

## **Factors Affecting Age Cohorts on Life Cycle Retirement Planning**

## ABSTRACT

The paper examined effect of age cohort on life cycle retirement planning. A total of 990 questionnaires were distributed with a 55.2% return rate. Four hypotheses were analysed using hierarchical and ordinary regression analysis. The results revealed that age cohort variables made significant contribution to life cycle retirement planning, particularly the younger age cohort. Current financial resources do have a strong positive impact on consumption for all age cohorts. On the other hand, no significant effect was found between age cohorts and current financial resources but older age cohorts were relatively more significant predictors. The implication was that not only should their individual perceptions of retirement planning become an increasingly important part of people's long-term commitment throughout their life-cycle, it must also assume the role as a self-directed life-long learning process, in view of the ever-changing and complicated financial environment. Consumption pattern would have reduced post retirement. During their retirement years, healthcare will become ever so important as the elderly cohorts will have different degrees of health, illness, and disability. This can translate to higher cost within the same age cohort.

**Keywords:** Retirement Planning, Age Cohort, Life Cycle, Financial Resources, Consumption

## 1. INTRODUCTION

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. Pension plans are shifting from the defined-benefit form to defined-contribution, in which plan participants must make investment decisions. With longevity increasing, replacing defined pension plans with defined contribution plans are making social security arrangements less certain. 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 either the knowledge or the training to handle the task.

For example, in the US, as a percentage of all private pension plans, the defined contribution plans increased from 66.8 percent to 92.3 percent in 1998 (Lusardi (2006)). 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. 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 can still depend largely on the state of the world financial markets. A market meltdown or financial shock near the end of their working careers as witnessed in 2009 can wipe out their hard-earned savings and investments. 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 diminished assets. For all age cohorts, the amount of financial resources they possess influence how much they will spend over their life cycle (Tan and Folk (2011), Tan et al. (2012)).

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 different sources: pension income from the government for the civil service workers and members of the armed forces, and in the case of employees in the private sector, savings via withdrawals from the Employees Provident Fund (EPF), personal savings and investments, and support from family members. Previous studies of people in their fifties and early sixties have found that savings levels are insufficient and are not in congruent with their expected retirement age (Bernheim and Scholz (1993), 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)).

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. 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. 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.

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 dissaving. 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 increase in the retirement span among Malaysians reflects improved life expectancy – the typical Malaysian retiring today at 60 years old will spend almost 20 years in retirement. The individual's responsibility for retirement security includes making an accurate 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 and cost of healthcare. Therefore, people face the prospect of having to support themselves for a long time on their accumulated retirement assets.

This paper has examined the extent Malaysians make financial preparations and their readiness for retirement, and the impact of expected retirement age on their retirement planning preparation. A financial planning model derived from the life-cycle theories was tested, outlining personal demographics such work status, education, household composition, and income variables as life-cycle factors affecting the expectation and planning outcomes. Outcomes included financial literacy, retirement age, expected sources of retirement income, financial

planning commencement, the propensity to save and investment strategies applied. This study further examines the issue by means of a cohort analysis to examine whether belonging to a particular group who engaged in retirement planning and having higher level financial literacy make a difference in attitude toward retirement and securing financial success in the post-retirement period among Malaysians.

### **Social security in Malaysia**

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. Pension plans are shifting from the defined-benefit form to defined-contribution, in which plan participants must make investment decisions. With longevity increasing, replacing defined pension plans with defined contribution plans are making social security arrangements less certain. 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 either the knowledge or the training to handle the task.

Malaysia's population, which is 28.30 million in 2010 (Department of Statistics, Malaysia (2018)) is expected to grow to about 41.5 million by year 2040. The current median age is 26.3 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 an ageing population in Malaysia. The proportion of aged population is currently at 5.1 percent in 2010 compared to 3.7 percent in 1980. Given prevailing demographic trends, it is projected that by year 2040, those aged 65 and above will constitute about 14.5 percent (Table 1) of an estimated population of 41.5 million. In terms of absolute numbers, the population of older persons will increase from about 1.4 million in 2010 to 6.0 million by the year 2040. This represents a more than four-fold increase within the span of 30 years, or an average increase of 153,000 older persons per year.

