, $p < .05$ respectively) were positive and significant predictors of the financial planning index, with gender being relatively a more significant predictor (refer to Appendices D and E for detailed results). The results indicate that the hypothesis was supported.

Hypothesis 6d: Consumption (ConsHighIndex) and Financial Planning for Post-Retirement (FinPlanIndex)

H6_d: There is a positive relationship between consumption (ConsHighIndex) and financial planning for post-retirement (FinPlanIndex).

Table 5.11 above shows the ordinary multiple regression results on consumption (“ConsHighIndex”). In Appendix D, the table shows that the independent variable have explained 6.9% of the variance of the dependent variable. The R square suggested that there are other factors explaining consumption ConsHighIndex besides the sixteen demographic characteristics used in this research. The consumption variables ($\Delta R^2 =$

.069; F change = 25.180, $p < .01$) were significant at the 0.01 level. The variables, gender and management type ($t = -3.059$, $p < .01$; $t = 2.149$, $p < .05$ respectively) were positive and significant predictors of the financial planning index, with gender being relatively a more significant predictor (refer to Appendices D and E for detailed results). The results indicate that the hypothesis was supported.

5.5 Summary of Hypothesis Testing

There are altogether six hypotheses, which were tested (some with a multi-approach) to delve into the relevant variables connected with the research questions. Principally, the hypotheses have focused on four major areas, namely: (1) the relationship between age cohorts and perceptions towards financial planning; (2) the orientation towards financial planning and expected retirement age; (3) the effect of interrelationships between parental retirement planning and their children financial planning preparation; and (4) financial planning and various levels of consumption. For easy reference, Table 5.12 below tabulates a summary of the test results of the hypotheses discussed earlier.

Table 5.12

Summary of Hypotheses Testing

<u>Hypotheses</u>	<u>Result Supported/Not Supported</u>
H 1 Age cohort has a difference in the perceptions towards financial planning for post-retirement (FinPIIndex)	Supported
H 2 There is a relationship between personal orientations towards retirement planning and financial planning for post-retirement	Supported
H 3 _a Expected retirement age (DRAge1) moderates the relationship between personal orientation toward retirement planning and financial planning for post-retirement	Not Supported
H 3 _b Expected retirement age (DRAge2) moderates the relationship between personal orientation toward retirement planning and financial planning for post-retirement	Supported
H 3 _c Expected retirement age (DRAge3) moderates the relationship between personal orientation toward retirement planning and financial planning for post-retirement	Not Supported
H 3 _d Expected retirement age (DRAge4) moderates the relationship between personal orientation toward retirement planning and financial planning for post-retirement	Not Supported
H 3 _e Expected retirement age (DRAge5) moderate the relationship between personal orientation toward retirement planning and financial planning for post-retirement	Not Supported
H 4 _a Current financial resources (SaveIndex) has a positive relationship with financial planning for post-retirement (FinPIIndex)	Supported
H 4 _b Current financial resources (SaveIndex) has a positive relationship with financial planning for post-retirement (FinPIIndex) .	Not Supported
H 4 _c Current financial resources (SaveIndex) has a positive relationship with financial planning for post-retirement (FinPIIndex)	Supported
H 5 _a There is a relationship between parental retirement planning (ParRetireIndex) and financial planning for post-retirement (FinPlanIndex)	Supported
H 5 _b There is a relationship between parental retirement planning (ParRetStatus) and financial planning for post-retirement	Supported

(FinPlanIndex)

H 5 _c	There is a relationship between parental retirement planning (ParRetPlan) and financial planning for post-retirement (FinPlanIndex)	Supported
H 6 _a	There is a positive relationship between Consumption (ConsIndex) and financial planning for post-retirement (FinPlanIndex)	Supported
H 6 _b	There is a positive relationship between Consumption (ConsLowIndex) and financial planning for post-retirement (FinPlanIndex)	Supported
H 6 _c	There is a positive relationship between Consumption (ConsMedIndex) and financial planning for post-retirement (FinPlanIndex)	Supported
H 6 _d	There is a positive relationship between Consumption (ConsHighIndex) and financial planning for post-retirement (FinPlanIndex)	Supported

5.6 SUMMARY

In addition to providing information on the data analysis, this chapter discusses issues relating to age cohort effects, personal orientation towards retirement planning, parental retirement planning, financial planning preparation as well as the impact on expected retirement age and consumption behaviour through the testing of hypotheses and the application of statistical tools. The chapter has extensively examined the influence of current financial resources on the financial planning activities and expected retirement age. Discussions of all these issues were again made possible by reference to testing data obtained through the testing of hypotheses and the application of statistical tools as well as by reference to research findings produced by relevant research studies. Finally, the overall effect of the interrelationship between relevant issues of financial planning preparation and the attitude towards financial planning was also investigated in the same manner. The research findings from this study are further discussed in Chapter 6.

6.1 Introduction

As stated in Chapter 1, the study would use several key areas: age cohorts, personal orientation, expected retirement age, current financial resources, parental retirement planning, consumption, and financial planning as the determinants to evaluate how urban Malaysians would generally plan for retirement and securing their financial security in the post-retirement period. The whole study was focused around and dependent upon the test results of the six main hypotheses which were either formulated by reference to the research questions in Chapter 3 (3.2) or deduced by inference to the possible combined influence, which the key areas might have on Malaysians' financial planning strategies.

For purposes of obtaining an in-depth knowledge of the more complicated areas, some of the hypotheses were appropriately split into a number of sub-hypotheses as a result of factor analysis in the earlier part of Chapter 5 in addition to the original hypotheses. The hypotheses were examined using either ANOVA, ordinary or hierarchical regression approach. The results have shown that twelve of the hypotheses or sub-hypotheses were supported and five were not supported (see Table 5.11, Chapter 5, for further details). A detailed discussion on the relevant findings with reference to the literature is tabulated below.

6.2 Findings and Discussions

6.2.1 Hypothesis 1: Age Cohort and Perception toward Financial Planning

Efforts were made to examine the possibility of any relationship between age cohorts and financial planning preparation via analysis of variance. The purpose of this approach was to ascertain whether there would be age cohort effects between

generations which might eventually have an effect on Malaysians' financial management strategies and ultimately on their financial planning for post-retirement. The first step involved eliciting respondents' financial planning preparation status using ANOVA. However, ANOVA indicated differences between the age cohorts. The results show that the hypothesis was not supported in respect of the younger cohorts i.e. Age cohort 1 (26 to 35 years old) and Age cohort 2 (36 to 45 years old); unlike the results for Age cohort 3 (46 to 55 years old) whilst Age cohort 4 (age 56 years and above) was also fairly weak. Age cohort 1 and 2 have a mean of 0.263 and 0.122 respectively compared to Age cohort 3 and 4 which have a mean of 0.298 and 0.172 respectively. Post hoc analysis indicated that those in age cohort DAge3 (age 46-55 years old) are fairly significant. We can therefore possibly ascribe the unexpected differences in age cohorts for personal orientation to the life-cycle effects i.e. that younger age cohorts tend to have lower income and may even need to borrow to make up for any shortfall in income in order to sustain their lifestyle. At the same time, younger age cohorts may be aware of the importance and implications of financial planning but may choose to defer saving decisions as they may feel that time is still on their side. The finding in this research, as opposed to the predicted hypothesis, indicated that Baby Boomers were more concerned about financial planning compared to the younger generations. Baby boomers are basically those born between 1946 and 1964 (Jones, 1980).

For the older age cohorts, there is strong evidence to suggest that Hypothesis 1 (there is a difference in the perception toward financing planning for post-retirement among the difference age cohorts) is supported although not strong. These findings are in line with those by Cutler and Devlin (1996), Lusardi and Mitchell (2007) and Tan *et al.* (2012). As suggested earlier, consulting with financial advisers and planners will be useful for

Malaysians in their financial planning for post-retirement. Previous research has demonstrated the effectiveness of financial advisers and planners on retirement savings as well as individuals' knowledge, attitude and behaviour towards financial planning (Bernheim and Garrett, 1996; Heath, 1996; Fletcher *et al.*, 1997; Gorbach, 1997; Tan *et al.*, 2012). The observed significance between lack of relevance and years until retirement intuitively made sense. If engagement in financial planning was for the purpose of building a retirement fund, then the nearer one is to retirement, the more relevant this would become.

6.2.2 Hypothesis 2: Personal Orientation and Financial Planning

As an important part of this study, attempt was made to examine the relationship between personal orientation towards financial planning and financial planning. This methodological approach was premised on the financial models previously used by Porter (1990) and Joo (1998). The regression results revealed that personal orientation towards financial planning was supportive of the hypothesized statements (Table 5.9, Chapter 5, Appendices C and D). With the aforementioned findings, there is therefore evidence to support the hypothesized statements that Malaysians would generally relate personal orientation towards financial planning to financial planning regardless of the age cohort effects. The theory has the general support of other researchers (Feuerbach and Erdwins, 1994; Sorensen and Pinquart, 2000; Ekerdt and Hackney, 2002; Tan and Folk, 2011).

6.2.3 Hypothesis 3: Expected Retirement Age and Personal Orientation (H3_a to H3_e)

As part and parcel of the study, there was a need to discuss the effect of the personal orientation towards financial planning and the expected retirement age (H3). Personal orientation within this context is defined as an attitude about responsibilities towards financial planning emphasizing the importance of protection and building a “nest egg” for the post-retirement period. In this case, the discussion was focused on the perception of the respondent’s retirement needs, not so much on the types of need. However, the term “retirement need” in this context may generally be interpreted to include, *inter alia* financial need, healthcare need or leisure need. The regression results revealed that there were three demographic variables i.e. gender, management type and health, which were significant at the 0.05 level for hypotheses H3_b to H3_e. The overall model concerning personal orientation towards retirement planning were also significant such as hypothesis H3_b ($\Delta R^2 = 0.067$, $\Delta F = 28.255$, $p < .01$) (see Table 5.10, Chapter 5 and detailed results in Appendix D) which was significant at the 0.01 level. However, for all hypotheses in Model 3, the combined regression results were generally weak, indicating that expected retirement age does not moderate the relationship between personal orientation towards financial planning and financial planning. Furthermore, this finding also has the support of previous research findings which had concluded that personal orientation towards financial planning and expected retirement age does not go hand in hand (Hanson and Sauer, 1985; Stein, 1993; Tan and Folk, 2011).

6.2.4 Hypothesis 4: Current Financial Resources and Financial Planning

(H4_a to H4_c)

As a further issue of the orientation towards financial planning, the relationship with current financial resources was also discussed on the basis of the hypothesis that “There is a positive relationship between current financial resources and financial planning” (H4). For H4_a, the ordinary multiple regression analysis has revealed that the R^2 change (= 0.061) and F change (= 7.930) were very significant at the 0.01 level (Appendix D). Hence, there is therefore evidence to support the hypothesis.

The financial planning variables were also investigated from two additional perspectives: (i) Saving Portfolio Index (SavPortIndex), and (ii) Saving Valuation Index (SavValIndex) through the testing of sub-hypotheses (H4_b to H4_c). In the course of investigating into the current financial resources, H4_b was found not to be a significant predictor, with the R^2 change (=0.008) and F change (=1.690) (see Table 5.10, Chapter 5 and detailed results in Appendix D). In the third hypothesis, H4_c, this was found to be a very significant predictor, while the R^2 change (=0.084) and F change (=30.629) were also significant (Appendix D). Overall, the combined hypothesis is considered as significant. As such, the regression results support the hypothesis that there is a positive relationship between current financial resources and financial planning for post-retirement. In this regard, Hasher and Zacks (1984) had demonstrated in their research on retirement planning that individuals would register financial planning information in their subconscious mind unintentionally, truly and automatically.

6.2.5 Hypothesis 5: Parental Retirement Planning and Financial Planning (H5_a to H5_c)

The following was the investigation into the relationship between children's financial planning preparation and their parents' retirement planning by ordinary multiple regression analysis into the relevant data. In the course of investigating into the "Parental retirement planning" from the children's perspective (H5_a), this was found to be a significant predictor, while the R^2 change ($=0.138$) and F change ($=57.830$) were also significant (see Table 5.9, Chapter 5, and Appendices C and D). As such, the regression results support the hypothesis that, from the children's perspective, there appears to be adequate retirement support from parents to their children. The financial planning variables were also investigated from two additional perspectives: (i) Parent Retirement Status (ParRetStatus), and (ii) Parent Retirement Planning (ParRetPlan) through the testing of sub-hypotheses (H5_b to H5_c). In the course of investigating into the parental retirement planning, H5_b was found to be a very significant predictor, with the R^2 change ($=0.094$) and F change ($=51.109$) (see Table 5.10, Chapter 5, and Appendix D). In the third hypothesis, H5_c, this was found to be a very significant predictor, while the R^2 change ($=0.070$) and F change ($=36.911$) were also significant (see Table 5.20, Chapter 5). Overall, the combined hypothesis is considered as very significant. Hence, there is evidence to support the hypothesis that there is a positive relationship between parental retirement planning and financial planning for post-retirement.

According to Luescher and Pillemer (1998), the parent-child relationships are ambivalent resulting in incompatible normative expectations which would require contradictory attitudes and behaviours (Merton and Barber, 1963). The finding in this

study seems to have the support of previous research. For example, Morgan *et al.*, (1991), (Lye, 1996) and Folk (2011) are of the opinion that parents and children are closely related to the contact and support exchange as they would assist and care for each other over the life course.

6.2.6 Hypothesis 6: Consumption and Financial Planning (H6_a to H6_d)

As mentioned in the relevant subsections in Chapter 5, the purpose of introducing the above-captioned hypotheses was to assess the interrelationship effect, if any, on the respondents' level of personal consumption and its relationship between consumption and financial planning for post-retirement. Essentially, the relationship issue would be examined under the ordinary multiple regression method in the context of the three different perspectives, viz.: the “low value consumption” perspective (H6_b), the “medium value consumption” perspective (H6_c), and the “high value consumption” perspective (H6_d). H6_a had already examined consumption on a combined basis and the result was very significant.

(a) From the “low value consumption” perspective (H6_b), the regression results (see Table 5.10, Chapter 5, and detailed results in Appendix D) indicated that overall Model (with the input of personal consumption variable) was significant at the 0.01 level. These regression results would further imply that personal consumption for lower value items does influence the level of financial planning. That is to say, people still need to consume for their needs or in some cases, ‘wants’ from their own perspective.

(b) From the “medium value consumption” perspective (H6_c), the regression results (Table 5.10, Chapter 5, and detailed results in Appendix D) showed that with the

insertion of the personal consumption variable, the overall Model ($\Delta R^2 = .054$, $\Delta F = 23.343$, $p < .01$) was very significant at the 0.01 level. As such, it might be appropriate to surmise that the respondents in this study had reflected that despite the fact that consumption which are slightly higher in cost may still need to be expended such as education can be considered as a prerequisite to higher income and hence more savings and better standard of living. In other words, they had invariably taken into account their personal consumption level and the perception of the future based on their financial planning.

