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A Real Case of less than Half a Million Net Worth: An Approach for Financial Planning

Stanley Yap Peng Lok, Chong Wei Ying, Cheok Mui Yee and Leow Hon Wei
Graduate School of Business, Segi University, Petaling Java, Malaysia

Abstract: In emerging market, financial planning is essential to accumulate wealth and financial independence. However, there is lack of awareness that could cause the retiree continues their workforce due to insufficient pension fund. This study examines how working couples with less than half a million net worth evaluated financial decisions in retirement planning using computer-aided financial fact sheets. This study adopted a real case of a working couple to evaluate their composition of savings and investment for financial decisions. Numerous analysis such as net worth analysis, insurance needs analysis, investment portfolio rebalancing, estate planning, education planning and retirement planning are applied to enhance the findings. The results highlighted that, firstly, financial planning is vital to achieve financial independence secondly, insurance needs, education and retirement funding are the most significant for people and thirdly, the sources are critical to maintain lifestyle after retirement, emergency fund such as diseases attack and the long term children education funding. Pertaining to the findings with half a million net worth is insufficient, some suggestions include reduction of unnecessary expenses, re-allocate of cash flow, adequate insurance coverage and re-balancing of investment portfolios to accumulate wealth. It is a challenge to obtain financial independence, hence, there is a need to increase the literature on financial planning. To the best of our knowledge, this is the first study that adopted a real case to provide solutions to enhance the efficiency of financial planning industry.

Key words: Net worth, financial planning, wealth and financial independence, retirement planning, agent-aided support system, education

INTRODUCTION

People are increasingly concerned with their financial security during retirement. They have not seriously allocated much saving in their early career lives (Habib, 2007). They rely greatly on savings and Employees Provident Fund (EPF) as part of the government's initiative to encourage savings for retirement purpose Ibrahim *et al*., 2012). Approximately 72% of Malaysian have propensity to save, however, 42% of them have insufficient knowledge on how to build retirement fund (Hunt, 2009). They prefer to rely on interest yielded from fixed deposit and savings. Alternatively, they discretely invest in unit trusts and shares to increase their wealth. Yet, they fail to properly allocate appropriate portion of their interest return for retirement needs.

Besides, they have to deal write complex financial products that may be beyond their basic knowledge. They, therefore, have to constantly acquire new financial information and skills to effectively manage their personal finances. Although, engagement with professional financial planners is available, much of this knowledge is acquired from their personal initiative (Knowles, 1975). They are obliged to plan, implement and evaluate their existing financial status and draw well-informed financial decisions (Kennickell, 1997) that take into consideration the issue of debt repayment, asset assessment, insurance needs, risk, investment portfolios and others (Bernheim, 1994). Knowing how to plan for retirement planning becomes an essential issue of working couple's lives. However, <5% of Malaysians are prepared for retirement (Habib, 2007) and they lack of confidence in the preparation of retirement planning because lack of financial illiteracy (Hunt, 2009).

Ironically, Malaysian achieved a 70% increase in enrolment in tertiary education over the last decades, according to Malaysian education blueprint 2012-2015. There is also a six-fold increase in undergraduate enrolment in both public and private universities and colleges. These results imply that Malaysian have basic knowledge and skills to manage their personal finance to their best capability. They are able to depend on self-directed investment scheme such as unit trust. However, the return of these investment may still be insufficient for retirement saving due to the recent depreciation of Ringgit Malaysia and amassing debt by Malaysian (HSBC, 2015). Besides, young working couples

Corresponding Author: Stanley Yap Peng Lok, Graduate School of Business, Segi University, Petaling Java, Malaysia

may have to repay a substantial educational loan repayment to National Higher Education Fund Corporation (PTPTN) for years (Sun Media, 2016). Hence, the major concern for Malaysians is that whether their accumulated wealth will be sufficient to sustain their scale of living upon retirement.