Table 1 indicates that the percentages of elderly people in the population are increasing whilst 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. 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: Population Size and Age Structure  
Malaysia, 1980 – 2040**

	1980	1991	2000	2010	2040
<b>Total Population (million)</b>	<b>13.7</b>	<b>18.5</b>	<b>23.3</b>	<b>28.3</b>	<b>41.5</b>
<b>Average Annual Growth Rate (%)</b>	<b>2.3</b>	<b>2.64</b>	<b>2.6</b>	<b>2.0</b>	<b>0.8</b>
<b>Age Structure (%)</b>					
0 – 14	<b>39.6</b>	<b>37.2</b>	<b>33.3</b>	<b>27.6</b>	<b>18.6</b>
15 – 64	<b>56.7</b>	<b>59.1</b>	<b>62.8</b>	<b>67.3</b>	<b>66.9</b>
65 & above	<b>3.7</b>	<b>3.7</b>	<b>3.9</b>	<b>5.1</b>	<b>14.5</b>
<b>Dependency Ratio (%)</b>	<b>76.4</b>	<b>69.2</b>	<b>59.2</b>	<b>48.5</b>	<b>49.5</b>

Source: Department of Statistics, Malaysia  
Tenth Malaysia Plan, 2010-2015

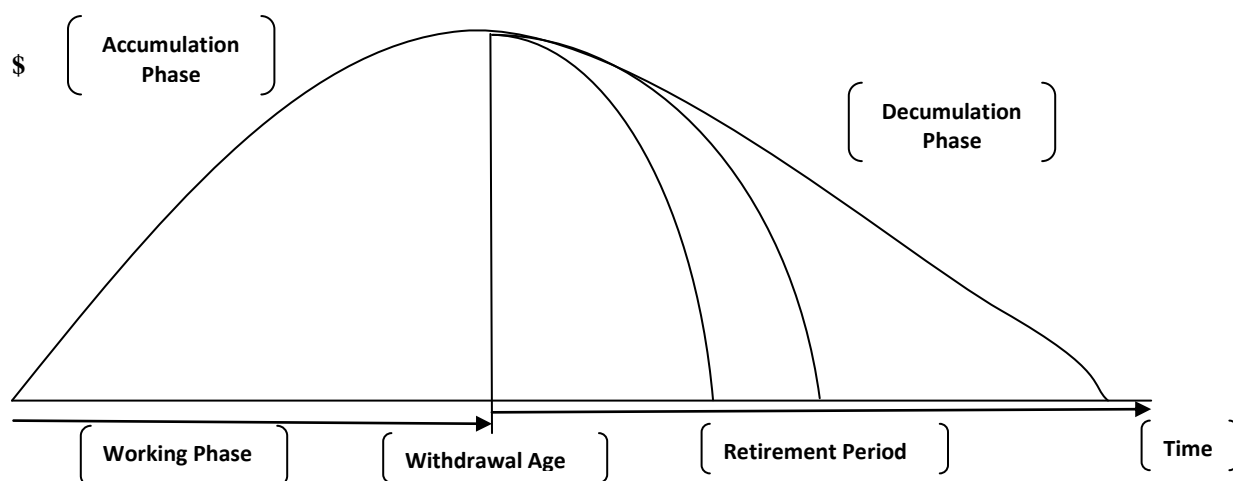
With social and medical advancements, the average life expectancy in Malaysia has increased – from 47 years old in the 1950s to 73 years old for men and from 48.5 years old to 77 years old for women (Department of Statistics, Malaysia (2018)). Better healthcare, availability of advanced medical technology, improved standards of living, higher education and literacy, have contributed to this change. In the absence of an old-age social security scheme in Malaysia, it is critical that people plan for their own financial retirement needs. 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 previously 55 years old to 60 years old. For a long time the retirement age for the private sector was largely unchanged at 55 years old but effective 1 July 2013, this was increased to 60 years old.

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) 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 pillar/tier framework (Holzmann and Hinz (2005)). 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.

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 Employees Provident Fund (EPF) for employees in the private sector. 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 1 shows mandatory savings scheme such as the EPF have two phases – accumulation phase during an individual's working career and the decumulation phase upon his retirement. In the accumulation phase, the rate of return on the savings accumulated and investments by the individual is important. In the decumulation phase, withdrawals of accumulated balances are drawn down on a “lump sum” basis. 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 1: Accumulation and decumulation phases of Provident Funds Cumulative Balances**



Source: Asher (2002)

The most important source of non-familial support for the elderly in Malaysia is the EPF. The EPF is a national provident fund set up in 1951. The EPF works on a DC formula and both employers and employees in the private sector contribute to the EPF at the current rate of 12% and 11% of monthly wages respectively. 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. Individual contributors are permitted to withdraw a portion of his or her EPF contribution, prior to reaching to 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. Research in behavioural economics suggests a breakdown of will power and self-control and often the lump sum EPF withdrawal is spent too quickly. 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)).