(c) From the “high value consumption” perspective (H6_d), the regression results (Table 5.10, Chapter 5, and detailed results in Appendix D) indicated that with the input of personal consumption variable, the overall Model ($\Delta R^2 = .069$, $\Delta F = 25.180$, $p < 0.01$) was very significant at the 0.01 level. This study had reflected that despite the fact that consumption which are high in cost may still need to be expended as maintaining a improved quality of life was considered as important for most respondents and hence more savings and better standard of living.

Arising from the discussion on the interrelationship between personal consumption and financial planning at the different consumption value range, the overall results have revealed that the respondents would have in mind the importance of their personal consumption spending in their decision-making process when planning for their retirement. Once again, there appears to have no specific research studies on this multi-approach to financial management and retirement financial planning. There is, however, a large body of literature relating to the issues of the respective effects of different degree of consumption when people are not confident of the economy. Apart from the

earlier references in this chapter, there are research studies on (i) consumption behaviour (Bernheim and Garrett, 1996; Garman and Leech, 1997; Joo, 1998), and (ii) the relationship between confidence in the economy and consumption (Ekerdt and Hackney, 2002; Tan *et al.*, 2012). According to previous studies, a person's consumption habits are determined by his financial resources (Lawton *et al.*, 1994; Tan *et al.*, 2012). Findings from previous studies on a person's level of consumption were found to be determined by his financial resources (Mancini and Bliesner, 1992; Tan and Folk, 2011). These findings support the hypothesis that current financial resources affect high value consumption.

This study has answered the research questions posed in Chapter 3 (3.2). Age cohorts definitely have a strong influence on financial planning, particularly, towards the later part of their life-cycle. There are four distinct phases in an individual's financial life-cycle. Starting at a relatively young age (age 26 years or younger), a career minded person typically will pass through different phases in their life-cycle en route to his or her retirement and the post-retirement period. These four phases and their corresponding age ranges are:

- Early career – age 26 (or younger) to age 35;
- Career development (age 36 to age 45):
- Peak Accumulation (age 46 to 55); and
- Retirement (age 56 and above).

Together, these four phases span a person's entire financial life-cycle. Although some people may not experience all of the phases or will spend more or less time in any one particular phase, the vast majority of career-minded people will go through all four

phases. The study indicates that Malaysians achieve their peak savings in the accumulation phase of 46 to 55 years, in part due to their positive attitude towards financial planning. In general, there is significant evidence that Malaysians tend to smooth consumption across their lifetimes and manage any big downward swings in their standard of living. From this perception, their financial planning strategies consist of transferring consumption across time and across contingencies, throughout the entire life-cycle of the individual. Regression tests in Hypothesis 4 have indicated that basically whatever current financial resources one has had a positive impact financial planning which in turn influences consumption for low to high value items. Consequently, when one has less financial resources, then the respondents tend to spend less but a minimum standard of living has still got to be maintained to ensure the same quality of life such as medium value items comprising rental accommodation, car installments, food and drinks, still need to be maintained regardless of low savings. Similarly, results in Hypothesis 4 have indicated that the level of financial resources that one currently has will enhance the level of financial planning that one will initiate. This means that the individual will be more proactive in his or her financial planning. This includes smoothing out consumption.

From the results of hypothesis H3, it can be concluded that personal orientation towards financial planning for retirement does not affect their expected retirement age for all age cohorts. As noted in hypothesis H3_b, which has a relatively more significant relationship, this older age group (expected retirement age of 56-60 years) probably know that they are nearing retirement age, hence the need to reassess the adequacy of current financial resources to retire. As most of the other age cohorts do not consider their expected retirement age as having any correlation to the adequacy of their current financial

resources, then the other side of the equation is consumption. This means that one will need to adjust or “smooth” their consumption pattern to meet their needs, given the limitation of their financial resources at different points in time.

More often than not, Malaysians depend on their children to provide financial assistance in their old age (if the need arises) as part of the Asian cultural and traditional values. The act of saving for retirement shifts consumption from the high earning years to years when the individual is no longer in the workforce. From a life-cycle investing point of view, preparing for retirement thus requires investing savings in sound investments to the extent that is appropriate for the individual’s personal circumstances, and insuring or otherwise addressing the risk of catastrophic losses, such as poor health or uncertain longevity. There is no consensus on the amount of savings that Malaysians will target to save as it depend on their own station in life and exercising financial prudence, to smooth their own consumption pattern.

Generally, financial advisers and planners attempt to advise their clients determine how much to save for their retirement. The typical financial advice given to people is put in terms of whether a savings plan will achieve the perceived standard of living for the individual during retirement. Although the life-cycle savings model does not seem to describe consumer behavior well at the household level (Thaler, 1990) or at the aggregate level (Mokhtari, 1990), it is still a rigorous model designed to provide a prescriptive answer to the question of how much the individual should save. The objective of financial planning is to determine the most appropriate or optimal wealth management strategy that meets an individual’s retirement goals. When faced with multiple strategies, it is important for a financial planner to assess how well each

potential strategy would meet the overall retirement goals and preferences through the assessment of benefit outcomes, costs, and investment risks. The asset allocation strategies of Malaysians appear to be optimizing the asset allocation of financial wealth. They attempt to invest in assets whose returns have a low or negative correlation to the return on human capital (wage growth). A high correlation will lead to a painful scenario when both human and financial capital falls and should, therefore, be avoided. However, the appropriate asset allocation of financial wealth is highly specific to the individual, particularly with different risk appetites.

Basically, older expected retirement age will affect more of their attitude towards financial planning activities as demonstrated in Hypothesis 3. This could be taken to mean that should their financial resources deteriorate, their expected retirement age may change over time to suit their needs. Hence current financial resources and their expected retirement age will influence their asset allocation strategies. Combined with their propensity to smooth consumption over times when the need arises, the asset allocation is most likely biased towards income generating type assets like property rental or capital-guaranteed type unit trusts that pays regular dividends or even in blue chip shares that pay good regular dividends. This is contrary to many of the approaches currently used that determine a suitable asset allocation based simply upon a combination of age and a simple measure of risk tolerance. Unexpected shocks in the global financial and capital markets such as the US subprime mortgage crisis and European countries (Greece and Spain) can have a major impact on one's risk tolerance at different stages of their life-cycle (Singh *et al.*, 2010).

In conclusion, it would be opportune time to restate that great efforts had been made to assess the effect (if any) of the interrelationships between age cohort and respondents' financial planning preparation from different perspectives i.e. (1) Consumption, (2) Current financial resources, (3) Personal orientation towards financial planning, (4) Parental retirement planning, and (5) Expected retirement age. Consequently, it was observed that, with the demographic variables being included in the overall models, some of the hypotheses have shown some positive effect. These effects mainly involved: the orientation towards financial planning for post-retirement, parental retirement planning, consumption and financial planning preparation. There is also some evidence to indicate that the interrelationships between older expected retirement age cohort and orientation towards financial planning have a higher degree of moderating effect for Malaysians' with older expected retirement age which may affect their plan for securing post-retirement financial security.

6.3 Study Limitations

This study has its limitations. First, this dissertation was undertaken as a cross-sectional study. This cross-sectional study involves studying respondents from different age groups at the same point in time. The study cannot measure change in the variables over time. The findings and conclusions capture only a snapshot of the financial planning, retirement expectations and plans of adult Malaysians at a particular point in time. Nevertheless, this shortcoming is mitigated by studying the four different age cohorts from age 26 to above 56 years old as proxies representing the different age groups in the life-cycle; evidence of change is inferred from differences between the different age cohorts. The reciprocal relationships between the life-cycle factors affecting the financial planning outcomes are examined principally on a multivariate basis to obtain

information and some measure of these influences from the many variables that were identified. However, the cohort effect in different age groups may show trends particular to a specific group and not true development changes. Whilst the survey study is based on random sampling, as enumerators were used to collect data, there is a possibility of self-selection bias. Nevertheless, this risk is mitigated by the sample size collected over a three months period.

While longitudinal studies would benefit from studying the respondents over a particular time period and thus allowing the observation of development over the respondents' life-cycle, the extensive time span, coverage problems, and costs involved in studying a large group of respondents (over a life-cycle) would be prohibitive and override the benefits. The second limitation of this study concerns the geographical coverage in relation to the sample population. The study was restricted to adult Malaysians working and living in the Klang Valley area. As described in Chapter 4 (4.6), this study is on urban Malaysians living in the Klang Valley which may not be representative of the overall Malaysian population.

6.4 Implications and Recommendations

To the extent of respondents' willingness to seek for outside guidance, financial advisers and planners should identify their niche market in order to dispense their professional services on financial planning for post-retirement strategies especially in areas of high-yielding and sound investments with tax advantages. While personal perception of their retirement financial adequacy is prevalent in most people, the implication was that not only should their individual perceptions of financial planning for post-retirement become an increasingly important part of people's long-term

commitment throughout their life-cycle, financial planning must also assume the role as a self-directed life-long learning process, in view of the ever-changing and complicated financial environment.

In the circumstances, Malaysians must be self-directed in absorbing the enormous amount of relevant information on financial and risk management so that they could generate a higher income level and minimize the risks in applying investment planning and strategies in order to achieve better retirement goals. The Department of Education should be leaders in providing the opportunities for pre-retirement education. Skills and knowledge needed for pre-retirement planning needs to be incorporated into general economic education in the public schools. A multiple non-traditional approach needs to be taken in providing pre-retirement education to adults, such as televised programs, adult education classes, seminars in local schools and dissemination of self-teaching materials. Since pre-retirement planning is more effective if it begins at an early age, it is best incorporated as a life-cycle approach.

Another implication is that the anticipated pattern of real income in the future is a very crucial part of optimal consumption patterns. People who are certain of substantial increases in real income have less need to start saving a substantial portion of their current income than people who expect constant or declining real income. It requires additional analysis, however, to determine optimal or at least plausible levels of emergency funds to accumulate for precautionary purposes. Even a non-mathematical analysis of the saving versus spending question should suggest that some households may find it better not to be overly thrifty at particular points of the family life-cycle. For example, in the years just after children are born, family income is often reduced due to

decreased labor force participation by the spouse to look after the children, or increased spending for child care.

For better retirement financial planning strategy, research efforts should also be made to further examine the relationships between other variables including income from part-time employment, insurance planning, age of initial investment, and legal structure. Some of these variables were briefly discussed earlier with no conclusive results due to life-cycle time constraint and other limiting factors. Such enquiries are expected to help determine more common demographics of retirement, while contributing to the body of knowledge. Respondents generally perceived themselves as financially prepared for retirement, but their income sources during their semi-retirement phase and eventual retirement were not revealed or fully determined. The revelation of these “unknown” income sources might be the ultimate solution to problems for future researchers in this area. If greater details of these unknown retirement income sources could be clearly identified, respondents in similar circumstances might be able to check the status of their financial retirement security adequacy at a certain point in time. If a 25 year old individual thinks it highly likely that real income will increase substantially, and does not plan to retire until age 65 or later, then it may be rational to defer most saving for retirement, as retirement is 40 years away.

In general, the more uncertainty there is about future income prospects, the higher the level of saving (or lower the level of borrowing) there should be (Fan, Chang and Hanna, 1993). Bae, Hanna and Lindamood (1993) found that, all other things being equal, more educated households are more likely to overspend in a year compared to less educated households. This result cannot be explained by other models, but it is

consistent with the life-cycle model. More educated households are more likely than less educated households at the same income level to expect increases in real income. Consideration of the current net asset level of a household, and other factors affecting the real interest rate faced by a household, may also be important in understanding family financial behavior. The basic life-cycle model is limited, however, in evaluating situations where uncertainty is important.

At the same time, it might be useful to look into the circumstances as to why many Malaysians are not seeking professional assistance for their financial planning for retirement as revealed in the study. Are they feeling sufficiently equipped and competent to take care of their own financial management without any professional help? Or are they simply ignorant of the importance of financial planning for retirement, given the fact that they might not be financially prepared in old age or their adult children might not be able to look after them when the time come for a variety of reasons? With more elderly people and retiring individuals joining the fast-rising Malaysian aging population, this may indicate enormous opportunities for professional financial advisers and planners in providing financial planning for retirement.

The findings in this study have strengthened those found in previous studies in the field of (1) age cohort effect and its contribution to financial planning for post-retirement; (2) the personal orientation towards financial planning and its contribution to retirement planning adequacy; and (3) finally the combined effect of both current financial resources and consumption on financial management and financial planning for post-retirement (see Literature Review in Chapter 2 and references to research studies in this chapter).

To the extent that age cohort has any effect on financial management and financial planning for post-retirement, the study has revealed that those with an early start in investment for retirement purposes have reflected their goals on strategic planning, and this has given them a clearer road-map of how and when they would be able to achieve those goals. In planning for their retirement preparedness, they had also taken into account the form, pattern and quantum of their life-cycle consumption and current financial resources adequacy as revealed in previous research findings by Dykstra and Knipscheer (1985), Hanson and Sauer (1985), Bengston and Roberts (1991), Stoller (1994); and Tan and Folk (2011).

Furthermore, those with higher education were found to be more financially prepared psychologically for their retirement, because of their exposures to wider scope of life experiences and higher level of education, which had given them the advantage to start early in life-cycle financial planning. These revelations are also clearly reflected in other research findings on (i) financial education (Bernheim and Garrett, 1996; Garman and Leech, 1997; Folk *et al.*, 2012); (ii) making retirement savings plan, estimating post-retirement living standard (Gustman and Steinmeier, 2002; Tan *et al.*, 2012); and (iii) continuing education to achieve, inter alia, personal development and occupational status enhancement (Long, 1983; Stalker, 1993; Beh and Folk, 2012). However, mental preparation towards financial planning may not necessary translates into an actual implementation of a financial plan.

In this study, the age cohort issue was examined from the perspectives of current financial resources, personal orientation towards financial planning and consumption based on the financial models by Porter (1990) and Joo (1998). These findings have

further strengthened the relationship between the age cohort life-cycle and financial planning for retirement. This study has revealed that age cohort has an impact on the orientation towards financial planning, on expected retirement age, on financial planning preparation and consumption. However, there could be a slight bias present in this study, as these variables or construct may indirectly influence one another, which might not have been revealed. Otherwise the study's findings have coincided with those studies where each of these constructs make strong impacts individually (Blieszner and Hamon, 1992).