Malaysians are still observed as lacking in retirement planning (Hunt, 2009), although, they are have the basic skill and knowledge about personal finance management. Possible reason maybe contributed to the relatively low per capita income among them (HSBC, 2010). It implies that Malaysians may have insufficient wealth (Muzaffar, 2010), although, they strive hard to accumulate their half a million net worth for retirement planning.

Besides, research on retirement planning are extensively performed in America (Hogarth, 2002), Australia (Beal and Delpachitra, 2003), Korea (Sohn *et al*., 2012) and UAE (Hassan *et al*., 2009) due to high saving of the people. However, similar research are less investigated in countries that have low per capita income such as Malaysia. Therefore, this study aims to explore how Malaysians strategise and optimise their existing financial resources from their domain income to achieve retirement goals.

This study examines how working couples evaluate financial decisions in retirement planning using computer-aided financial fact sheets. The results offers a comprehensive view on how working couples may appropriately distribute their wealth according to personalised financial need. Their composition of saving and investment may offer insights into how to educate people to be better manage their personal wealth. This study also develops a computer-aided financial fact sheet that enables working people to input their financial data and perform an analysis about saving and investment.

Literature review: Numerous programs and practices have been developed to facilitate self-learning of financial management (DeVaney *et al*., 1996). These resources include books and magazines, financial columns, electronic financial tools and applications. Family and friends are also valuable resources for seeking financial information and advice. Financial knowledge and money management are inevitably necessary for preparing a sound retirement plan (Bernheim and Garrett, 2003). One of them is that people are able to better assess their investment in defined contribution plans imposed by the government. They are also encouraged to learn and understand the information about the component saving and investment plans. The gaining of financial knowledge would definitely enhance better decision-making in financial planning and products (Garman, 1998).

Through, the effort of self-learning, working couples are increasingly confident about their retirement planning (Kim *et al*., 2005). They tend to match their retirement needs with existing financial resources. Their confidence increase (Power and Hira, 2004) as they accumulate greater wealth through well-strategised saving and investment plans.

When planning their personal finance, working couples understand their retirement saving practices (Jacob-Lawson and Hershey, 2005) to better estimate and predict their saving tendency. It implies that they have had a reasonably good understanding of the fundamental workings of financial planning. However, they may not have sufficient knowledge to strategize their distributions of wealth (Dvorak and Hanley, 2010).

Working couples have to be able to demonstrate the ability to make informed judgement and take effective financial decisions. In order to acquire such skill, interaction with person and agents in specific social settings should be taken place, according to financial socialisation theory (McLeod and O'Keefe, 1972). These agents include family, peer groups, schools and media. Among them, media is the main sources of financial information for people. They, however, do not abide by the conventional media tools. Instead, they cultivate financial literacy behavioural outcome through participation (incidental learning) and intentional interaction with socialisation agents (Danes and Dunrud, 1993), i.e., professional financial planners.

People are more willing to participate in personal financial planning when are offered with information (Delafrooz and Paim, 2011). The alarming here is that they may not be able utilise the information to their best advantage (Bayer *et al*., 2003). It affects people's ability to make a sound judgement in financial decisions. In addition to acquiring information, people must demonstrate the ability to apply financial knowledge (Huston, 2010). Previous studies have focused attention on the different demographic factors of financial planning such as age, income, genders and others (Albeerdy1 and Gharleghi, 2015). Other studies investigated the roles and implication of financial planners (Hanna, 2011) and education on financial planning (Mandell and Klein, 2009). However, lack of research (Merriam and Caffarella, 1999) explores the application of unconventional media tool such as computerised financial decision support system on the preparation of retirement plans.

Gao *et al*. (2007) was one of few researches that applied intelligent agent-assisted decision support system to study family financial planning. Contradictory to Hunt (2009) findings, they argued that many people recognise the importance of managing effective personal finance. The complex financial structure and regulations hinder them to better manage their wealth portfolio. They further proposed the adoption of computer-based system to offer financial-related advisory service to potential users. They also suggested to automate the role of real financial planners to better manage personal finance individually.