Table 2 shows the average savings of EPF members at 54 years of age, one year before entitlement to full withdrawal, is about RM106,000 (US\$25,238). With more than 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.

**Table 2: 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)	
2013	73,168	166,650	160,131	26,250	70,283
2014	76,424	180,153	166,131	27,557	75,637
2015	81,646	194,438	169,425	31,540	84,513
2016	82,332	204,288	170,844	34,032	89,393
2017	84,777	213,852	147,160	43,872	106,003

Source: EPF Annual Report 2017

## 2. LITERATURE REVIEW

Studies of retirement preparedness typically assume that people will retire at a fixed age. Earlier-than-expected retirement has been associated with adverse health and labour market shocks (Anderson et al. (1986), Disney and Tanner (1999), Loughran et al. (2001)). Barring injury or illness, the timing of retirement can be a matter of choice; workers can choose to when to retire, just as they choose how much to save.

The principal theories of saving are the life-cycle hypothesis (Modigliani and Brumberg (1954), 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 decisive difference between the two theories concerns the length of the planning period. For Friedman, this period is infinite, meaning that people also for their descendants unlike the Modigliani-Brumberg version, the planning period is finite meaning people save only for themselves.

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. Basically, the life-cycle saving model assume that individuals live for three periods: when young, individuals borrow to finance current consumption, when they reach middle aged, they repay the loans taken out in the first half period of their life and save for retirement; when they get old and retire, they consume the assets accumulated in the second period of their life. The life-cycle hypothesis predicts that consumption in each period depends on expectations about lifetime income.

The literature on savings groups household savings motives into five categories:

- a) Saving to provide resources for retirement - people save during their working years to finance their consumption after retirement. Life-cycle theory predicts that people save more in middle age and dissave in old age after retirement (Modigliani and Brumberg (1954), Horioka (2006)).



- b) Precautionary saving to finance unexpected losses of income – a hedge against uncertainty about the future; unemployment or sickness (Carroll (1992) (1997), Hubbard et al. (1995)); liquidity constraints also make households increase precautionary saving (Browning and Lusardi (1996)).
- c) Saving to smooth the availability of financial resources over time to maintain a more stable consumption profile (Carroll and Summers (1989), Attanasio and Browning (1995), Skinner (1996)).
- d) Saving to finance expected large lifetime expenditure, that is “big-ticket” items (durable purchases), target savings (wedding, vacation, education); and
- e) Saving for bequests – assets to bequeath to children and dependents. Bequests can be accidental because of the uncertainty regarding the date of death (Browning and Lusardi (1996), Davies and Palumbo (2001)), strategic, or reduced consumption.

Lusardi (1999, 2006) find that planning has effects on both saving behaviour and portfolio choice. Households whose head has not planned for retirement accumulate much less than households whose head has done some planning. Previous studies have found that many households have limited resources until late in their life-cycle or start saving very late when it is not possible to accumulate much (Lusardi (2006)). The literature examining the financial well being of the baby-boom generation (Bernheim (1993), Moore and Mitchell (2000)) has consistently show that baby boomers are not saving enough to maintain their current levels of consumption into their retirement years. Moore and Mitchell (2000) conclude that the majority of older households will not be able to maintain their current levels of consumption into retirement without additional saving.

Carroll (1992) reports that uncertainty helps to explain why consumption is highly correlated with income in the case of young consumers who expect their incomes to increase in the future but do not know by how much. Uncertainty also explains why the older population saves a positive amount as they face a lot of uncertainty regarding their length of life and health costs. Carroll and Summers (1989) obtained results which suggest that precautionary saving may account for a large portion of household wealth.

Carroll and Summers (1989) notice that the life cycle profiles of income and consumption tracked each other. Households headed by an individual with low education had a relatively flat profile for both income and consumption, while households headed by better educated individuals presented more of a hump shape. Carroll (1992) shows that if consumers are sufficiently impatient and their labour income is subject to both permanent and temporary shocks, they set consumption close to income. This model with impatient consumers under labour income uncertainty has been labeled “the buffer-stock model” of savings, because saving is kept to the

lowest level compatible with the need to buffer negative income shocks. Carroll's buffer stock model can provide a rationale for the income tracking of consumption that was highlighted by Carroll and Summers (1989). Attanasio and Weber (1989) and Gourinchas and Parker (2002) clarify the role played by age-related changes in demographics and hump-shape age profile of labour income in generating income tracking for relatively young consumers. Hubbard, Skinner and Zeldes (1994 and 1995) show how precautionary motives interact with the insurance properties of social security in the US. Attanasio et al. (1999) investigates the interaction between demographics and precautionary savings, and highlighted the correlation between education and income; in the analysis education matters because of income and demographics age profiles are education/specific. Attanasio and Weber (1993) and Attanasio and Browning (1995) stressed the importance of demographics to explain observed patterns of consumption life cycle profiles.