The study has also indicated that respondents with adequate current financial resources were likely to influence most other determinants in the life-cycle of an individual. The level of household saving is crucial for household security and the amount of total saving has a direct impact on the economy at large (Hira, 1987). Spending less than income is essential in household budgeting because it is the first step toward saving and accumulating financial assets. In contrast to the predictions of life-cycle saving theory, younger couples without children and older households without dependent children are more likely to save than younger single households. Among middle age groups, only the pre-retirees without dependent children are more likely to save than younger single households. Results of the family life-cycle stages imply that middle-age households seem to delay saving until children attain financial independence and they reach the previous conventional retirement age of 55 years. This phenomenon might be partly related to high education costs for children. With regard to the effect (if any) of the interrelationships between age cohort and financial planning preparation, the study indicated that the interrelationships generally have some degree of mediating effect on

Malaysians' decision to manage their finances or plan for their retirement financial security adequacy.

Additionally, the study has also revealed positive relationships between demographics and financial planning strategies and that, with savings and home ownership, a significant number of the respondents appeared more financially prepared for retirement based on the research findings. Given Malaysia's lack of a comprehensive old age social security scheme, the inadequate retirement security plans (viz. the DB and DC retirement plans), and the escalating prices of petrol and basic necessities, people should, however, be constantly aware of the possible inadequacy and the lack of current social security benefits as retirement income sources in the country. To prevent such an eventuality, they should take an active part in learning about saving opportunities and their own need and responsibility for financial planning for retirement.

As a result of the previous global financial crisis in 2008/2009 (the effect of which was widely felt), there is also an urgent need to study its financial effects and implications on future financial planning strategies. Results of the empirical analysis provide useful information for developing and implementing personal and family financial management education programs. The low percentage of saving implies that a large proportion of the Malaysian population needs to be made aware of the importance of saving. Low income, less educated, and rural households should be targeted for financial literacy education. If the goal is to induce households to save, the education programs should emphasize the importance of financial goal setting and long-term perspective in household financial planning. Low income, lower education of the householder and a higher propensity to spend all added up to lower the probability of

household saving. The lack of saving makes these households particularly vulnerable to unexpected declines or interruptions in income. Public policies that provide saving incentives (e.g. tax advantages or higher interest rates) may make it feasible for these more vulnerable households to save, thus improving their financial security. Public policies need to be developed to encourage family saving through tax reduction on interest income, dividends, or increase amounts eligible for tax deductions. Public policies are essential to the control of inflation. Therefore, a clearer understanding of the causes of inflation is necessary to people who must vote and choose various alternatives. Demographic factors should be further explored, particularly those of gender and ethnicity, to determine personal financial management competencies in different populations. Further research should probe current differences in personal financial management competences based on gender, ethnicity, and family structure.

Finally, in view of the increasingly sophisticated financial and investment products, people should consider engaging more professional advice and expertise to help them structure a more effective and efficient financial planning scheme so that they could optimize their investment returns and reap any tax-advantages and savings when deciding to plan for their financial planning and investments. With proper training and continuing financial learning, they should, therefore, talk to financial advisers and planners before adopting better methods to accumulate quality investments and generate greater returns for better retirement preparation. In the absence of a comprehensive old-age social security scheme in Malaysia, some ideas and recommendations are outlined below in order to help the growing number of Malaysian men and women in retirement.

6.4.1 Retirement Age

The study shows that expected retirement age has no moderating effect in relation to personal orientation towards financial planning for post-retirement except for expected retirement age, 56 to 60 years. This finding is unique as retirement age is relatively structured in Malaysia i.e. retirement age being extended to 60 years (from 58 years for public sector in 2012 and 55 years for private sector effective from July 2013). Studies in the US show otherwise, Peglow (2010) found decisions on retirement age to be strongly dependent and influenced by institutional factors. Brown (2006) found that workers are more likely to retire at a particular age if they regard that age as the “usual” retirement age for workers like themselves. Munnell *et al.*, (2003) found that as firms move away from traditional defined benefit pension plan towards defined contribution plans, the average retirement age of older Americans are expected to increase.

With increased longevity, Malaysians face the prospect of having to support themselves for a longer post-retirement period. A realistic option is to raise the retirement age and let more people work longer as their life span increases and the need to accumulate more savings and financial resources for their old age. With the previous retirement age of 55 years for the private sector and 58 years for the public sector, the average Malaysians will need to finance their consumption post-retirement for about 20 years. In this respect, the government has taken the right step to raise the retirement age to 60 years for the public sector from 2012 and the private sector from 2013 (Sukumaran, 2012). In comparison, neighboring Singapore had raised the retirement age from 62 to 65 years effective January 2012, and is considering extending this further to 68 years (in line with Finland). Most developed countries such as Japan and Germany are increasing

their retirement age from 60 to 65 years, while Sweden is proposing to increase the retirement to 67 years.

With the changing notion of retirement, people themselves may choose to continue working in some form or capacity by taking up alternative or part-time employment. Delaying retirement increases lifetime earnings by extending the asset accumulation period, help to reduce the period of retirement and allow retirees to better support their post-retirement consumption. Effective 2008, the liability period for mandatory contribution to the EPF for both employers and employees has been extended from age 55 to age 75. This change may indirectly encourage members to continue working after 55 years to enhance their retirement savings.

6.4.2 Consumption and Household Debts

The study shows the significant effect of consumption in relation to financial planning for post-retirement from different perspectives: higher cost consumption items being more significant in comparison with lower cost consumption items. As stated in Chapter 1 (1.5.1), private consumption contributed significantly to the annual growth in Malaysia's GDP. While this has been a boon to the economy on a macro basis, a darker side is the snowballing increase in household debts. In 2013, total household debt in Malaysia has snowballed to 86.8 percent of GDP (see Chapter 1, 1.5.1). While the country increasingly relies on domestic demand and private consumption to stimulate the economy, policy makers have to bear in mind the increasing stress on household financial health and future financial security arising from excessive consumption and unsustainable household debts. The household sector is now the major sector exposure for Malaysian banks. Too much focusing on consumer lending can eventually be

counterproductive to the economy. This has also given rise to a new phenomenon where increasing number of debt-ridden young adults risk being declared bankrupt because of overspending and failing to manage their personal finance prudently.

The Credit Counseling and Debt Management Agency (AKPK), was set up by Bank Negara Malaysia to provide financial education, credit counseling and debt restructuring services to individuals. As stated in Chapter 1 (1.5.1), many of the people enrolled in AKPK's debt management programme are below 30 years old; young adults who risk being declared bankrupt because of credit card overspending and failing to observe sound financial planning and management. Therefore, the economy's dependence on private consumption is creating a consumer driven society which is completely contradictory to the need to save and invest for one's future retirement.

Higher repayments for debt taken to buy houses, cars, and for other consumption needs would eventually bite into private consumption and saving for retirement. There is therefore a great need to balance between consumption and savings, and an even urgent need to promote the practice of financial planning among Malaysians via improved financial literacy. It is timely that the central bank, Bank Negara had in 2012 imposed a set of "responsible lending guidelines" to the banks and financial institutions "to avoid the excessive accumulation of household debt" (Khoo, 2012). Among the possible policy measures to curb the rising household consumption and debts are: (1) the imposition of more stringent Loan-to-value ratios by banks and financial institutions for mortgage loans to finance home purchases; (2) fixing higher minimum income requirement for eligibility to apply for credit cards and personal loans; and (3) limiting

the maximum credit limit on credit cards as well as the number of credit cards to be issued to an individual.

6.4.3 Private Pension Schemes

As stated in Chapter 2 (2.10), while there are three potential sources of post-retirement income for Malaysian – pension for retired civil servants, the EPF for employees in the private sector, and personal savings, this study found that there is a lack of a comprehensive social security system to protect Malaysians from social and economic distress in old age. While the private sector in Malaysia offer better salaries and compensation benefits and a lump sum EPF withdrawal upon retirement, it appears that it is the civil servants who tend to have it better after retirement. The public sector employees eligible for a life-long government pension based on 50 percent of their last drawn salary (including survivor and disability pension) are clearly better off than their private sector counterparts who contribute to the EPF. The EPF is a defined contribution plan, and the contributors receive only what they and their employers have contributed over their working lives, together with the compounded annual dividends. This study estimated that about 42.6 percent of the country's labour force does not contribute to the EPF (see Chapter 1, 1.2). This means that about 5 million Malaysians are not covered by any formal saving or retirement scheme.

It is therefore timely that the government approved the establishment of private retirement schemes in 2012 to facilitate voluntary savings for retirement and complement the mandatory EPF savings for the benefit of private sector employees and the self-employed (Lim, 2012). The private pension scheme is still very much at its infancy stage in Malaysia. Even for the EPF contributors, many people may not realize

that their EPF was meant to fund only basic financial needs and requirements during retirement. Two studies have indicated the unfortunate fact that more than 70 percent of EPF members will exhaust their EPF accounts within 10 years of retirement (see Chapter 1, 1.2). The 2013 EPF annual report shows that 84 percent of contributors have less than RM100,000 in their EPF savings, which is insufficient to see them through twenty years of post-retirement. Even for those within the present public sector pension framework, there are questions of sustainable financial security during retirement. Private pensions can complement the current system by providing various options to the public to supplement their current retirement funding. As discussed in Chapter 2 (2.6.1), Gough and Adami (2008) defined “poor” as those individuals having post-retirement income below 50 or 60 percent of the median income. To measure post-retirement adequacy, generally, the literature recommends an income replacement rates of 70 to 80 percent (Smith, 2003; Munnell and Soto, 2005; Ibbotson *et. al.*, 2007a).

Private pension schemes are becoming an increasingly important source of retirement income in many countries such as the United Kingdom, the United States, Latin America and Western Europe; this has spurred the growing trend towards greater privatization of retirement income worldwide. Two well-known private pension systems are the Chilean and Australian private pension models which have been instituted for some time and can serve as useful reference for both their successes and weaknesses. The mandatory individual account pension systems pioneered by Chile have become the predominant system in Latin American and Central and Eastern Europe (Arenas de Mesa *et al.*, 2006). The Chilean Pension Savings Account is essentially a mandatory second pillar with defined contributions. There is now more than 95 percent coverage of the Chilean economically active population and pension savings are equivalent to more than 65 percent of Chilean GDP (Drimer, 2010). The Chilean private pension system

has also benefited enormously the country's financial sector and its capital markets. Investment returns to the Chilean participants have been good; the rate of return (net of administrative costs) has averaged between 7 and 7.5 percent over the past twenty years. By comparison, the average EPF return over the last ten years from 2000 to 2009 is about 5.06 percent (EPF Annual Reports)

On the other hand, Australia has a fully liberalized, three-pillar system: the first pillar is a universal old age pension, means tested on the basis of assets and income. Emphasis is placed on the second pillar which is a superannuation consisting of an obligatory defined contribution scheme. Most employers operate defined contribution schemes, either as separate employer-sponsored arrangements, or under centralized master trusts. The Australian superannuation system has been very successful and is a major reason why Australia now has the fourth largest fund management industry (by asset) in the world (Drimer, 2010), which is a huge achievement considering that Australia's 22.8 million people is less than Malaysia's 30.1 million population (Department of Statistics, 2014). Therefore, it is timely to introduce private pension schemes to complement the EPF to strengthen social security coverage, particularly for the private sector employees and the informal sector comprising of the self-employed. There are a number of potential providers to supply private pension schemes to the public, and these could include banks, insurance companies, asset managers and other specialist providers. In addition to strengthening retirement protection and old age security, this will also go a long way to help the country to strengthen the depth of the domestic financial and capital markets.

6.4.4 Medical Care in Old Age

The aged population in Malaysia in 2012 stood at 5.3 percent (see Chapter 1, 1.5.2), i.e. there are now about 1.5 million Malaysians aged 65 years and above. The estimate of older Malaysians is projected to rise to 3.4 million by 2020. There is an urgent need to address the concerns about rising healthcare costs, long term care costs, prescription drug and other medical expenses, etc. attributable to these demographic changes. Failure to address the health needs of the elderly population could post a costly problem for both the retirees and immediate family members. With escalating costs of medical and healthcare products and services today, few people can afford to become seriously ill.

Apart from financing post-retirement consumption, the biggest risk in financial planning for retirement is the risk of ill health and the escalating healthcare costs. Many retirees have stated that the unpredictability of personal health is the biggest risk in retirement planning. Financial planning for post-retirement therefore should include provisions for lifetime healthcare coverage to provide for medical expenses during retirement and long term care. Retirement planning should cover for medical insurance and providing investments for old age care. However, escalating healthcare costs make it increasingly difficult for individual Malaysians to finance their own medical costs. A concerted effort is necessary from the Government to provide medical and old age care subsidies and assistance, and tax incentives to make private health and medical care affordable.

For example, the role of Socso can be expanded to provide a universal health care coverage for Malaysian employees and their family members. One successful model is Singapore's Medical Savings Accounts or "Medisave" introduced in 1984. Medisave is a compulsory national health care savings program designed to help citizens meet their individual responsibilities and to supplement funds drawn from their own savings

(Massaro and Wong, 1996). Medisave accounts are individually owned accounts used to pay health care expenditures; the fact that people are spending their own money helped to curtail Singapore's health care costs. Medisave contributions range from 6 to 8 percent according to the worker's age. This is supplemented by: (1) the Medishield Program to pay for extraordinary hospital expenses for those under 70 years of age; and (2) the Medifund Program to cover the low-income workers' medical expenses (which may not be adequately covered by Medisave and Medishield). The Singapore model is efficient and effective as the national investment in health care is surprising low, while hospitals and physician incomes are relatively high (Massaro and Wong, 1996).

6.5 Concluding Remarks

The life-cycle hypothesis postulates that consumption depends primarily on expected total resources or life-cycle income, and not on transitory income fluctuations. It is observed that younger people have lower income but greater spending commitments. These include investments in their human capital through education and training, getting married and having children, purchasing a home and financing their children education. In their earlier years, younger people do not earn enough and often borrow to finance their financial shortfalls. As they get older, their income generally rises and their consumer and mortgage debts are paid off as they rise along their financial life-cycle. Their children may have completed their education and moved on. Savings and investments increase as they reach the peak of their working career and as retirement approaches.

People make expected or unexpected transitions and adjustments in the course of their lifetimes. For example, shocks such as sudden economic downturns, natural disasters,

job loss, excessive longevity, disability, health issues due to old age, sudden death of a spouse will change their lives in every way. These contingencies could cause financial shocks and involve a reduction in economic resources and change needs for household management like decreased household work time. Financial markets are responsible for unexpected fluctuations in wealth causing increasing uncertainty and concern and indicating new retirement timing. Other problems identified by several studies are myopia – people are absorbed in their daily routines or prefer not to think of their own old age, and fail to see what lies in the distant future, and the lack of self-control to save and insure adequately.