The advancement in agent-aided support system (Gao *et al*., 2007) enables people to review their financial situation comprehensively and make informed decisions. Potential users are then able to easily manage the distribution of potential wealth. Using the system (Wen *et al*., 2005), they can regularly update financial information. With the new input, they can effectively diagnose financially related problems and suggest appropriate decisions to better plan for retirement.

In short, encouraging working couples to use computerised financial decision support system (Wen *et al*., 2005) may be one of the ways to promote the awareness of self-directed behaviour in financial planning (Hira and Liobl, 2005). When they evaluate financial decisions independently, working couples participate in the preparation of retirement plans (Barlett and Kotrlik, 1999). Gradually, they develop necessary analytical skills in financial decisions (Bernheim, 1994).

MATERIALS AND METHODS

This study adopted a case study approach to assess household's assets, liabilities, income and expenditure toward a working couple. Such approach provided a great opportunity to assess working couple's financial decisions in terms of saving and investing. Instead of performing structured conversation, respondents were asked to strategise their wealth appropriately using a computer-aided financial fact sheet. Although, it might not be a representative approach, it was a useful approach to understand how people make financial decisions. It is worth noted that researchers made an effort to ensure that the parameters selected for developing the financial fact sheet was validated by a panel of registered financial planners.

In this study, respondents had basic skills and knowledge in financial management in their undergraduate studies prior joining the study. The case (i.e., financial fact sheet) was presented to them and the study was performed in two sessions. The first session was where respondents input their financial details into the fact sheet. Later, their financial health were analysed and proposed several decisions in the distribution of personal wealth.

The financial fact sheet comprised of four sections. Section a described the demographic information of respondents, their spouse and children, employment details, existing health conditions. Section B described respondent's cash flow statement. Respondents also provided information that might significantly increase or decrease their current income and expenditure position such as an inheritance or borrowing money for investment or purchase of a holiday home or others. Section C described the net worth statement of respondents. It consisted of assets (total cash assets, total invested assets and total personal-use assets) and liabilities (total current liabilities and total long-term liabilities). Section D described respondent's financial goals and objectives, personal priorities and risk profile. The financial goals and objectives was further divided into short-term (<3 years), medium term (3-7 years) and long-term (more than 7 years). In the sub-section of personal priorities, respondents had to rank items relating to personal needs such as providing for family in the event of death and funding for children's tertiary education. The risk profile was used to assess the retirement planning, tertiary education planning, existing insurance policies and others.

Respondent's personal and financial background: John (49 years old) and May (46 years old) have been married for years and have a child named Jeremy (1 year old). John holds a managerial post in a multi-national electronics and appliance company. Both of them are in healthy conditions without any medical hereditary problem. They demonstrated basic skill and knowledge in personal finance. They were keen to understand their financial situation in order to better plan for their child's education and retirement.

During the session, a financial planner who played the role of facilitator, instructed John and May to provide financial information onto the computerised fact sheet. At the later session, the facilitator then offered constructive suggestions to John and May to better plan their retirement planning.

John and May provided information about their existing financial position and cash flow statement. Based on Table 1, the pre-planning cash flow position of John has the net cash surplus of RM 40, 212. Meanwhile, the pre-planning cash flow position for May has the shortage of RM 612 due to her does not working after married, yet she needs to pay for her insurance premium which is an expense that amounted as RM 612. Hence, the total cash flow in the case has RM 39, 600 surpluses, yet it is insufficient for covered all the insurance needs that including for their child, Jeremy. The total of pre-planning net worth position is RM 536, 044 indicated that John and May has ability to cover liabilities from their assets if they are in financial risk conditions.