Deaton and Paxson (1997) and Paxson (1996) suggest that saving rates vary reasonably continuously with age, so that people of similar ages act in similar ways. A number of studies have examined the predictive power of individual date of retirement expectations and have found that these measures are strong predictors of future retirement dates (Disney and Tanner (1999), Loughran et al. (2001)). Deviations between expected and actual retirement ages are found to be correlated with wealth and health changes as well as marital transitions (Disney and Tanner (1999)). Maestas (2004) finds that many older workers who returned to work after retiring had planned on doing so (Haider and Stephens 2004). Michel et al. (2016) posits the fight against risk factors for disability and dependency, to identify and target modifiable risk factors. It is always possible to positively modify "intermediate" risk factors, such as health habits (sedentary lifestyle and diet), health behaviours (alcohol consumption, smoking or other addictions), as well as living and working conditions, and access to healthcare.

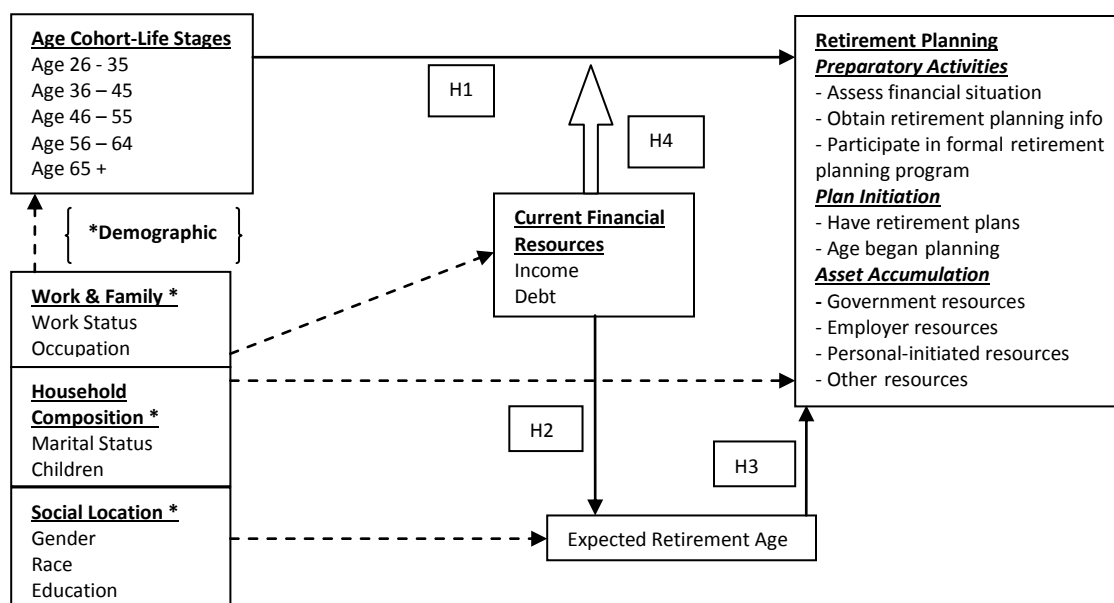
### **3. CONCEPTUAL FRAMEWORK**

The conceptual framework model is outlined in Figure 2 below. The conceptual model posits that several life-cycle factors affect retirement orientations, expectations and plans: family and work status, social location, household composition, consumption, and current financial resources. The life-course perspective links both proximal and distal forces to individuals' lived experiences. In this study, each model component is defined, previous relevant research for each component is summarised, and the hypothesised relationships between model components outlined below. The life-cycle factors affecting retirement planning are summarised as they relate to these retirement outcomes.

The age cohort 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 age cohort, the higher is the probability of having adequate financial resources for retirement. Early life advantages or disadvantages are recognized as cumulating over the life course, leading to different later-life experiences.

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? Confidence in one's financial preparedness and savings encourages retirement at younger ages. 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. The life-course framework expands beyond consideration of time in an individual's life course to social and historical time as well.