Some problems in retirement that have been identified are the lack of knowledge about good retirement planning practices, financial literacy, dearth of investment products, employment status, changes in marital status, the need to care for children and aged parents, low level of income and education. Widowhood may steer a woman towards poverty in old age, if a husband dies after retirement. If the husband's retirement income is not sufficient, the widow could find herself financially destitute, if her own retirement income is not adequate. As women live longer than men, she may experience poverty for an extended time period. Nevertheless, today's retirees have more options open to them; while some people retire and go into a new career, others may choose to extend their leisure activities. The decision to retire or not to retire will impact not only the individual or his immediate family but the community at large. Retirees leaving their work places may result in vacant positions in some specialized areas, while there may be people still staying at work when they are considered no longer productive. The retirement of baby boomers will affect society at large and many sectors of the economy, ranging from product manufacturing to financial services.

To be able to retire from active employment, people must have sufficient income to support themselves during the post-retirement period. Retirement income in Malaysia comes from a combination of pension income (for civil service workers and members of the armed forces), and in the case of employees in the private sector, EPF contributions, personal savings and investments, and support from family members. Several studies of people nearing retirement (in their fifties and early sixties) have found that their savings levels are insufficient and are not in congruent with their expected retirement age (Bernheim, 1992; Lusardi, 1999). In many Asian countries, the commitment to familial support of the elderly has been found waning. In Japan, South Korea, and Taiwan, the percentage of elderly living with their children has declined substantially in recent years (Feeney and Mason, 2001). To ensure financial security in their post-retirement period, it is critical that Malaysians plan for their own financial retirement needs. Ultimately, it is the responsibility of the individual to prepare for his or her own retirement.

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UNIVERSITY OF MALAYA

Faculty of Business and Accountancy

2 April 2013

Dear Sir/Ms.

**PHD THESIS
FINANCIAL PLANNING FOR POST-RETIREMENT AMONG URBAN MALAYSIANS
IN KLANG VALLEY**

Hello. My name is Tan Hoe Kock. I am currently conducting an in-depth study on the above subject in part satisfaction of the academic requirements of the Doctor of Philosophy (“PhD”) program at University of Malaya. I would be grateful if you could take **15-20** minutes to complete the enclosed **confidential** survey.

You have been selected to participate in my study about financial planning for post-retirement among urban Malaysians in the Klang Valley. This is a significant topic that affects all people. It is therefore important to obtain perspectives from people of different age groups and backgrounds, even if you have not given much thought to these issues. Your opinions are important.

All information provided will be treated as **private** and **confidential** and will be used solely for my **research purposes only**. Your name will not appear in any publication or released to anyone for any purpose. All participation is voluntary. I have included two copies of the questionnaire in case there are two adults in your household.

Kindly complete the enclosed questionnaire and return it to me in the attached self-addressed envelope. Since a good response is essential to research, I would appreciate very much your help.

Thank you for your participation and assistance.

Yours sincerely,

Tan Hoe Kock
PhD Candidate

**QUESTIONNAIRE FOR FINANCIAL PLANNING FOR POST-RETIREMENT
AMONG URBAN MALAYSIANS IN KLANG VALLEY**

SECTION A : DEMOGRAPHICS

Appendix B

1. What is your Age :

26 - 35	36 - 45	46 - 55	56 - 65	> 65

2. Gender :

Male	Female

3. Ethnicity:

Malay	Chinese	Indian	Others

4. Present marital status :

Married	Single	Widowed	Separated / Divorced	Co-habitat

5. Education level :

Primary	Secondary	Tertiary

6. Occupation :

Self-Employment		Junior Staff/ Temporary	Non-Executive	Executive/ Management
Non-Professional	Professional			

7. In general, how would you describe your health?

Very Poor	Poor	Fair	Good	Excellent

8. In general, how would you describe your spouse's health (If you are married)?

Very Poor	Poor	Fair	Good	Excellent

9. What is your best estimate of the average life expectancy for someone your age and gender?
(Age in years)

65 - 70	71 - 75	76 - 80	81 - 85	> 85

10. What is your Spouse's Age :

<36	36 - 45	46 - 55	56 - 65	> 65

11. Are you presently employed?

No	Part-Time	Full-Time

12. Do you have a health condition which limits your ability to work?

Yes	No

13. Is your spouse presently employed?

No	Part-Time	Full-Time

14. Does your spouse have a health condition which limits his/her ability to work?

Yes	No

15. What is your spouse's current type of employer?

Government	Private Sector	Non-Profit Institution	Self-Employment

16. Do you own or rent your home?

Free Stay	Own	Rent

17. How many children do you have?

0	1	2	3	> 4

SECTION B : SATISFACTION WITH LIFE

Please tick the box that best reflects your response.

1. How happy are you with life in general?

Very Unhappy	Slightly Unhappy	Uncertain	Happy	Very Happy

2. How happy are you with your financial arrangements?

Very Unhappy	Slightly Unhappy	Uncertain	Happy	Very Happy

3. In general, how do you feel about your time - would you say that you always feel you have enough leisure time?

None At All	Not Enough	Uncertain	Just Enough	More than Enough

SECTION C : INCOME SOURCES

1. What is your gross annual salary for the current year? (RM'000)

< 24	25 - 49	50 - 74	75 - 99	> 100

2. Giving your best approximation, what will be your total gross annual income from all sources for the current year? (RM'000)

< 24	25 - 49	50 - 74	75 - 99	> 100

3. What percentage of your total income from all sources do you estimate will you save or invest?

< 21	21 - 40	41 - 60	61 - 80	81-100

4. Who will likely have the larger pension income, you or your spouse?

Me	My Spouse	About Equal	Uncertain

5. What is your spouse's annual gross salary? (RM'000)

<24	25 - 49	50 - 74	75 - 99	> 100

6. Is it likely that your spouse will be working for salary or wages after you retire?

Yes	No

7. Will your spouse be eligible to receive EPF or Government pension benefits?

No, not eligible	Uncertain	Likely to become eligible	Yes, eligible to receive	Yes, already receiving

SECTION D : EXPENDITURES (CONSUMPTION)

For Q.D1 and D2: In the past 3 months, did you owe any money to any of the following?

1. Revolving credit accounts including store, petrol, and general purpose credit cards, such as Diners, Visa, MasterCard, etc.

Yes	No

2. Banks, finance companies and other loan companies.

Yes	No

3. In the past one year, estimate how much you spent by ticking the appropriate box below:

RM	0-5,000	5,001-10,000	10,001-15,000	15,001-20,000	>20,000
i) Accommodation / Rental					
ii) Car Rental/Instalments					
iii) Personal Education Fund					
iv) Life Assurance					
v) Food & Drinks					
vi) Children's Education Fund					
RM	0 - 200	201-400	401-600	601-800	> 800
vii) Electricity & Water					

viii) Telephone					
ix) Personal Accident Insurance					
x) Gift to Family Members					
RM	0-3,000	3,001-6,000	6,001-9,000	9,001-12,000	>12,000
xi) Medical Insurance					
xii) Entertainment					
xiii) Holiday Travel					

4. Do you have a mortgage on your home?

Yes	No

5. If you answered "Yes" to the above question, please indicate how much longer you have to make payments, assuming you do not sell or refinance. (Years)

< 5	6 - 10	11 - 15	16 - 20	> 20

6. What is the remaining balance on your house mortgage? (RM'000)

< 50	51 - 100	101 - 150	151 - 200	> 200

7. Roughly what percentage of your total annual household income after taxes goes to pay the mortgage and property taxes on your main home? (%)

< 20	21 - 40	41 - 60	61 - 80	81-100

SECTION E : FINANCIAL PLANNING

Listed below are some specific retirement planning actions. Please tick the appropriate box.

	Not planning to do	Not certain	Planning to do in few years time	Planning to do very soon	Already done
1. Figured out how much money you would need in retirement to be able to maintain the standard of living you want					
2. Prepared an estimate of likely retirement income and expenses					
3. Established a program to save for retirement (other than EPF & Government pensions)					
4. Looked into health-care coverage you will have during retirement					
5. Decide where to live in retirement					
6. Purchased long-term-care insurance					

7. Have a formal financial plan prepared by a professional financial planner					
--	--	--	--	--	--

8. Do you generally make some kind of plan before spending your money?

Yes	No

9. If yes, estimate how long a time period does this plan cover?

Few Days	Few Weeks	Few Months	1 Year	More than a year

10. Do you ever think about retirement at all in the last 5 years?

Yes	No

11. Do you expect your EPF contributions or the Government pension to provide more or less than 50% of your retirement income?

Less than 50%	More than 50%

12. Please rank the following of what worries you most about retirement? Starting from 1-least worried to 5=being the most worried.

	1	2	3	4	5
i) Poor health					
ii) Financial problems					
iii) Boredom					
iv) Alienation					
v) Neglected					

13. Mark all major sources of expected retirement income :

	Yes	No
i) Government Pension		
ii) EPF		
iii) Help from family members		
iv) Private Savings		
v) Private Pension		
vi) Rental Income		
vii) Share Dividends		
viii) Interest Income		

14. Compared to your parents' generation, do you expect to be worse off or better off in the following areas during your retirement?

	Very bad	Little worse	Uncertain	Little better	Much better
i) Health Care					
ii) Being Independent					
iii) Having Enough Money					
iv) Personal Health					
v) Ability to Stay Involved					

15. Which of the following activities do you think you will spend time on after retirement?

	Yes	No
i) Reading		
ii) Concerts / Theatres / Movies		
iii) Volunteer Work		
iv) Sports / Exercise		
v) Travel		
vi) Spectator Sports		
vii) Part-time, paid employment		
viii) Continuing Education		
ix) Others		

16. In ten years time, do you think the cost of a college education would have increased?

Same	Uncertain	Increased less than half	Increased more than half	At least increased Doubled

17. How do you rate your parents planning for their retirement?

Very Poor	Poor	Neutral	Good	Very good

18. How financially well-off do you think your parents are and need not depend on you for financial support?

Very Poor	Poor	Neutral	Good	Very good

SECTION F : SAVINGS AND INVESTMENTS

1. Giving your best approximation, what do you expect the total value of all your personal savings and investments to be when you retire? Please do not include the accumulated value of your retirement fund(s) through an employer or spouse's savings. (RM'000)

< 200	200 - 400	401 - 600	601 - 800	> 800

2. Approximately how are your current savings and investments distributed (besides your pension plan)?

Type of Investment / Savings	(%) 0 - 20	(%) 21 - 40	(%) 41 - 60	(%) 61 - 80	(%) 81-100
(i) Property					
(ii) Public Listed Shares					
(iii) Unit Trusts					
(iv) Savings/Current/Fixed Deposit/Cash					

(v) Unlisted Company/Business					
(vi) Others					

3. Giving your best approximation, what do you expect the total value of all your personal savings, investments, and accumulated value of your retirement fund(s) to be when you retire?

0-200	201 - 400	401 - 600	601 - 800	> 800

4. Giving your best approximation, what do you expect the total value of all your spouse's personal savings, investments, and accumulated value of their retirement fund(s) to be when you retire? Please do not include EPF and Government pension benefits. (RM'000)

0-200	201 - 400	401 - 600	601 - 800	> 800

5. What is your expected monthly EPF withdrawal or Government pension benefit at retirement? (RM per month)

< 1,000	1,000 – 2,000	2,001 – 3,000	3,001 – 4,000	> 4,000

6. If married, what is your spouse's expected monthly EPF or Government pension benefit at retirement? (RM per month)

< 1,000	1,000 – 2,000	2,001 – 3,000	3,001 – 4,000	> 4,000

7. Does your spouse strongly influence how your retirement assets are invested?

Yes	No

8. If Yes, how do you rate your spouse's risk appetite?

Very Low	Low	Neutral	High	Very High

9. How do you rate your risk appetite?

Very Low	Low	Neutral	High	Very High

10. What is your major source of investment/retirement information?

	Yes	No
i) Retirement company representatives		
ii) Colleagues / friends		
iii) Financial magazines / reports		
iv) Financial Planner		
v) Others		

11. Do you expect retirement income to be adequate to meet your family's current standard of living during retirement?

Very Inadequate	Inadequate	Neutral	Adequate	Very Adequate

12. Will uncertainty over the future of the EPF and Government pension system likely influence your expected retirement age?

Yes, will delay	Uncertain	No, even though expect level to be lower	No, even though structure remains unchanged	No, do not need it

SECTION G : RETIREMENT EXPECTATIONS

1. At what age do you plan to retire?

<56	56 - 60	61-65	66 - 70	>70

2. Please rank the following important factors in your retirement decision, starting from 1= Least Important to 5= Most Important.

	1	2	3	4	5
i) Health Status					
ii) Dissatisfaction with job/superiors					
iii) Qualify for retirement benefits					
iv) Financial ability to retire					
v) More leisure time/time for family					
vi) Pursue other employment activity					

3. How confident are you with the present economy?

No confident at all	Little confident	Neutral	Confident	Very confident

4. At what rate do you expect the economy to grow on an average over the next 10 years?

< 1.0%	1.0 – 2.9%	3.0% - 4.9%	5.0% - 7.0%	> 7.0%

5. At what rate do you expect the inflation rate to grow on an average over the next 10 years?

< 1.0%	1.0 – 2.9%	3.0% - 4.9%	5.0% - 7.0%	> 7.0%

**BORANG SOAL SELIDIK KEWANGAN PERANCANGAN SELEPAS PERSARAAN
ANTARA BANDAR RAKYAT MALAYSIA DI SEKITAR LEMBAH KELANG**

BAHAGIAN A : DEMOGRAFI

1. Berapakah umur anda?

26 - 35	36 - 45	46 - 55	56 - 65	> 65

2. Jantina:

Lelaki	Perempuan

3. Etnik:

Melayu	Cina	India	Lain-lain

4. Status perkahwinan semasa:

Berkahwin	Bujang	Janda/Duda	Bercerai	Co-habitat

5. Tahap pendidikan:

Sekolah Rendah	Sekolah Menengah	Pendidikan Tinggi

6. Pekerjaan:

Bekerja Sendiri		Staf Baru/ Sementara	Bukan Pegawai	Pegawai/ Pengurusan
Bukan Professional	Professional			

7. Secara amnya, sejauh manakah tahap kesihatan anda?

Sangat Teruk	Teruk	Sederhana	Baik	Sangat Baik

8. Secara amnya, sejauh manakah tahap kesihatan pasangan anda (jika anda berkahwin)?

Sangat Teruk	Teruk	Sederhana	Baik	Sangat Baik

9. Berapakah anggaran purata untuk hidup bagi seseorang yang sama umur dan jantina dengan anda? (umur dalam tahun)

65 - 70	71 - 75	76 - 80	81 - 85	> 85

10. Berapakah umur pasangan anda?

<36	36 - 45	46 - 55	56 - 65	> 65

11. Pada masa ini, adakah anda bekerja?

Tidak Bekerja	Kerja Sambilan	Sepenuh Masa

12. Adakah anda mempunyai masalah kesihatan yang menghadkan kemampuan anda untuk bekerja?

Ya	Tidak

13. Pada masa ini, adakah pasangan anda bekerja?

Tidak Bekerja	Kerja Sambilan	Sepenuh Masa

14. Adakah pasangan anda mempunyai masalah kesihatan yang menghadkan kemampuannya untuk bekerja?

Ya	Tidak

15. Siapakah majikan pasangan anda?

Kerajaan	Sektor Swasta	Badan Kebajikan	Bekerja Sendiri

16. Adakah anda tinggal dirumah sendiri atau menyewa?

Tinggal Percuma	Rumah Sendiri	Menyewa

17. Berapakah bilangan anak anda?

0	1	2	3	> 4

BAHAGIAN B : KEPUASAN DALAM HIDUP

Sila tandakan (/) di ruangan yang disediakan.