Table 1: Summary of pre-planning financial position and cash flow statement

Description	John (RM)	May (RM)	Total (RM)
Cash inflow	117,264	0	117,264
Cash outflow	77,052	612	77,664
Net cash surplus	40,212	612	39,600
Net worth	442,544	53,500	536,044

Table 2: Summary of assets

Description	John	May	Total
Cash and cash equivalents	23,500	8,500	32000
Investment assets	380,000	45,000	425,000
Personal-use assets	370,000	0	370,000
Total assets	773,500	53,500	827,000

Table 3: Summary of liabilities

Description	John	May	Total
Short-term liabilities	0	0	0
Long-term liabilities	290,956	0	290,956
Total liabilities	290,956	0	290,956

Later, John and May provided details about their assets, liabilities and equity. In terms of assets, John had cash and cash equivalents amounted to RM 23,500 and May had RM 8,500, respectively. The contribution of employee provident fund for John and May was amounted to RM 380,000 and RM 45,000, respectively as investment assets. All the expenses on personal-use assets include residential home RM 280,000 and car RM 90,000 were bear by John with the amount of RM 827,000. John's and May's assets is illustrated in Table 2.

In terms of liabilities, John and May has no short-term liability. However, John bear a housing mortgage RM 241,000 and car loan RM 49,956 which amounted to RM 290,956 (Table 3).

RESULTS AND DISCUSSION

After John and May input their information, they performed several financial analysis, namely, financial situation using financial ratio calculation, insurance needs, investment planning, education planning and retirement planning.

Financial situation analysis: In order to better plan the cash flow, asset and liability, financial ratios were used to measure the financial situation of John and May concurrently such as liquidity ratios, liquid assets to net worth ratio, debt to asset ratio, debt service ratio and net investment assets to net worth ratios.

Based on the calculation of liquidity ratio 4.94%, John and May might sustain their household expenses for <5 months when they had no income. Instead, they had to mobilise their emergency funding to sustain their livings. In addition to that, the liquid assets to net worth ratio 5.97% indicated John and May had a shortage of liquid assets such as savings and fixed deposits. The debt to asset ratio 35.18% showed that John and May were able to repay their debts through asset disposal in critical situations to avoid bankruptcy. John and May had financial capability to settle their debt repayment as the debt service ratio was only 24.11%. Their debt repayment included mortgage and consumer loans. The net investment assets to net worth ratio of 85.25% showed that John and May had a healthy financial profile that suited for the planning of retirement lives (Table 4).

Table 4: Summary of financial ratios

Description	Result (%)
Liquidly ratio	4.940
Liquid assets to net worth ratio	5.970
Debt to asset ratio	35.180
Debt service ratio	24.110
Net investment assets to net worth ratio	85.250

Insurance needs analysis: When analysing John's and May's insurance needs for the next 20 years, they required to narrow their insurance protection gaps in terms of family income replacement needs RM 511,522; medical and health insurance needs RM 536,070; children's education funding needs RM 93,649.06 and debt cancellation funding needs RM 84,956 (Table 5). The main reason is that John and May were lacked of sufficient fund in Employee Provident Fund (EPF), savings and fixed deposits and life insurance.

Financial and investment planning analysis: Based on Table 6, John and May solely reply on fixed ringgit resources as their main financial and investment sources, which was amounted to RM 457,000. This is because they do not have enough spare savings money to invest in bonds, stocks and other investments. However, such distribution of wealth was disproportional, according to industry benchmark as financial indicators. They did not evenly distribute their wealth based on fixed ringgit 15%, income 50% and equity 35%. After restructuring, each component equally played important roles to assist John and May to better plan their retirement life.

Education planning: John and May had sufficient educational funding for their 2 years old son named Jeremy. His 3 year education fees was amounted to RM 50,000 which assumed that he studied tertiary education at the age of 18 years old. In other words, John and May had to prepare another 16 years of saving for Jeremy's education which was amounted to RM 93,649.06 (Table 7). Therefore, John and May had to save RM 4,291 yearly to support Jeremy's education starting from today (Table 8).