**Figure 2: Conceptual Framework of Age Cohort Effect on Life Cycle Retirement Planning**



### 3.1 Age Cohort

A cohort refers to a group of people with unique shared experiences or characteristics. The concept of cohort (Ryder 1965) has been recognised as an important way of assessing the influence of social change and

historical circumstances on individuals (Elder and Caspi 1990). This study examined whether belonging to a particular age cohort relates to differences in attitudes and financial preparation toward retirement. The six age cohorts are: 26-35, 36-45, 46-55, 56-64, and 65+. By having respondents at different stages of their life-cycle, this study examined 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. Therefore, it is hypothesised that age cohorts have a positive orientation towards retirement financial planning.

## **3.2 Demographics**

### **3.2.1 Work and Family**

The relationship between work and the family are critical factors to financial planning and retirement preparations. 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. Employed persons are earning income and some are accumulating retirement savings and benefits. 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. Time spent out of the labour market that is devoted to marriage, family life, childbearing, caring for sick family members, and as a homemaker, impact financial planning for 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.

### **3.2.2 Household Composition**

Another demographic factor which is important for saving behaviour is the composition of the household. Compared to unmarried individuals, married couples report greater average wealth, more than remarried couples and singles. 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. Consequently,

families with children would be expected to have lower retirement wealth than families without children. 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. 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). Family ties is an important source of support in retirement years. Financial support from children helps to reduce the need to continue working in old age.

### **3.2.3 Social Location**

Socioeconomic background of cohorts constitutes social location which recognises existing social hierarchies and divisions that impact life experiences. Hierarchies and differences based on gender, race/ethnicity, and education create systems of disadvantage and privilege in society; which leads to considerable diversity in old age, consistent with the cumulative advantages and disadvantages hypothesis (Stoller and Gibson 2000). Social location of individuals impacts retirement expectations and influence financial planning. The relationships between socioeconomic status with educational and occupation is an important indicator of the degree of social equity and the success of government policies aimed at reducing social inequality.

Gender issues are increasingly important in financial and retirement planning. Women make up about 50 percent of the population and about 36 percent of the labour force in Malaysia. 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. Much of the economic policy had been directed towards distributional issues along ethnic lines, socio-economic groups, rather than gender-specific terms. 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 2006). Marriage and children exert important influences on women's retirement (Vinick and Ekerdt 1989). Childbearing and the need to work around family responsibilities can impact eventual retirement incomes (O'Rand and Landerman 1984). As women are expected to live longer than men, having adequate financial resources to prepare for late life is critical.

Malaysia's demographics are represented by multiple ethnic groups. Malays and other Bumiputra groups make up 65% of the population, Chinese (26%), Indians (8%), and others (1%). 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. Race/ethnicity forms a significant part in the discourse concerning virtually any Malaysian social condition or issue including personal interaction in retirement planning.

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. Given the correlation between income and education, prior studies find evidence of a distinct pattern of higher saving for higher education groups (Bernheim and Scholz (1993), Attanasio (1993), Folk et al. (2012), Folk (2011)). Bernheim and Scholz (1993) and Hubbard et al. (1994) have documented wide disparities in wealth holdings across different education groups.

### **3.3 Current Financial Resources**

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. Several US studies on savings emphasise there is huge heterogeneity in household savings and wealth holdings, even among households close to retirement (Smith (2006), Lusardi (1999)). Up to one quarter of the pre-retired population seem to under-save for retirement.

Income has been shown to be the main factor to determine both savings and asset holdings (Browning and Lusardi 1996). Inheritances are sometimes overlooked as a source of retirement income, but they are important because they transfer residual savings or wealth across generations. The study postulates that 80 percent of Americans' household wealth originates from intergenerational transfers. Therefore, it is hypothesised that current financial resources influence retirement planning.

### **3.4 Retirement Planning Outcomes**

The decision of how much to save for retirement is a complex one for an individual. It would require some understanding of several variables such as pensions, retirement benefits, basic fundamental economic and financial concepts including compound interest, inflation, financial markets, mortality tables, among others (Lusardi 2006). In this study, financing planning for retirement is categorized into: (1) preparatory activities, (2) plan initiation, and (3) asset accumulation. Preparatory activities involve gathering information about or making assessments of their retirement needs, setting financial goals and objectives. 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.

### **3.4.1 Financial Preparatory Activities**

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), Ameriks et al. (2002)). 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. Those who plan have more than double the wealth of those who have not done any retirement planning. There are positive causal effects between attending firm sponsored retirement planning seminars and retirement wealth. These studies report evidence that planning can foster higher savings.

### **3.4.2 Plan Initiation**

This study will examine when and at what age members of the 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.

### **3.4.3 Asset Accumulation**

Asset accumulation encompasses the accumulating of financial resources comprising of a combination of post-retirement income, housing wealth, and financial assets. An individual's savings/assets at retirement are influenced by the 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 2004).