1. Secara amnya, adakah anda gembira dengan kehidupan anda sekarang?

Sangat Tidak Gembira	Tidak Gembira	Tidak Pasti	Gembira	Sangat Gembira

2. Adakah anda gembira dengan keadaan kewangan anda sekarang?

Sangat Tidak Gembira	Tidak Gembira	Tidak Pasti	Gembira	Sangat Gembira

3. Secara amnya, bagaimanakah keadaan masa anda – adakah anda sentiasa mempunyai masa lapang yang mencukupi?

Tiada Masa Lapang	Tidak Mencukupi	Tidak Pasti	Sekadar Mencukupi	Lebih Daripada Mencukupi

BAHAGIAN C : SUMBER PENDAPATAN

1. Secara kasarnya, berapakah jumlah pendapatan tahunan anda untuk tahun semasa?(RM'000)

< 24	25 - 49	50 - 74	75 - 99	> 100

2. Berapakah anggaran jumlah kasar pendapatan tahunan anda *daripada semua sumber* untuk tahun semasa? (RM'000)

< 24	25 - 49	50 - 74	75 - 99	> 100

3. Berapa peratuskah daripada jumlah pendapatan anda (daripada semua sumber) yang anda gunakan untuk tujuan simpanan atau pelaburan? (%)

< 21	21 - 40	41 - 60	61 - 80	81-100

4. Siapakah yang akan memperolehi pencen yang lebih besar, anda atau pasangan anda?

Saya	Pasangan Saya	Lebih Kurang	Tidak Pasti

5. Berapakah jumlah kasar pendapatan tahunan pasangan anda? (RM'000)

<24	25 - 49	50 - 74	75 - 99	> 100

6. Adakah berkemungkinan bahawa pasangan anda akan bekerja untuk mencari pendapatan selepas anda bersara?

Ya	Tidak

7. Adakah pasangan anda layak untuk menerima EPF atau pencen dari kerajaan?

Tidak Layak menerima	Tidak Pasti	Berkemungkinan layak menerima	Ya, layak menerima	Ya, sudahpun menerima

BAHAGIAN D : PERBELANJAAN (PENGUNAAN)

Bagi soalan D1 dan D2: Dalam tempoh 3 bulan yang lepas, adakah anda mempunyai hutang dengan mana-mana perkara yang berikut?

1. Berkaitan akaun kredit seperti barangan runcit, petrol, dan tujuan am kredit kad (Diners, Visa, MasterCard, etc).

Ya	Tidak

2. Bank, syarikat kewangan atau lain-lain syarikat yang menawarkan kemudahan kewangan.

Ya	Tidak

3. Dalam tempoh setahun yang lalu, anggarkan berapakah jumlah wang yang anda belanjakan untuk tujuan-tujuan berikut.

	0-5,000	5,001-10,000	10,001-15,000	15,001-20,000	>20,000
i) Tempat tinggal					
ii) Bayaran Ansuran Kereta					
iii) Tabung Pendidikan Peribadi					
iv) Insurans Nyawa					
v) Makanan & Minuman					
vi) Tabung Pendidikan Anak					
	0 - 200	201-	401-	601-	> 800

		400	600	800	
vii) Bil Air & Elektrik					
viii)Telefon					
ix) Insurans Kemalangan					
x) Hadiah Untuk Ahli Keluarga					
	0-3,000	3,001-6,000	6,001-9,000	9,001-12,000	>12,000
xi) Insurans Kesihatan					
xii) Hiburan					
xiii)Percutian					

4. Adakah anda mempunyai gadaian ke atas rumah anda?

Ya	Tidak

5. Jika jawapan anda “Ya” untuk soalan di atas, sila anggarkan berapa lama lagikah anda perlu membuat bayaran dengan andaian anda tidak akan menjualnya/*refinance*? (Tahun)

< 5	6 - 10	11 - 15	16 - 20	> 20

6. Berapakah jumlah baki gadaian ke atas rumah anda? (RM'000)

< 50	51 - 100	101 - 150	151 - 200	> 200

7. Secara kasarnya, berapa peratuskah jumlah pendapatan bersih seisi rumah(selepas cukai) yang digunakan untuk membayar gadai janji dan cukai harta bagi rumah anda? (%)

< 20	21 - 40	41 – 60	61 - 80	81-100

BAHAGIAN E : PERANCANGAN KEWANGAN

Berikut disenaraikan beberapa perancangan untuk persaraan. Sila tandakan (/) diruangan yang sesuai. (**A**-tiada perancangan untuk dilaksanakan; **B**-tidak pasti; **C**-akan dilakukan dalam tempoh beberapa tahun lagi; **D**-akan dilakukan dalam tempoh terdekat; **E**-dalam pelaksanaan)

	A	B	C	D	E
1. Menghitung berapakah jumlah wang yang anda perlukan bila bersara untuk mengekalkan gaya hidup yang diamalkan sekarang					
2. Menyediakan anggaran pendapatan dan perbelanjaan bila bersara nanti					
3. Mewujudkan tabung untuk persaraan (selain EPF & pencen kerajaan)					
4. Melihat kearah penjagaan kesihatan apabila sudah bersara.					
5. Memilih untuk tinggal dimana selepas bersara					
6. Membeli insurans untuk tempoh jangka panjang					
7. Mengupah perancang kewangan yang					

professional untuk menyediakan rancangan kewangan yang teratur

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8. Pada kebiasaannya, adakah anda membuat apa-apa perancangan sebelum membelanjakan wang anda?

Ya	Tidak

9. Jika 'Ya', berapa lamakah perancangan tersebut efektif untuk satu-satu masa?

Beberapa Hari	Beberapa Minggu	Beberapa Bulan	Setahun	Lebih Dari Setahun

10. Secara jujur, adakah anda pernah terfikir berkaitan persaraan dalam tempoh 5 tahun yang lepas?

Ya	Tidak

11. Adakah anda menjangkakan wang EPF atau pencen kerajaan akan menyumbang 50% lebih/kurang daripada jumlah pendapatan anda?

Kurang daripada 50%	Lebih daripada 50%

12. Sila senaraikan mengikut kepentingan bagi perkara yang paling anda risaukan berkaitan persaraan? Bermula dengan 1-paling tidak merisaukan, sehingga 5-yang paling merisaukan.

	1	2	3	4	5
i) Masalah Kesihatan					
ii) Masalah Kewangan					
iii) Kebosanan					
iv) Pengasingan					
v) Diabaikan					

13. Sila tandakan bagi semua punca pendapatan yang anda jangkakan selepas bersara:

	Yes	No
i) Pencen Kerajaan		
ii) EPF		
iii) Bantuan Dari Ahli Keluarga		
iv) Simpanan Peribadi		
v) Pencen Peribadi		
vi) Pendapatan dari sewa rumah		
vii) Dividen Saham		
viii) Faedah(interest income)		

14. Jika dibandingkan dengan generasi sebelum ini, adakah anda menjangkakan keadaan anda akan lebih teruk atau lebih baik bagi perkara-perkara berikut setelah anda bersara?

	Sangat Lebih Teruk	Lebih Teruk	Tidak Pasti	Lebih Baik sedikit	Sangat lebih baik
i) Penjagaan Kesihatan					
ii) Bebas dari sebarang masalah					
iii) Kewangan yang mencukupi					
iv) Kesihatan sendiri					

v) Kemampuan untuk terus aktif					
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15. Daripada aktiviti-aktiviti dibawah, yang manakah anda akan lakukan selepas bersara?

	Ya	Tidak
i) Membaca		
ii) Konsert/Menonton wayang		
iii) Kerja-kerja Sukarela/Kebajikan		
iv) Bersukan		
v) Mengembara		
vi) Menonton Perlawanan Sukan		
vii) Membuat Kerja Sambilan		
viii) Menyambung Pelajaran		
ix) Lain-lain:.....		

16. Dalam tempoh 10 tahun dari sekarang, adakah anda rasakan bahawa yuran pendidikan di kolej-kolej swasta/awam akan meningkat?

Tidak berubah	Tidak pasti	Meningkat kurang dari separuh	Meningkat lebih dari separuh	Sekurang-kurangnya meningkat 2 kali ganda

17. Pada pendapat anda, sejauh manakah keberkesanan perancangan persaraan yang dibuat oleh ibubapa anda?

Sangat teruk	Teruk	Biasa sahaja	Baik	Sangat baik

18. Sejauhmanakah kemampuan kewangan ibubapa anda dan kebergantungan mereka kepada anda untuk mendapatkan bantuan kewangan?

Sangat Tidak Mampu	Tidak Mampu	Sederhana	Mampu	Sangat Mampu

BAHAGIAN F : SIMPANAN DAN PELABURAN

1. Berapakah anggaran jumlah simpanan peribadi dan pelaburan yang anda jangkakan apabila anda bersara? Tidak termasuk jumlah tabung persaraan anda atau pasangan anda. (RM'000)

< 200	200 - 400	401 - 600	601 - 800	> 800

2. Anggarkan secara kasarnya, bagaimanakah anda mengagihkan simpanan semasa dan pelaburan anda (selain daripada pencen)?

Jenis-jenis Pelaburan/Simpanan	(%) 0 - 20	(%) 21 - 40	(%) 41 - 60	(%) 61 - 80	(%) 81-100
Hartanah					

<i>Public Listed Shares</i>					
<i>Unit Trusts</i>					
Simpanan/Semasa/Fixed Deposit/Tunai					
Perniagaan sendiri					
Lain-lain:.....					

3. Anggarkan secara kasar, berapakah jumlah simpanan, pelaburan dan nilai terkumpul tabung persaraan yang **anda** jangkakan apabila anda bersara? (RM'000)

0-200	201 - 400	401 - 600	601 - 800	> 800

4. Anggarkan secara kasar, berapakah jumlah simpanan, pelaburan dan nilai terkumpul tabung persaraan **pasangan anda** yang anda jangkakan apabila anda bersara? Tidak termasuk EPF dan pencen kerajaan. (RM'000)

0-200	201 - 400	401 - 600	601 - 800	> 800

5. Berapakah jumlah pengeluaran EPF bulanan atau pencen kerajaan yang **anda** harapkan apabila anda bersara nanti? (RM sebulan)

< 1,000	1,000 – 2,000	2,001 – 3,000	3,001 – 4,000	> 4,000

6. Jika sudah berkahwin, berapakah jumlah pengeluaran EPF bulanan atau pencen kerajaan **pasangan anda** yang dijangkakan apabila dia bersara nanti? (RM sebulan)

< 1,000	1,000 – 2,000	2,001 – 3,000	3,001 – 4,000	> 4,000

7. Adakah pasangan anda sangat mempengaruhi anda dalam membuat keputusan bagaimana untuk melaburkan aset persaraan anda?

Ya	Tidak

8. Jika 'Ya', bagaimanakah anda menilai keberaniannya dalam mengambil risiko?

Sangat rendah	Rendah	Sederhana	Tinggi	Sangat Tinggi

9. Bagaimanakah anda menilai keberanian anda dalam mengambil risiko?

Sangat rendah	Rendah	Sederhana	Tinggi	Sangat Tinggi

10. Apakah sumber utama bagi anda dalam mendapatkan maklumat berkaitan pelaburan atau persaraan?

	Ya	Tidak
i) Wakil dari syarikat perundingcara		
ii) Kawan-kawan/rakan sepejabat		
iii) Majalah kewangan		
iv) Perancang kewangan		
v) Lain-lain:.....		

11. Adakah anda menjangkakan bahawa pendapatan persaraan anda mencukupi untuk menampung gaya hidup seperti sekarang apabila anda sudah bersara?

Sangat tidak mencukupi	Tidak mencukupi	Biasa	Mencukupi	Sangat mencukupi

12. Adakah ketidakpastian dalam masa depan EPF dan sistem pencen kerajaan akan mempengaruhi umur persaraan anda?

Ya, akan menangguhkan usia persaraan	Tidak pasti	Tidak, walaupun sistem dijangkakan semakin teruk	Tidak, walaupun tidak akan berlaku perubahan dalam sistem	Tidak kerana tidak perlukannya

BAHAGIAN G : JANGKAAN PERSARAAN

1. Pada usia berapakah anda merancang untuk bersara?

<56	56 - 60	61-65	66 - 70	>70

2. Sila senaraikan mengikut kepentingan faktor-faktor berikut kepada anda dalam membuat keputusan berkaitan persaraan, bermula dari 1= Paling Tidak Penting, sehingga 5= Paling Penting.