Retirement planning: John and May were required to have annual income of RM 112,301 and RM 3,200

Table 5: Summary of insurance needs

Components	Family income replacement needs	Medical and health insurance needs	Children's education funding needs	Debt cancellation funding needs
Total insurance needed	941,522	536,070	93,649.06	84,956
Total resources available	430,000	0	0	0
Protection gap	511,522	536,070	93,649.06	84,956

Table 6: Summary of financial status of John and May (existing vs. industry benchmark)

	Pre-status	Post-status			
Components	Description	Percentage	RM	Percentage	RM
Fixed ringgit	Cash/fixed deposit/EPF/insurance cash value	100	457,000	15	68,5500
Income	Bonds/REITs/property invested	0	0	50	194,225
Equity	Stocks/shares/unit trust	0	0	35	194,225

Table 7: Summary of education fees for Jeremy

Present value (RM)	No. of years	Interest	Future value (RM)
50,000	16	4%	93,649.06

Table 8: Yearly investment in Jeremy's education fund beginning today

Future value (RM)	No. of years	Interest	Payment (RM)
93,649.06	16	4%	4,291.00

Table 9: Expected 1st year annual income needed at retirement

Name	Present value (RM)	No. of years	Interest	Future value (RM)
John	112,301	10	5	182,926.50
May	3,200	13	5	6,034.10
Total	-	-	-	18,8960.60

respectively at their first year of retirement (Table 9). It means that John needed to save RM 182,926.50 for his retirement 10 years later. May had to save RM 6,034.10 for her retirement 13 years later.

Besides, John's had to cover his expenses (i.e., long-term debts) more urgently compared to May, if he planned for retirement. The lump sum capital liquidation for John and May which was associated with the adjusted interest rate 1.92% was amounted to RM 3,014331.62 and RM 99,432.17, respectively (Table 10) such as inflation rate and depreciation rate. They also has liquidation resources such as savings and fixed deposit, amounted to RM 1,921,996.46 (Table 11). However, there was still a retirement gap existed which amounted to RM 1,191,767.33, apart from the lump sum value of RM 3,113,763.79.

Results of the case study highlighted that financial planning is vital to achieve financial independence. Working couple have to plan their retirement strategically to minimise the gap between financial resources and financial needs. When assessing the financial situation of John and May, they were advised to accumulate other wealth such as stocks and bonds investment to repay their monthly expenses for another 3-6 months. They also had to improve their overall liquidity performance by depositing more cash in financial institutions. They were suggested to repay their car loan to avoid high interest bearing and reduce their debt burden. After settling the car loan, John was advised to restructure his mortgage to a shorter repayment period to avoid high hire

Table 10: Total lump sum need for John and May by adopting capital liquidation

Name	Payment	No. of years	Interest adjusted	Present value
John	182,926.50	20	1.92	3,014,331.62
May	6,034.1000	20	1.92	99,432.17000
Total				3,113,763.79

Table 11: Total resources for each category of balance sheet

Resources	Present value (RM)	No. of years	Interest	Future value (RM)
Saving account	15000	0.0	20	15000
Fixed deposit	10000	3.8	20	21,083.72
Life insurance cash value	7000	4.0	20	15,337.86
EPF	425,000	5.0	20	1,127,651.52
Property 1	280,000	5.0	20	742,923.36
Total	-	-	-	1,921,996.46

purchase interest rate. They should maximise the value of their investment assets to enable them to enjoy retirement.

Furthermore, insurance needs, education and retirement funding are the most significant financial products for working couples. Results of the case study revealed that John and May desired to have adequate insurance coverage for family income replacement need, medical and health needs for the next 20 years. They also committed to support their son financially for tertiary education by allocating RM 4,291 yearly in educational funding. They obliged to have sufficient funds to enjoy debt-free retirement lives. For example, John planned settle his financial debts urgently to avoid high interest rate.