The life-cycle theory suggests that age has an impact on savings. 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. To show how well post-retirement income will allow retirees to maintain their standard of living, financial advisors 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 planners generally advise that retirees need 70-80 percent of their pre-retirement earnings to maintain a comparable standard of living in retirement. 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. Household's target replacement rate can be a function of household earnings and current wealth, and demographics.

Earnings shocks can have a substantial effect 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. Malaysian retirees' potential sources of post-retirement income are pensions, EPF withdrawals, 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.

Inheritances are sometimes overlooked as a source of retirement income, but they are important because they transfer residual savings or wealth across generations. Individuals may save significant sums for the possibility of substantial end-of-life medical and nursing home expenses. If such medical problems do not arise, a bequest will arise.

The house is the largest single asset in most retired households (Dushi and Webb 2004). Housing can serve 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. Most individuals value the option of remaining in their houses until declining health forces a move or a sale (Lusardi and Mitchell 2006). Some financial planners point out how much retiree could save by "unlocking" their housing equity – either by downsizing through buying a smaller housing units or simply moving to a cheaper location. 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. This suggests 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 et al. (2005), and Carroll, Otsuka, and Slacelek (2006)). Similarly Muellbauer and Murphy (1997) find that house price increases and financial innovation stimulated a consumption boom in the UK. Homeowners and those who hold stocks and bonds have been found to have higher saving (Bosworth et al. (1991), Browning and Lusardi (1996)).



A summary of the hypotheses, derived from the above discussions, are examined as follow:

**Hypothesis 1:** Age cohort has a positive impact on retirement planning.

**Hypothesis 2:** Current financial resources have a positive orientation towards expected retirement age.

**Hypothesis 3:** Expected Retirement Age does affect retirement planning preparation.

**Hypothesis 4:** Controlling for current financial resources, age cohort has a positive impact towards retirement planning preparation.

#### 4. METHODOLOGY

This study uses a quantitative approach via a questionnaire survey to obtain primary information. Sample size was 546 Malaysians out of 990 questionnaires distributed. Random sampling was used targeting the three major ethnic groups i.e. Malays, Chinese, and Indians. Questionnaires were handed over to respondents by research assistants. The questions comprise of Likert-like questions and mainly closed-ended. Tests were carried out using the Statistical Package for Social Sciences (SPSS) for Windows. The significance level is set at 0.05 throughout the study. The use Cronbach alpha coefficient is used for Reliability Analysis (internal consistency). Alpha coefficient of above 0.6 is used.

Constructs was tested using indexes which are multi-item instruments to measure a single concept with several attributes. The Factor Analysis tests were used to identify significant components which were included in the final equation; it was for finding factors within a large distribution of scores. Items with primary factor loadings greater than 0.4 was judged sufficient.

Regression Analysis was used to measure the amount of variance explained in the dependent variable by the predictors. Multiple regression tests were carried out for all the hypotheses as there are several independent variables involved. Checks were carried out for mediating effect on some variables using hierarchical regression tests. Hierarchical regression and ordinary regression was used to test the significance of each independent variable as reflected in the conceptual framework. Descriptive Analysis was first examined, followed by multiple regression analysis.

## 5. EMPIRICAL RESULTS AND DISCUSSION

### 5.1 Descriptive Analysis

Table 3 below depicts the respondents' demographic characteristics such as age, gender, ethnicity, and marital status, level of education, health, average life expectancy, type of employment, house ownership and children. Out of 546 respondents that responded, majority of them were from the age ranges between 26 and 45 years old. Most of the respondents were Malays followed by Chinese. Indians made up of the minority. More than 67% of the respondents were married while the remaining 33% were single, widow, separated or divorced. More than 58% of the respondents have tertiary education. Overall respondents and their spouses have good or fair health. It shows that most people take care of their health. Usually, a big sum of our retirement savings is spent on medical expenditure. Therefore, health plays an important role in retirement planning. Perception of life expectancy is between 65 to 75 years of age. Over 57% of the respondents are homeowners and the balance are renting or staying with family or friends. Homeownership accounts for a large part of an individual's expenditure and has a significant impact on retirement planning. Most respondents have an average of one to three children. A reasonable percentage (20%) of the respondents have four and above. More children will imply extra expenses in a household in term of education, medical and daily necessities.