	1	2	3	4	5
Tahap kesihatan					
Ketidakpuasan dengan kerja					
Kelayakan untuk mendapatkan pencen					
Kemampuan kewangan untuk pencen					
Lebih masa lapang untuk bersama keluarga					
Memilih untuk terlibat dalam perniagaan					

3. Sejauh manakah anda yakin dengan keadaan ekonomi semasa?

Tiada keyakinan langsung	Sedikit yakin	Biasa	Yakin	Sangat yakin

4. Berapakah kadar purata **pertumbuhan ekonomi** yang anda jangkakan dalam tempoh 10 tahun dari sekarang?

< 1.0%	1.0 – 2.9%	3.0% - 4.9%	5.0% - 7.0%	> 7.0%

5. Berapakah kadar purata **inflasi** yang anda jangkakan dalam tempoh 10 tahun dari sekarang?

< 1.0%	1.0 – 2.9%	3.0% - 4.9%	5.0% - 7.0%	> 7.0%

DETAILED RESULTS OF MAIN HYPOTHESES

H1: Age Cohorts and Perception of Financial Planning

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	DChild1, DSAge2, DMgmt1, DMar1, DEthnic2, DLEAge4, DSHea1, DEmp1, DLEAge5, DGender, DHome, DLEAge2, DAge3, DSAge5, DEduc1, DEthnic3, DSAge4, DSEmp1, DLEAge3, DHea1, DAge2, DAge4, DSAge3 ^b	.	Enter

a. Dependent Variable: FinPlanIndex

b. All requested variables entered.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.445 ^a	.198	.132	7.017

a. Predictors: (Constant), DChild1, DSAge2, DMgmt1, DMar1, DEthnic2, DLEAge4, DSHea1, DEmp1, DLEAge5, DGender, DHome, DLEAge2, DAge3, DSAge5, DEduc1, DEthnic3, DSAge4, DSEmp1, DLEAge3, DHea1, DAge2, DAge4, DSAge3

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	3386.517	23	147.240	2.990	.000 ^b
Residual	13738.321	279	49.241		
Total	17124.838	302			

a. Dependent Variable: FinPlanIndex

b. Predictors: (Constant), DChild1, DSAge2, DMgmt1, DMar1, DEthnic2, DLEAge4, DSHea1, DEmp1, DLEAge5, DGender, DHome, DLEAge2, DAge3, DSAge5, DEduc1, DEthnic3, DSAge4, DSEmp1, DLEAge3, DHea1, DAge2, DAge4, DSAge3

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	20.550	3.870		5.310	.000
DAge2	-1.403	1.716	-.076	-.817	.414
DAge3	-3.752	1.815	-.234	-2.067	.040
DAge4	-1.037	2.154	-.049	-.481	.631
DGender	-.575	.953	-.038	-.603	.547
DEthnic2	-1.446	.957	-.091	-1.511	.132
DEthnic3	1.143	1.443	.049	.792	.429
DMar1	-4.950	2.837	-.099	-1.745	.082
DEduc1	4.665	.938	.310	4.972	.000
DMgmt1	1.187	.963	.070	1.232	.219
DHea1	4.198	2.872	.109	1.461	.145
DSHea1	-.318	2.551	-.009	-.125	.901
DLEAge2	.595	1.155	.034	.515	.607
DLEAge3	1.496	1.150	.092	1.301	.194
DLEAge4	1.482	1.606	.056	.923	.357
DLEAge5	-.207	1.997	-.006	-.104	.917
DSAge2	2.336	1.776	.130	1.315	.190
DSAge3	3.377	1.907	.208	1.771	.078
DSAge4	5.598	2.156	.257	2.596	.010
DSAge5	.227	2.756	.005	.082	.934
DEmp1	-2.124	1.203	-.105	-1.766	.079
DSEmp1	-.372	1.135	-.023	-.328	.743
DHome	2.554	1.102	.135	2.317	.021
DChild1	-.489	.880	-.032	-.555	.579

a. Dependent Variable: FinPlanIndex

H2: Relationship between Personal Orientations and Financial Planning for Post-Retirement FinPlanIndex

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	F11, DLEAge3, DAge4, DMgmt1, DSAge3, DMar1, DSAge5, DLEAge5, DEthnic3, DChild1, DGender, DLEAge4, DAge2, DSHea1, DEmp1, DEthnic2, DEduc1, DLEAge2, DSEmp1, DHea1, DSAge4, DSAge2, DAge3 ^b	.	Enter

a. Dependent Variable: FinPlanIndex

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.517 ^a	.267	.206	6.696

a. Predictors: (Constant), F11, DLEAge3, DAge4, DMgmt1, DSAge3, DMar1, DSAge5, DLEAge5, DEthnic3, DChild1, DGender, DLEAge4, DAge2, DSHea1, DEmp1, DEthnic2, DEduc1, DLEAge2, DSEmp1, DHea1, DSAge4, DSAge2, DAge3

ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	4531.511	23	197.022	4.394	.000 ^b
Residual	12420.443	277	44.839		
Total	16951.953	300			

a. Dependent Variable: FinPlanIndex

b. Predictors: (Constant), F11, DLEAge3, DAge4, DMgmt1, DSAge3, DMar1, DSAge5, DLEAge5, DEthnic3, DChild1, DGender, DLEAge4, DAge2, DSHea1, DEmp1, DEthnic2, DEduc1, DLEAge2, DSEmp1, DHea1, DSAge4, DSAge2, DAge3

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	17.055	3.747		4.552	.000
DAge2	-.288	1.642	-.016	-.176	.861
DAge3	-2.406	1.738	-.150	-1.384	.167
DAge4	-.476	2.032	-.023	-.235	.815
DGender	-.597	.917	-.040	-.651	.516
DEthnic2	-1.325	.908	-.084	-1.460	.146
DEthnic3	1.676	1.384	.072	1.211	.227
DMar1	-5.237	2.698	-.105	-1.942	.053
DEduc1	3.918	.909	.261	4.310	.000
DMgmt1	.910	.926	.054	.982	.327
DHea1	3.075	2.749	.080	1.118	.264
DSHea1	-1.911	2.450	-.055	-.780	.436
DLEAge2	.939	1.107	.053	.848	.397
DLEAge3	1.603	1.100	.098	1.457	.146
DLEAge4	-.427	1.553	-.016	-.275	.784
DLEAge5	1.495	1.846	.046	.810	.419
DSAge2	2.384	1.694	.133	1.407	.160
DSAge3	3.182	1.823	.195	1.745	.082
DSAge4	6.225	2.041	.296	3.049	.003
DSAge5	-.310	2.632	-.007	-.118	.906
DEmp1	-2.728	1.139	-.136	-2.394	.017
DSEmp1	-.784	1.096	-.048	-.715	.475
DChild1	-.595	.850	-.039	-.700	.485
F11	2.821	.504	.322	5.600	.000

a. Dependent Variable: FinPlanIndex

* p < 0.05. ** p < 0.01.

H3: Expected Retirement Age DRAge and Personal Orientation toward Financial Planning for Post-Retirement

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	DRAge5, DAge3, DLEAge2, DSHea1, DEmp1, DEthnic2, DSAge4, ConsIndex, DLEAge5, DRAge4, DGender, F11, DSAge2, DMar1, DLEAge4, DChild1, DRAge2, ParRetireIndex, DEduc1, SaveIndex, DSEmp1, DMgmt1, DEthnic3, DAge2, DHea1, DRAge3, DAge4, DLEAge3, DSAge3 ^b	.	Enter

a. Dependent Variable: FinPlanIndex

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.810 ^a	.657	.462	4.590

a. Predictors: (Constant), DRAge5, DAge3, DLEAge2, DSHea1, DEmp1, DEthnic2, DSAge4, ConsIndex, DLEAge5, DRAge4, DGender, F11, DSAge2, DMar1, DLEAge4, DChild1, DRAge2, ParRetireIndex, DEduc1, SavelIndex, DSEmp1, DMgmt1, DEthnic3, DAge2, DHea1, DRAge3, DAge4, DLEAge3, DSAge3

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2057.205	29	70.938	3.367	.000 ^b
	Residual	1074.450	51	21.068		
	Total	3131.654	80			

a. Dependent Variable: FinPlanIndex

b. Predictors: (Constant), DRAge5, DAge3, DLEAge2, DSHea1, DEmp1, DEthnic2, DSAge4, ConsIndex, DLEAge5, DRAge4, DGender, F11, DSAge2, DMar1, DLEAge4, DChild1, DRAge2, ParRetireIndex, DEduc1, SavelIndex, DSEmp1, DMgmt1, DEthnic3, DAge2, DHea1, DRAge3, DAge4, DLEAge3, DSAge3

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-4.630	6.539		-.708	.482
	DAge2	-.159	2.748	-.009	-.058	.954
	DAge3	4.770	3.166	.377	1.507	.138
	DAge4	6.451	3.587	.392	1.798	.078
	DGender	-4.826	1.449	-.387	-3.332	.002
	DEthnic2	.264	1.820	.021	.145	.885
	DEthnic3	.156	2.047	.009	.076	.940
	DMar1	-3.363	4.484	-.084	-.750	.457
	DEduc1	.089	1.600	.007	.056	.956
	DMgmt1	5.763	1.793	.393	3.215	.002
	DHea1	11.627	4.438	.405	2.620	.012
	DSHea1	-6.925	4.301	-.241	-1.610	.114
	DLEAge2	2.325	2.191	.169	1.061	.294
	DLEAge3	1.535	2.253	.118	.682	.499
	DLEAge4	-.088	2.728	-.004	-.032	.974
	DLEAge5	1.077	2.731	.049	.395	.695
	DSAge2	1.121	2.550	.078	.440	.662
	DSAge3	-2.531	3.451	-.192	-.733	.467
	DSAge4	-3.339	4.182	-.197	-.798	.428
	DEmp1	-2.311	2.054	-.111	-1.125	.266

DSEmp1	-.992	1.660	-.072	-.598	.553
DChild1	1.298	1.607	.104	.808	.423
F11	.147	.691	.021	.213	.832
SaveIndex	.193	.106	.201	1.818	.075
ParRetireIndex	.573	.146	.455	3.914	.000
ConsIndex	.087	.064	.140	1.355	.181
DRAge2	1.971	2.286	.155	.862	.393
DRAge3	.154	2.437	.011	.063	.950
DRAge4	7.491	3.267	.379	2.293	.026
DRAge5	-1.646	2.686	-.064	-.613	.543

a. Dependent Variable: FinPlanIndex

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	F11xDRAge5, DEthnic2, F11, DHea1, DGender, DLEAge2, DAge3, DEduc1, DLEAge5, DRAge2, DChild1, DSAge2, DLEAge4, DMar1, DEmp1, ParRetireIndex, DRAge4, ConsIndex, DSAge4, SaveIndex, DSEmp1, DMgmt1, DEthnic3, DAge2, DSHea1, F11xDRAge3, DAge4, DLEAge3, DSAge3, DRAge5, DRAge3, F11xDRAge2, F11xDRAge4 ^b	.	Enter

a. Dependent Variable: FinPlanIndex

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.834 ^a	.695	.482	4.505

a. Predictors: (Constant), F11xDRAge5, DEthnic2, F11, DHea1, DGender, DLEAge2, DAge3, DEduc1, DLEAge5, DRAge2, DChild1, DSAge2, DLEAge4, DMar1, DEmp1, ParRetireIndex, DRAge4, ConsIndex, DSAge4, SaveIndex, DSEmp1, DMgmt1, DEthnic3, DAge2, DSHea1, F11xDRAge3, DAge4, DLEAge3, DSAge3, DRAge5, DRAge3, F11xDRAge2, F11xDRAge4

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2177.844	33	65.995	3.252	.000 ^b
Residual	953.810	47	20.294		
Total	3131.654	80			

a. Dependent Variable: FinPlanIndex

b. Predictors: (Constant), F11xDRAge5, DEthnic2, F11, DHea1, DGender, DLEAge2, DAge3, DEduc1, DLEAge5, DRAge2, DChild1, DSAge2, DLEAge4, DMar1, DEmp1, ParRetireIndex, DRAge4, ConsIndex, DSAge4, SaveIndex, DSEmp1, DMgmt1, DEthnic3, DAge2, DSHea1, F11xDRAge3, DAge4, DLEAge3, DSAge3, DRAge5, DRAge3, F11xDRAge2, F11xDRAge4

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-12.685	8.647		-1.467	.149
	DAge2	.863	2.868	.051	.301	.765
	DAge3	6.634	3.465	.524	1.914	.062
	DAge4	8.398	3.714	.511	2.261	.028
	DGender	-4.368	1.536	-.350	-2.843	.007
	DEthnic2	.813	1.866	.065	.436	.665
	DEthnic3	-.431	2.191	-.026	-.197	.845
	DMar1	-3.067	4.434	-.077	-.692	.493
	DEduc1	-.232	1.697	-.019	-.137	.892
	DMgmt1	6.363	1.831	.434	3.476	.001
	DHea1	10.873	4.424	.379	2.458	.018
	DSHea1	-6.133	4.236	-.214	-1.448	.154
	DLEAge2	2.524	2.245	.183	1.124	.267
	DLEAge3	1.970	2.365	.152	.833	.409
	DLEAge4	.497	2.982	.024	.167	.868
	DLEAge5	1.587	2.714	.072	.585	.561
	DSAge2	.180	2.765	.012	.065	.948
	DSAge3	-4.860	3.755	-.368	-1.294	.202
	DSAge4	-5.939	4.609	-.351	-1.288	.204
	DEmp1	-2.361	2.204	-.113	-1.071	.289

DSEmp1	-.825	1.731	-.060	-.477	.636
DChild1	1.108	1.604	.089	.691	.493
F11	2.519	1.568	.364	1.606	.115
SaveIndex	.153	.107	.159	1.431	.159
ParRetireIndex	.633	.150	.503	4.222	.000
ConsIndex	.060	.066	.096	.910	.367
DRAge2	14.002	6.517	1.101	2.148	.037
DRAge3	3.497	7.257	.243	.482	.632
DRAge4	17.156	10.778	.867	1.592	.118
DRAge5	9.615	10.312	.372	.932	.356
F11xDRAge2	-3.894	1.998	-1.055	-1.949	.057
F11xDRAge3	-1.263	2.445	-.267	-.516	.608
F11xDRAge4	-3.027	3.085	-.539	-.981	.332
F11xDRAge5	-4.020	3.467	-.452	-1.159	.252

a. Dependent Variable: FinPlanIndex

* $p < 0.05$. ** $p < 0.01$.

H4a: Current Financial Resources SaveIndex and Financial Planning FinPlanIndex

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	SaveIndex, DEthnic3, DEmp1, DLEAge3, DAge4, F11, DSAge3, DMgmt1, DLEAge4, DMar1, DHea1, DSAge5, DChild1, DLEAge5, DAge2, DGender, DSEmp1, DEthnic2, DEduc1, DLEAge2, DSAge2, DSHea1, DSAge4, DAge3 ^b	.	Enter

a. Dependent Variable: FinPlanIndex

b. All requested variables entered.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.673 ^a	.453	.273	5.787

a. Predictors: (Constant), SaveIndex, DEthnic3, DEmp1, DLEAge3, DAge4, F11, DSAge3, DMgmt1, DLEAge4, DMar1, DHea1, DSAge5, DChild1, DLEAge5, DAge2, DGender, DSEmp1, DEthnic2, DEduc1, DLEAge2, DSAge2, DSHea1, DSAge4, DAge3

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2021.094	24	84.212	2.515	.001 ^b
Residual	2444.580	73	33.487		
Total	4465.673	97			

a. Dependent Variable: FinPlanIndex

b. Predictors: (Constant), SavelIndex, DEthnic3, DEmp1, DLEAge3, DAge4, F11, DSAge3, DMgmt1, DLEAge4, DMar1, DHea1, DSAge5, DChild1, DLEAge5, DAge2, DGender, DSEmp1, DEthnic2, DEduc1, DLEAge2, DSAge2, DSHea1, DSAge4, DAge3

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	9.436	6.867		1.374	.174
DAge2	.548	3.167	.029	.173	.863
DAge3	-2.295	3.253	-.168	-.706	.483
DAge4	.894	3.979	.049	.225	.823
DGender	-4.085	1.538	-.301	-2.655	.010
DEthnic2	-1.816	1.590	-.131	-1.142	.257
DEthnic3	2.682	2.108	.147	1.272	.207
DMar1	-5.888	4.826	-.123	-1.220	.226
DEduc1	2.366	1.566	.175	1.510	.135
DMgmt1	3.018	1.695	.187	1.780	.079
DHea1	8.265	4.580	.242	1.805	.075
DSHea1	-3.091	4.223	-.101	-.732	.467
DLEAge2	1.976	2.023	.129	.977	.332
DLEAge3	1.491	2.176	.104	.685	.495
DLEAge4	-.381	2.831	-.015	-.135	.893
DLEAge5	2.441	2.731	.099	.894	.374
DSAge2	3.681	2.929	.231	1.257	.213
DSAge3	3.365	3.316	.240	1.015	.314
DSAge4	6.195	4.095	.311	1.513	.135
DSAge5	-8.328	7.802	-.124	-1.067	.289
DEmp1	-1.571	2.442	-.067	-.643	.522
DSEmp1	-.540	1.707	-.037	-.317	.752
DChild1	-.367	1.458	-.026	-.251	.802

F11	1.426	.738	.188	1.932	.057
SaveIndex	.301	.094	.321	3.208	.002

a. Dependent Variable: FinPlanIndex

* $p < 0.05$. ** $p < 0.01$.