Recognising the priority of these financial needs, working couples have to strategically seek financial sources to sustain retirement lifestyles and have sufficient emergency funds for medical and children education. The findings suggested that working couples may restructure their existing financial resources. For instance, John and May were advised to follow market benchmarking to strengthen their existing financial performance for better retirement lives. Specifically, they might restructure the previous weightage which as 100% of fixed ringgit into 15% of fixed ringgit, 50% of income and 35% of equity. After such restructuration, John and May would be able to effectively segregate their financial resources into fixed ringgits, income and equity.

Table 12: Total lump sum need for John and May by adopting capital liquidation

Name	PMT	N	I adj	PV
John	182,926.50	20	1.92	3,014,331.62
May	6,034.10	20	1.92	99,432.17
Total	-	-	-	3,113,763.79

I adjusted = (r-g)/(1+g)×100

Table 13: I adjusted

EPF	PV	N	I	FV
Existing	380,000	20	5	1,008,253.13

Future accumulated; 31,516.80×(1.045^20-1.04^20)/0.045-0.04; = 1,390,463.74; Total = 2,398,716.87

Table 14: Future accumulated

Retirement benefit	PV	N	I	FV
Existing	45000	20.0	50	119,398.4000
Saving account	15000	0.0	20	15,000.0000
Fixed deposit	10000	3.8	20	21,083.7200
Life insurance cash value	7000	4.0	20	15,337.8600
EPF	425,000	5.0	20	1,127,651.5200
Property 1	280,000	5.0	20	742,923.3600
Total resources	-	-	-	1,921,996.4600

Retirement gap = Lump sum need>Total resources; = 3,113,763.79-1921996.46; = 1,191,767.33

Table 15: Retirement gap

Retirement gap	FV	N	I	PV
Lump sum	1,191,767.33	20	6	371,598.70

By doing, so, the net worth value of John and May might enable them to better plan retirement lives as their pre-financial status (RM 2,512,310) was improved as compared post-financial status (RM 1,921,996). The incremental value indicated the proposed restructuring plan enabled John and May to better manage their wealth together.

In order to realise their retirement plans, however, John and May had to start saving early in order to shorten the retirement gap. The total amount of saving required which was inclusive of lump sum and annual savings, after 20 years is RM 371,598.70 and 1,191,767.33, respectively (Table 12-15).

CONCLUSION

This study concludes that people are challenged to obtain financial independence. They have to strategically increase and distribute their financial resources to generate greater wealth. It highlighted that possessing half a million worth is no longer sufficient to sustain people's wealth accumulation after retirement.

Hence, there is a need to promote the importance of financial planning among working couple in Malaysia.

LIMITATIONS

This study adopted a real case to study the retirement planning of working couples. It is, however, cautioned that the financial needs of John and May vary with other working classes in terms of financial needs. Future study may include socio-psychological factors such as personal ability and goals (Janor *et al.*, 2016) and personal values (Fernandes *et al.*, 2014). It is also possible to examine education, saving and investment pattern of people using longitudinal study. Such approach enables researchers to observe the periodic change within the gap of financial needs and financial resources.

IMPLICATIONS

This study presented a case relating to how working couples make sound financial decisions for retirement using existing financial resources. Findings of the case highlighted that people do plan their financial resources for insurance, education and retirement. However, they are lack of sufficient fund to have a sound financial plan to accommodate these needs. It implies that half a million net worth of financial resources is insufficient to sustain lives after retirement.

A financial fact sheet was specially design as a case to study the saving and investment patterns of working couples that prepare for their retirement. The sheet displayed comprehensive financial information relating to cash flow statement, insurance needs and retirement planning. It offers an insight into people's financial resources at an aerial view. At the same time, it highlights areas that display gaps between financial needs and existing financial resources.

From a practical perspective, working couples are advised to plan and distribute their financial resources strategically to minimise the gap of financial needs. Results from the case offered several suggestions to avoid the pitfalls of financial dilemma such as the reduction of unnecessary expenses, re-allocate of cash flow, adequate insurance coverage and re-balance the investment portfolios to accumulate wealth.

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