**Table 3: Survey Results – Descriptive Analysis**

<b>Age</b>	<b>26-35</b>	<b>36-45</b>	<b>46-55</b>	<b>56-65</b>	<b>&gt;66</b>		<b>Gender</b>	<b>Male</b>	<b>Female</b>	
%	42.7	16.8	26.2	12.6	1.7		%	42.0	58.0	
<b>Ethnicity</b>	<b>Malay</b>	<b>Chinese</b>	<b>Indian</b>	<b>Others</b>		<b>Marital Status</b>	<b>Married</b>	<b>Single</b>	<b>Others</b>	
%	51.8	35.5	10.4	2.3		%	67.8	27.7	4.5	
<b>Education Level</b>	<b>No School</b>	<b>Primary</b>	<b>Secondary</b>	<b>Tertiary</b>		<b>Health</b>	<b>Excellent</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>
%	0.6	11.2	30.0	58.2		%	15.6	51.6	29.3	3.5
<b>Spouse Health</b>	<b>Excellent</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>		<b>Life Expectancy</b>	<b>65-70</b>	<b>71-75</b>	<b>76-80</b>	<b>&gt;80</b>
%	8.2	41.9	46.6	3.3		%	28.9	25.1	25.8	20.2
<b>Home Ownership</b>	<b>Own</b>	<b>Rent</b>		<b>No. of Children</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>&gt; 3</b>	
%	57.9	42.1		%	22.0	10.8	19.8	13.7	33.7	

## 5.2 Hypothesis Testing

The results of the multilevel regression analyses are summarised in Table 4 below.

**Table 4 : Hypothesis Results Table**

Hypothesis	Type	$\Delta R^2$	$\Delta F$	Signi.	Significant Variables
H1.1: Age cohort DAge1 does not have a positive impact on retirement planning FinPISelfIndex.	Ord.	.201	3.919	.01**	DAge1
H1.2: Age cohort DAge1 does not have a positive impact on retirement planning FinPIProfIndex.	Ord.	.159	2.230	.01**	DAge1
H1.3: Age cohort DAge2 does not have a positive impact on retirement planning FinPISelfIndex.	Ord.	.166	3.031	.01**	DAge2
H1.4: Age cohort DAge2 does not have a positive impact on retirement planning FinPIProfIndex.	Ord.	.130	1.773	.05*	DAge2
H1.5: Age cohort DAge3 does not have a positive impact on retirement planning FinPISelfIndex.	Ord.	.170	3.096	.01**	DAge3
H1.6: Age cohort DAge3 does not have a positive impact on retirement planning FinPIProfIndex.	Ord.	.129	1.746	.05*	DAge3
H1.7: Age cohort DAge4 does not have a positive impact on retirement planning FinPISelfIndex.	Ord.	.163	2.990	.01**	DAge4
H1.8: Age cohort DAge4 does not have a positive impact on retirement planning FinPIProfIndex.	Ord.	.130	1.767	.05*	DAge4
H1.9: Age cohort DAge5 does not have a positive impact on retirement planning FinPISelfIndex.	Ord.	.163	2.996	.01**	DAge5
H1.10: Age cohort DAge5 does not have a positive impact on retirement planning FinPIProfIndex.	Ord.	.127	1.729	.05*	DAge5
H2.1: Current financial resources SavPortIndex have a positive orientation towards expected retirement age DRAge1	Ord.	0.032	3.920	.05*	
H2.2: Current financial resources SavValIndex have a positive orientation towards expected retirement age DRAge1	Ord.	0.001	0.265	P=.607	Ethnicity, Spouse <36yrs, Employment type.
H2.3: Current financial resources SavPortIndex have a positive orientation towards expected retirement age DRAge2	Ord.	0.000	0.054	P=.816	
H2.4: Current financial resources SavValIndex have a positive orientation towards expected retirement age DRAge2	Ord.	0.005	1.780	P=.183	Ethnicity, Spouse employment.
H2.5: Current financial resources SavPortIndex have a positive orientation towards expected retirement age DRAge3	Ord.	0.025	3.244	P=.075	
H2.6: Current financial resources SavValIndex have a positive orientation towards expected retirement age DRAge3	Ord.	0.003	1.050	P=.306	Gender, Ethnicity, Age cohort 36-65yrs, Spouse <36yrs.
H2.7: Current financial resources SavPortIndex have a positive orientation towards expected retirement age DRAge4	Ord.	0.000	0.025	P=.876	
H2.8: Current financial resources SavValIndex have a positive orientation towards expected retirement age DRAge4	Ord.	0.001	0.400	P=.528	
H2.9: Current financial resources SavPortIndex have a positive orientation towards expected retirement age DRAge5	Ord.	0.007	0.763	P=.384	
H2.10: Current financial resources SavValIndex have a positive orientation towards expected retirement age DRAge5	Ord.	0.006	1.900	P=.169	Spouse >65yrs.
H3.1: Expected Retirement Age does affect	Ord.	0.192	2.571	.01**	Age cohort 56-65yrs,