H5a: Parental Retirement Planning ParRetireIndex and Financial Planning FinPlanIndex

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	ParRetireIndex, DEmp1, DLEAge3, DAge4, DEthnic3, F11, SaveIndex, DSAge3, DMgmt1, DLEAge4, DMar1, DHea1, DSAge5, DChild1, DLEAge5, DAge2, DGender, DEthnic2, DSEmp1, DEduc1, DSAge2, DLEAge2, DSHea1, DSAge4, DAge3 ^b	.	Enter

a. Dependent Variable: FinPlanIndex

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.718 ^a	.516	.347	5.481

a. Predictors: (Constant), ParRetireIndex, DEmp1, DLEAge3, DAge4, DEthnic3, F11, SavelIndex, DSAge3, DMgmt1, DLEAge4, DMar1, DHea1, DSAge5, DChild1, DLEAge5, DAge2, DGender, DEthnic2, DSEmp1, DEduc1, DSAge2, DLEAge2, DSHea1, DSAge4, DAge3

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2302.453	25	92.098	3.065	.000 ^b
Residual	2163.220	72	30.045		
Total	4465.673	97			

a. Dependent Variable: FinPlanIndex

b. Predictors: (Constant), ParRetireIndex, DEmp1, DLEAge3, DAge4, DEthnic3, F11, SavelIndex, DSAge3, DMgmt1, DLEAge4, DMar1, DHea1, DSAge5, DChild1, DLEAge5, DAge2, DGender, DEthnic2, DSEmp1, DEduc1, DSAge2, DLEAge2, DSHea1, DSAge4, DAge3

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.992	7.066		.140	.889
	DAge2	1.881	3.031	.100	.621	.537
	DAge3	1.349	3.304	.099	.408	.684
	DAge4	4.601	3.959	.252	1.162	.249
	DGender	-4.002	1.457	-.295	-2.746	.008
	DEthnic2	-1.762	1.506	-.127	-1.170	.246
	DEthnic3	1.994	2.010	.109	.992	.325
	DMar1	-4.577	4.592	-.096	-.997	.322
	DEduc1	1.388	1.517	.103	.915	.363
	DMgmt1	2.203	1.628	.136	1.354	.180
	DHea1	9.062	4.346	.266	2.085	.041
	DSHea1	-5.916	4.105	-.193	-1.441	.154
	DLEAge2	3.774	2.004	.247	1.883	.064
	DLEAge3	2.326	2.079	.163	1.119	.267
	DLEAge4	.090	2.686	.004	.033	.973
	DLEAge5	2.139	2.588	.087	.827	.411
	DSAge2	2.275	2.812	.143	.809	.421
	DSAge3	.681	3.261	.049	.209	.835
	DSAge4	1.078	4.224	.054	.255	.799
	DSAge5	-9.973	7.410	-.148	-1.346	.183
	DEmp1	-1.846	2.315	-.079	-.797	.428
	DSEmp1	-.596	1.617	-.041	-.369	.713

DChild1	-.309	1.382	-.022	-.224	.824
F11	1.092	.708	.144	1.543	.127
SaveIndex	.263	.090	.280	2.933	.005
ParRetireIndex	.457	.149	.322	3.060	.003

a. Dependent Variable: FinPlanIndex

* $p < 0.05$. ** $p < 0.01$.

H6a: Consumption ConsIndex and Financial Planning for Post-Retirement FinPlanIndex

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	ConsIndex, DAge3, DSAge4, DSHea1, DEmp1, DEthnic2, DLEAge5, DSAge2, F11, DGender, DLEAge4, DChild1, ParRetireIndex, DMar1, DLEAge2, SaveIndex, DMgmt1, DSEmp1, DEduc1, DEthnic3, DAge2, DHea1, DAge4, DLEAge3, DSAge3 ^b	.	Enter

a. Dependent Variable: FinPlanIndex

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.770 ^a	.594	.409	4.811

a. Predictors: (Constant), ConsIndex, DAge3, DSAge4, DSHea1, DEmp1, DEthnic2, DLEAge5, DSAge2, F11, DGender, DLEAge4, DChild1, ParRetireIndex, DMar1, DLEAge2, SaveIndex, DMgmt1, DSEmp1, DEduc1, DEthnic3, DAge2, DHea1, DAge4, DLEAge3, DSAge3

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1858.891	25	74.356	3.213	.000 ^b
Residual	1272.763	55	23.141		
Total	3131.654	80			

a. Dependent Variable: FinPlanIndex

b. Predictors: (Constant), ConsIndex, DAge3, DSAge4, DSHea1, DEmp1, DEthnic2, DLEAge5, DSAge2, F11, DGender, DLEAge4, DChild1, ParRetireIndex, DMar1, DLEAge2, SaveIndex, DMgmt1, DSEmp1, DEduc1, DEthnic3, DAge2, DHea1, DAge4, DLEAge3, DSAge3

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	-3.091	6.726	-.460	.648
	DAge2	.202	2.755	.012	.942
	DAge3	2.199	3.025	.174	.470
	DAge4	4.713	3.633	.287	.200
	DGender	-4.414	1.443	-.354	.003
	DEthnic2	-2.197	1.511	-.175	.152
	DEthnic3	.610	2.042	.037	.766
	DMar1	-2.864	4.388	-.071	.517
	DEduc1	1.055	1.585	.085	.508
	DMgmt1	3.613	1.681	.246	.036
	DHea1	10.732	4.423	.374	.019
	DSHea1	-5.913	4.355	-.206	.180
	DLEAge2	3.293	2.194	.239	.139
	DLEAge3	2.696	2.162	.208	.218
	DLEAge4	-.040	2.600	-.002	.988
	DLEAge5	2.558	2.581	.116	.326
	DSAge2	2.442	2.545	.169	.342
	DSAge3	1.647	3.024	.125	.588
	DSAge4	.920	3.846	.054	.812
	DEmp1	-1.693	2.122	-.081	.428
	DSEmp1	-.573	1.610	-.042	.723
	DChild1	.095	1.363	.008	.945
	F11	.659	.680	.095	.337
	SaveIndex	.190	.107	.198	.083
	ParRetireIndex	.448	.141	.356	.002
	ConsIndex	.111	.066	.179	.097

a. Dependent Variable: FinPlanIndex

* $p < 0.05$. ** $p < 0.01$.

DETAILED RESULTS WITH SUB-HYPOTHESES**H1: Age Cohorts and Perception of Financial Planning****Test of Homogeneity of Variances**

	Levene Statistic	df1	df2	Sig.
DAge1	2.318(a)	31	353	.000
DAge2	4.449(b)	31	353	.000
DAge3	6.947(c)	31	353	.000
DAge4	9.704(d)	31	353	.000

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
DAge1	Between Groups	8.692	33	.263	1.082	.352
	Within Groups	85.959	353	.244		
	Total	94.651	386			
DAge2	Between Groups	4.023	33	.122	.909	.616
	Within Groups	47.362	353	.134		
	Total	51.385	386			
DAge3	Between Groups	9.846	33	.298	1.580	.025
	Within Groups	66.666	353	.189		
	Total	76.512	386			
DAge4	Between Groups	5.673	33	.172	1.635	.017
	Within Groups	37.123	353	.105		
	Total	42.796	386			

* $p < 0.05$. ** $p < 0.01$.

H2: Relationship between Personal Orientations and Financial Planning for Post-Retirement FinPlanIndex**Model Summary^a**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.278 ^a	.077	.076	6.870	.077	40.577	1	483	.000

a. Predictors: (Constant), PerOrientIndex

b. Dependent Variable: FinPlanIndex

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1914.881	1	1914.881	40.577	.000 ^a
	Residual	22793.415	483	47.191		
	Total	24708.296	484			

a. Predictors: (Constant), PerOrientIndex

b. Dependent Variable: FinPlanIndex

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.980	1.983		5.032	.000
	PerOrientIndex	.955	.150	.278	6.370	.000

a. Dependent Variable: FinPlanIndex

* p < 0.05. ** p < 0.01.

H3a: Expected Retirement Age DRAge1 and Personal Orientation toward Financial Planning for Post-Retirement

Model Summary(d)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.401(a)	.161	.097	6.791	.161	2.504	25	326	.000
2	.478(b)	.228	.166	6.523	.067	28.255	1	325	.000
3	.479(c)	.229	.165	6.528	.001	.518	1	324	.472

ANOVA(d)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2886.402	25	115.456	2.504	.000(a)
	Residual	15032.217	326	46.111		
	Total	17918.620	351			
2	Regression	4088.752	26	157.260	3.696	.000(b)
	Residual	13829.868	325	42.553		
	Total	17918.620	351			
3	Regression	4110.836	27	152.253	3.573	.000(c)
	Residual	13807.784	324	42.617		
	Total	17918.620	351			

Coefficients(a)

Variables	Model 1		Model 2		Model 3	
	Standardized Coefficients	Sig.	Standardized Coefficients	Sig.	Standardized Coefficients	Sig.
	Beta		Beta		Beta	
(Constant)		.000		.000		.000
DAge2	.109	.178	.135	.084	.130	.095
DAge3	.033	.736	.018	.848	.012	.895
DAge4	.131	.158	.074	.409	.068	.448
DGender	-.030	.620	-.024	.679	-.020	.738
DEthnic2	-.048	.419	-.071	.212	-.076	.185
DEthnic3	.100	.091	.101	.073	.103	.070
DMar1	-.144	.334	-.056	.698	-.044	.761
DMar2	-.262	.087	-.192	.193	-.179	.227
DEduc2	-.238	** .000	-.218	** .000	-.219	** .000
DMgmt2	-.080	.136	-.042	.418	-.041	.426
DHea1	.070	.323	.098	.149	.099	.146
DSHea1	.039	.603	-.063	.398	-.063	.404
DLEAge2	.035	.578	.028	.639	.031	.605
DLEAge3	.032	.626	.021	.738	.023	.711
DLEAge4	.034	.555	-.003	.960	-.002	.965
DLEAge5	.003	.959	.013	.811	.013	.806
DSAge1	.049	.661	-.005	.961	-.015	.889
DSAge2	-.030	.688	-.043	.550	-.046	.528
DSAge4	.114	.076	.133	* .032	.136	* .028
DSAge5	-.030	.608	-.049	.374	-.049	.381
DEmp1	.005	.924	-.019	.721	-.014	.796
DSEmp1	.025	.695	-.030	.637	-.027	.664
DHome	.153	** .006	.117	* .030	.115	* .034
DChild1	.020	.844	-.002	.981	.001	.990
DChild2	.035	.731	-.001	.989	.004	.971
F11			.290	** .000	.292	** .000
DRAge1					.037	.472

a Dependent Variable: FinPlanIndex

* p < 0.05. ** p < 0.01.

H3b: Expected Retirement Age DRAge2 and Personal Orientation Toward Financial Planning for Post-Retirement

Model Summary(d)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.401(a)	.161	.097	6.791	.161	2.504	25	326	.000
2	.478(b)	.228	.166	6.523	.067	28.255	1	325	.000
3	.481(c)	.232	.168	6.519	.003	1.440	1	324	.231

ANOVA(d)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2886.402	25	115.456	2.504	.000(a)
	Residual	15032.217	326	46.111		
	Total	17918.620	351			
2	Regression	4088.752	26	157.260	3.696	.000(b)
	Residual	13829.868	325	42.553		
	Total	17918.620	351			
3	Regression	4149.944	27	153.702	3.617	.000(c)
	Residual	13768.676	324	42.496		
	Total	17918.620	351			

Coefficients(a)

Variables	Model 1		Model 2		Model 3	
	Standardized Coefficients	Sig.	Standardized Coefficients	Sig.	Standardized Coefficients	Sig.
	Beta		Beta		Beta	
(Constant)		.000		.000		.000
DAge2	.109	.178	.135	.084	.140	.073
DAge3	.033	.736	.018	.848	.022	.817
DAge4	.131	.158	.074	.409	.074	.412
DGender	-.030	.620	-.024	.679	-.025	.675
DEthnic2	-.048	.419	-.071	.212	-.084	.147
DEthnic3	.100	.091	.101	.073	.096	.090
DMar1	-.144	.334	-.056	.698	-.052	.718
DMar2	-.262	.087	-.192	.193	-.188	.203
DEduc2	-.238	** .000	-.218	** .000	-.223	** .000
DMgmt2	-.080	.136	-.042	.418	-.043	.403
DHea1	.070	.323	.098	.149	.102	.133
DSHea1	.039	.603	-.063	.398	-.067	.369
DLEAge2	.035	.578	.028	.639	.030	.615
DLEAge3	.032	.626	.021	.738	.023	.713
DLEAge4	.034	.555	-.003	.960	-.008	.881
DLEAge5	.003	.959	.013	.811	.011	.832
DSAge1	.049	.661	-.005	.961	-.007	.945
DSAge2	-.030	.688	-.043	.550	-.051	.480

DSAge4	.114	.076	.133	*.032	.138	*.025
DSAge5	-.030	.608	-.049	.374	-.046	.409
DEmp1	.005	.924	-.019	.721	-.016	.768
DSEmp1	.025	.695	-.030	.637	-.021	.738
DHome	.153	** .006	.117	*.030	.117	*.030
DChild1	.020	.844	-.002	.981	-.006	.953
DChild2	.035	.731	-.001	.989	-.002	.986
F11			.290	** .000	.297	** .000
DRAge2					-.062	.231

a Dependent Variable: FinPlanIndex

* p < 0.05. ** p < 0.01.