retirement planning preparation FinPISelfIndex					Education, Home ownership.
H3.2: Expected Retirement Age does affect retirement planning preparation FinPIProffIndex	Ord.	0.141	1.389	P=.093	Ethnicity, Spouse health.
H4.1: Controlling for current financial resources, age cohort DAge1 has a positive impact towards retirement planning preparation FinPISelfIndex	Hier.	0.143		.01**	Age cohort 26-35yrs, Marriage, Education, Spouse <36yrs.
H4.2: Controlling for current financial resources, age cohort DAge1 has a positive impact towards retirement planning preparation FinPIProffIndex	Hier.	0.107		.01**	Ethnicity, Marriage, Spouse health, Spouse <36yrs.
H4.3: Controlling for current financial resources, age cohort DAge2 has a positive impact towards retirement planning preparation FinPISelfIndex	Hier.	0.075		.05*	Education.
H4.4: Controlling for current financial resources, age cohort DAge2 has a positive impact towards retirement planning preparation FinPIProffIndex	Hier.	0.070		.05*	Ethnicity.
H4.5: Controlling for current financial resources, age cohort DAge3 has a positive impact towards retirement planning preparation FinPISelfIndex	Hier.	0.074		.05*	Spouse 56-65 yrs.
H4.6: Controlling for current financial resources, age cohort DAge3 has a positive impact towards retirement planning preparation FinPIProffIndex	Hier.	0.069		.05*	Ethnicity.
H4.7: Controlling for current financial resources, age cohort DAge4 has a positive impact towards retirement planning preparation FinPISelfIndex	Hier.	0.078		.05*	Education.
H4.8: Controlling for current financial resources, age cohort DAge4 has a positive impact towards retirement planning preparation FinPIProffIndex	Hier.	0.070		.05*	Ethnicity.
H4.9: Controlling for current financial resources, age cohort DAge5 has a positive impact towards retirement planning preparation FinPISelfIndex	Hier.	0.074		.05*	Education.
H4.10: Controlling for current financial resources, age cohort DAge5 has a positive impact towards retirement planning preparation FinPIProffIndex	Hier.	0.068		.05*	Ethnicity.

Note: \*  $\rho < 0.05$ ; \*\*  $\rho < 0.01$

[**Note:** DAGE = Age Cohorts: 1 = 26-35; 2 = 36-45; 3 = 46-55; 4 = 56-65; 5 = >66]

## 6. DISCUSSION AND CONCLUSION

The survey results indicate that current financial resources do have some impact on positive orientation towards retirement planning particularly for those in the middle age group. This study has provided many insights about the retirement expectations and preparations of different people and structural, work, family, race and personal factors affecting their retirement outcomes. The younger age cohorts usually have very little savings so they may be planning to save or increase their disposable income for a better standard of living in later years. However, it is not very clear if their intention to save more is purely to improve their standard of living during mid life or saving for their retirement. Further research can be carried out for this life cycle path looking at their propensity to save and the sort of investment strategies applied.

This may be because the respondents felt that if there is a shortfall in financial resources at the present time; they will make up for any shortfall in later years, hence the apathetic attitude. Confidence level is important as it strengthens people expectations for the future. Confidence level can be brought about by many external factors such as the current economic situation, performance of the company the respondent is working for, and their income and savings level.

Expected retirement age for all age cohorts does affect retirement planning preparation. For each age cohort, when one expects to retire can influence how they prepare for their retirement. This may entail adjusting their consumption pattern of their life cycle. Current financial resources do have a strong positive impact on consumption for all age cohorts. For all age cohorts, how much financial resources they have influence how much they will spend over their life cycle. Marketers have employed this strategy of life cycle consumption to plan for their marketing strategy of targeting consumers.

Thus far, this paper has examined the extent Malaysians make financial preparations and their readiness for retirement, and looked at age cohort's life cycle on their retirement planning preparation. The retirement planning model derived from the life-cycle theories showed positive influences from the personal demographics such as work status, education, household composition, and income variables as life-cycle factors affecting the expectation and planning outcomes. This study has also examined the issues by means of a cohort analysis to examine whether belonging to a particular group who engaged in retirement planning and having higher level financial literacy make any difference in attitudes toward retirement. The education variable did make a significant impact.

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