H3c: Expected Retirement Age DRAge3 and Personal Orientation Toward Financial Planning for Post-Retirement

Model Summary(d)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.401(a)	.161	.097	6.791	.161	2.504	25	326	.000
2	.478(b)	.228	.166	6.523	.067	28.255	1	325	.000
3	.479(c)	.230	.165	6.527	.001	.598	1	324	.440

ANOVA(d)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2886.402	25	115.456	2.504	.000(a)
	Residual	15032.217	326	46.111		
	Total	17918.620	351			
2	Regression	4088.752	26	157.260	3.696	.000(b)
	Residual	13829.868	325	42.553		
	Total	17918.620	351			
3	Regression	4114.231	27	152.379	3.576	.000(c)
	Residual	13804.389	324	42.606		
	Total	17918.620	351			

Coefficients(a)

Variables	Model 1		Model 2		Model 3	
	Standardized Coefficients	Sig.	Standardized Coefficients	Sig.	Standardized Coefficients	Sig.
	Beta		Beta		Beta	
(Constant)		.000		.000		.000
DAge2	.109	.178	.135	.084	.125	.115
DAge3	.033	.736	.018	.848	.008	.932
DAge4	.131	.158	.074	.409	.063	.485
DGender	-.030	.620	-.024	.679	-.018	.762
DEthnic2	-.048	.419	-.071	.212	-.064	.265
DEthnic3	.100	.091	.101	.073	.107	.061
DMar1	-.144	.334	-.056	.698	-.046	.752
DMar2	-.262	.087	-.192	.193	-.183	.217
DEduc2	-.238	** .000	-.218	** .000	-.216	** .000
DMgmt2	-.080	.136	-.042	.418	-.041	.432
DHea1	.070	.323	.098	.149	.098	.151
DSHea1	.039	.603	-.063	.398	-.065	.387
DLEAge2	.035	.578	.028	.639	.030	.612
DLEAge3	.032	.626	.021	.738	.021	.735
DLEAge4	.034	.555	-.003	.960	.001	.985
DLEAge5	.003	.959	.013	.811	.014	.798
DSAge1	.049	.661	-.005	.961	-.016	.885
DSAge2	-.030	.688	-.043	.550	-.042	.560
DSAge4	.114	.076	.133	* .032	.132	* .033
DSAge5	-.030	.608	-.049	.374	-.053	.343
DEmp1	.005	.924	-.019	.721	-.017	.751
DSEmp1	.025	.695	-.030	.637	-.033	.598
DHome	.153	** .006	.117	* .030	.114	* .035
DChild1	.020	.844	-.002	.981	.002	.981
DChild2	.035	.731	-.001	.989	.003	.977
F11			.290	** .000	.291	** .000
DRAge3					-.041	.440

a Dependent Variable: FinPlanIndex

* $p < 0.05$. ** $p < 0.01$.

H3d: Expected Retirement Age DRAge4 and Personal Orientation Toward Financial Planning for Post-Retirement

Model Summary(d)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.401(a)	.161	.097	6.791	.161	2.504	25	326	.000
2	.478(b)	.228	.166	6.523	.067	28.255	1	325	.000
3	.480(c)	.230	.166	6.526	.002	.777	1	324	.379

ANOVA(d)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2886.402	25	115.456	2.504	.000(a)
	Residual	15032.217	326	46.111		
	Total	17918.620	351			
2	Regression	4088.752	26	157.260	3.696	.000(b)
	Residual	13829.868	325	42.553		
	Total	17918.620	351			
3	Regression	4121.843	27	152.661	3.585	.000(c)
	Residual	13796.777	324	42.583		
	Total	17918.620	351			

Coefficients(a)

Variables	Model 1		Model 2		Model 3	
	<i>Standardized Coefficients</i>	<i>Sig.</i>	<i>Standardized Coefficients</i>	<i>Sig.</i>	<i>Standardized Coefficients</i>	<i>Sig.</i>
	Beta		Beta		Beta	
(Constant)		.000		.000		.000
DAge2	.109	.178	.135	.084	.132	.090
DAge3	.033	.736	.018	.848	.015	.873
DAge4	.131	.158	.074	.409	.067	.460
DGender	-.030	.620	-.024	.679	-.024	.686
DEthnic2	-.048	.419	-.071	.212	-.067	.237
DEthnic3	.100	.091	.101	.073	.099	.081
DMar1	-.144	.334	-.056	.698	-.051	.724
DMar2	-.262	.087	-.192	.193	-.191	.195
DEduc2	-.238	** .000	-.218	** .000	-.220	** .000
DMgmt2	-.080	.136	-.042	.418	-.045	.382
DHea1	.070	.323	.098	.149	.101	.137
DSHea1	.039	.603	-.063	.398	-.070	.351
DLEAge2	.035	.578	.028	.639	.030	.613
DLEAge3	.032	.626	.021	.738	.020	.744
DLEAge4	.034	.555	-.003	.960	-.004	.941
DLEAge5	.003	.959	.013	.811	.014	.795
DSAge1	.049	.661	-.005	.961	-.010	.929
DSAge2	-.030	.688	-.043	.550	-.046	.529
DSAge4	.114	.076	.133	* .032	.134	* .031
DSAge5	-.030	.608	-.049	.374	-.048	.387
DEmp1	.005	.924	-.019	.721	-.020	.719
DSEmp1	.025	.695	-.030	.637	-.029	.640
DHome	.153	** .006	.117	* .030	.118	* .029
DChild1	.020	.844	-.002	.981	-.003	.973
DChild2	.035	.731	-.001	.989	-.004	.966
F11			.290	** .000	.292	** .000
DRAge4					.044	.379

a Dependent Variable: FinPlanIndex

* p < 0.05. ** p < 0.01.

H3e: Expected Retirement Age DRage5 and Personal Orientation Toward Financial Planning for Post-Retirement

Model Summary(d)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.401(a)	.161	.097	6.791	.161	2.504	25	326	.000
2	.478(b)	.228	.166	6.523	.067	28.255	1	325	.000
3	.485(c)	.235	.171	6.505	.007	2.878	1	324	.091

ANOVA(d)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2886.402	25	115.456	2.504	.000(a)
	Residual	15032.217	326	46.111		
	Total	17918.620	351			
2	Regression	4088.752	26	157.260	3.696	.000(b)
	Residual	13829.868	325	42.553		
	Total	17918.620	351			
3	Regression	4210.501	27	155.944	3.686	.000(c)
	Residual	13708.118	324	42.309		
	Total	17918.620	351			

Coefficients(a)

Variables	Model 1		Model 2		Model 3	
	Standardized Coefficients	Sig.	Standardized Coefficients	Sig.	Standardized Coefficients	Sig.
	Beta		Beta		Beta	
(Constant)		.000		.000		.000
DAge2	.109	.178	.135	.084	.135	.082
DAge3	.033	.736	.018	.848	.021	.818
DAge4	.131	.158	.074	.409	.072	.423
DGender	-.030	.620	-.024	.679	-.022	.709
DEthnic2	-.048	.419	-.071	.212	-.071	.211
DEthnic3	.100	.091	.101	.073	.107	.058
DMar1	-.144	.334	-.056	.698	-.066	.647
DMar2	-.262	.087	-.192	.193	-.200	.174
DEduc2	-.238	** .000	-.218	** .000	-.214	** .000
DMgmt2	-.080	.136	-.042	.418	-.038	.465
DHea1	.070	.323	.098	.149	.098	.149
DSHea1	.039	.603	-.063	.398	-.070	.351
DLEAge2	.035	.578	.028	.639	.026	.660
DLEAge3	.032	.626	.021	.738	.020	.751
DLEAge4	.034	.555	-.003	.960	-.004	.940
DLEAge5	.003	.959	.013	.811	.008	.885

DSAge1	.049	.661	-.005	.961	.000	.997
DSAge2	-.030	.688	-.043	.550	-.048	.505
DSAge4	.114	.076	.133	*.032	.132	*.032
DSAge5	-.030	.608	-.049	.374	-.057	.307
DEmp1	.005	.924	-.019	.721	-.023	.671
DSEmp1	.025	.695	-.030	.637	-.027	.662
DHome	.153	**0.006	.117	*.030	.115	*.033
DChild1	.020	.844	-.002	.981	-.008	.929
DChild2	.035	.731	-.001	.989	-.003	.979
F11			.290	**0.000	.302	**0.000
DRAge5					.085	.091

a. Dependent Variable: FinPlanIndex

* p < 0.05. ** p < 0.01.

H4a: Current Financial Resources SaveIndex and Financial Planning FinPlanIndex

Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.247 ^a	.061	.053	6.952	.061	7.930	1	122	.006

a. Predictors: (Constant), SaveIndex

b. Dependent Variable: FinPlanIndex

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	383.225	1	383.225	7.930	.006 ^a
	Residual	5895.949	122	48.327		
	Total	6279.174	123			

a. Predictors: (Constant), SaveIndex

b. Dependent Variable: FinPlanIndex

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.801	1.767		10.073	.000
	SaveIndex	.229	.081	.247	2.816	.006

a. Dependent Variable: FinPlanIndex

* p < 0.05. ** p < 0.01.

H4b: Current Financial Resources SavPortIndex and Financial Planning FinPlanIndex

Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.090 ^a	.008	.003	7.133	.008	1.690	1	206	.195

a. Predictors: (Constant), SavPortIndex

b. Dependent Variable: FinPlanIndex

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	85.976	1	85.976	1.690	.195 ^a
	Residual	10481.415	206	50.881		
	Total	10567.391	207			

a. Predictors: (Constant), SavPortIndex

b. Dependent Variable: FinPlanIndex

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	20.863	1.322		15.784	.000
	SavPortIndex	.172	.132	.090	1.300	.195

a. Dependent Variable: FinPlanIndex

* $p < 0.05$. ** $p < 0.01$.

H4c: Current Financial Resources SavValIndex and Financial Planning FinPlanIndex

Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.289 ^a	.084	.081	6.849	.084	30.629	1	335	.000

a. Predictors: (Constant), SavValIndex

b. Dependent Variable: FinPlanIndex

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1436.928	1	1436.928	30.629	.000 ^a
	Residual	15715.938	335	46.913		
	Total	17152.867	336			

a. Predictors: (Constant), SavValIndex

b. Dependent Variable: FinPlanIndex

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.645	.946		18.648	.000
	SavValIndex	.454	.082	.289	5.534	.000

a. Dependent Variable: FinPlanIndex

* $p < 0.05$. ** $p < 0.01$.

H5a: Parental Retirement Planning ParRetireIndex and Financial Planning FinPlanIndex

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.371 ^a	.138	.135	6.993	.138	57.830	1	362	.000

a. Predictors: (Constant), ParRetireIndex

b. Dependent Variable: FinPIIndex

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2827.696	1	2827.696	57.830	.000 ^a
	Residual	17700.537	362	48.897		
	Total	20528.233	363			

a. Predictors: (Constant), ParRetireIndex

b. Dependent Variable: FinPIIndex

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.356	2.138		4.375	.000
	ParRetireIndex	.637	.084	.371	7.605	.000

a. Dependent Variable: FinPIIndex

* $p < 0.05$. ** $p < 0.01$.

H5b: Parental Retirement Planning ParRetireStatus and Financial Planning FinPlanIndex

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.306 ^a	.094	.092	6.809	.094	51.109	1	494	.000

a. Predictors: (Constant), ParRetStatus

b. Dependent Variable: FinPlanIndex

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2369.273	1	2369.273	51.109	.000 ^a
	Residual	22900.575	494	46.357		
	Total	25269.848	495			

a. Predictors: (Constant), ParRetStatus

b. Dependent Variable: FinPlanIndex

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.200	1.467		8.317	.000
	ParRetStatus	.548	.077	.306	7.149	.000

a. Dependent Variable: FinPlanIndex

* $p < 0.05$. ** $p < 0.01$.

H5c: Parental Retirement Planning ParRetirePlan and Financial Planning FinPlanIndex

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.264 ^a	.070	.068	6.898	.070	36.911	1	492	.000

a. Predictors: (Constant), ParRetPlan

b. Dependent Variable: FinPlanIndex

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1756.378	1	1756.378	36.911	.000 ^a
	Residual	23411.370	492	47.584		
	Total	25167.748	493			

a. Predictors: (Constant), ParRetPlan

b. Dependent Variable: FinPlanIndex

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.693	1.475		9.281	.000
	ParRetPlan	1.253	.206	.264	6.075	.000

a. Dependent Variable: FinPlanIndex

* $p < 0.05$. ** $p < 0.01$.

H6a: Consumption ConsIndex and Financial Planning for Post-Retirement FinPlanIndex

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.271 ^a	.074	.071	6.887	.074	25.375	1	319	.000

a. Predictors: (Constant), ConsIndex

b. Dependent Variable: FinPlanIndex

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1203.706	1	1203.706	25.375	.000 ^a
	Residual	15132.357	319	47.437		
	Total	16336.063	320			

a. Predictors: (Constant), ConsIndex

b. Dependent Variable: FinPlanIndex

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.783	1.004		17.705	.000
	ConsIndex	.197	.039	.271	5.037	.000

a. Dependent Variable: FinPlanIndex

* $p < 0.05$. ** $p < 0.01$.

H6b: Consumption ConsLowIndex and Financial Planning for Post-Retirement FinPlanIndex

Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.202 ^a	.041	.039	7.005	.041	18.102	1	424	.000

a. Predictors: (Constant), ConsLowIndex

b. Dependent Variable: FinPlanIndex

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	888.347	1	888.347	18.102	.000 ^a
	Residual	20807.987	424	49.075		
	Total	21696.334	425			

a. Predictors: (Constant), ConsLowIndex

b. Dependent Variable: FinPlanIndex

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.970	.676		29.546	.000
	ConsLowIndex	.265	.062	.202	4.255	.000

a. Dependent Variable: FinPlanIndex

* $p < 0.05$. ** $p < 0.01$.

H6c: Consumption ConsMedIndex and Financial Planning for Post-Retirement FinPlanIndex

Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.232 ^a	.054	.051	6.959	.054	23.343	1	412	.000

a. Predictors: (Constant), ConsMedIndex

b. Dependent Variable: FinPlanIndex

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1130.503	1	1130.503	23.343	.000 ^a
	Residual	19953.229	412	48.430		
	Total	21083.732	413			

a. Predictors: (Constant), ConsMedIndex

b. Dependent Variable: FinPlanIndex

* $p < 0.05$. ** $p < 0.01$.

H6d: Consumption ConsHighIndex and Financial Planning for Post-Retirement FinPlanIndex

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.263 ^a	.069	.066	6.904	.069	25.180	1	339	.000

a. Predictors: (Constant), ConsHighIndex

b. Dependent Variable: FinPlanIndex

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1200.112	1	1200.112	25.180	.000 ^a
	Residual	16156.955	339	47.661		
	Total	17357.067	340			

a. Predictors: (Constant), ConsHighIndex

b. Dependent Variable: FinPlanIndex

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.960	.971		18.496	.000
	ConsHighIndex	.473	.094	.263	5.018	.000

a. Dependent Variable: FinPlanIndex

* $p < 0.05$. ** $p < 0.01$.