

The Relevance of Financial Education for Retirement Savings Behaviour

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This paper was motivated by the growing literature that suggests that individuals fail to conform to rational economic behaviour when it comes to saving for retirement. A review of the relevant literature confirmed that many individuals fail to save for retirement in a rational way as prescribed by the Modigliani and Brumberg (1954) economic life-cycle model. Numerous studies show that many individuals exhibit irrational behaviour when it comes to planning and saving for retirement. The literature review identified that exposure to financial education programs can positively influence the planning and savings behaviour of retirement fund members.

JEL Codes: D03, D14 and I22

1. Introduction

As a result of declining mortality and fertility rates in OECD (Organisation for Economic Co-operation and Development) countries the population is ageing. In Australia, it is projected that life expectancy will increase to 86 years for men and 90 years for women by the year 2047 (The Treasury 2007). The implications include that there will be a decrease in the ratio between working age Australians and retirees. This is expected to lead to higher government spending and a reduction in Gross Domestic Product (GDP) (The Treasury 2007) and compromise the living standards of Australians (Committee for Economic Development of Australia (CEDA) 2004). Given an ageing population, adequate retirement funding is of increasing importance to individuals who will experience longer periods in retirement. At present, a means tested government provided age pension, superannuation and voluntary savings underpin Australia's retirement system. The subject of ensuring adequate retirement income has attracted increasing attention around the developed world in recent years (OECD 2005; 2008). There is also growing survey evidence, both in Australia and the US, which shows that individuals are not adequately preparing or saving for their retirement (ANZ A.C.Nielsen 2005; ANOP Research Services 2006; Helman, Greenwald, VanDerhei & Copeland 2008).

In 1992 the Australian government introduced a compulsory employer superannuation system where employers are required to contribute to their employees' superannuation fund. Superannuation represents a form of saving

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where money is set aside by the worker and/or the employer and invested for each employee's retirement benefit. The Treasury (2002) in the first Intergenerational Report identified superannuation as one structure that can counter the impact of an ageing population. When first introduced, the Australian superannuation guarantee system required minimum employer annual contributions of three percent which was progressively increased to its current level of nine percent. Recently, superannuation stakeholder groups have suggested that a further increase in the contribution rate is necessary to ensure individuals derive sufficient superannuation savings for retirement.

In 2008 superannuation assets in Australia were reported to be in excess of \$1 trillion (APRA 2009a). A report from the Australian Bureau of Statistics (ABS) (2008) indicates that 91 percent of employed people have superannuation coverage. However, there is still considerable doubt about whether Australians will have sufficient balances in their superannuation accounts to support them adequately in retirement (Clare 2008). CEDA (2004) also suggests that many Australians will find that their level of savings will be inadequate for retirement.

Another important development in superannuation fund (referred to as pension funds in some countries) arrangements in the OECD countries is the shift from defined benefit to defined contribution (accumulation) funds (OECD 2005). This shift is especially important in Australia where a majority of superannuation fund members have defined benefits (APRA 2009b). A defined benefit fund uses a formula for calculating the member's retirement benefit, which is specified in terms of years of employment and average salary level prior to retirement. Under defined contribution funds each member has their own account where contributions and investment earnings are added and fees deducted. The balance in the account represents the funds available for retirement funding. Therefore, with defined contribution funds the member bears the investment risk, whereas with defined benefits this risk is carried by the fund. The OECD (2006, p. 1) acknowledges that:

...the responsibility and risk for financial decisions that will have a major impact on an individual's future life, notably pensions, are being shifted increasingly to workers and away from government and employers.

The OECD (2006, p. 3) advises governments that: "future retirees should be made aware of the need to assess the financial adequacy of their current public and private pensions schemes". Of significance is the increasing responsibility of individuals to provide for their own retirement. The OECD (2005, p. 11) expects that:

An increasing number of workers will have to rely on defined contributions pensions and their personal savings to finance their retirement as governments begin scaling back the benefits of state-supported social security programmes and as the number of employers offering benefits plans decreases.

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The Australian federal government has legislated to allow superannuation fund members a choice of which fund they join and the ability to switch to other funds. Superannuation defined contribution fund members also have investment choice within the fund so that they can choose where to place their funds from a menu of available investment options. Therefore, the level and adequacy of information provided by superannuation funds to members making investment choices, needs to be determined. Whether members exercising choice use the information supplied, and whether this contributes to them being informed on superannuation issues also needs to be determined. An aim in this paper is to emphasise the importance of a financial education model in providing superannuation fund members with the required knowledge to assist them in making informed choices regarding their superannuation decisions. This paper is part of a larger study, and full results are yet to be published.

The remainder of this paper proceeds as follows: Section 2 and 3 contain a discussion of financial literacy and the implications for planning and retirement. A theoretical framework for superannuation fund choice is outlined in section 4; and the role of financial education is discussed in section 5. In section 6, the implications of financial education and behaviour are discussed. Conclusions are provided in section 7.

2. Financial Literacy

The life-cycle model (Modigliani & Brumberg 1954) assumes a “planned consumption path” that reflects the allocation of life resources to consumption over an individual’s life span. This model assumes that individuals will rationally plan their consumption and savings needs over their lifetimes whilst taking into account the interests of their heirs. According to the principles of the life-cycle model, individuals will accumulate sufficient assets that will allow them to maintain their standard of living in retirement. Mitchell and Utkus (2006, p. 83) argue that:

...on balance, the life-cycle theory is thought to do a reasonable job in explaining patterns of household saving behaviour. Saving generally rises with income and age, and is positively associated with education and total wealth. Young households generally have more debt than assets, while prime-aged households do appear to begin saving more and accumulating financial holdings. Finally, in retirement, people do tend to consume portions of their financial assets as they age.

Aizcorbe, Kennickell and Moore (2003) provide evidence that supports the life-cycle hypothesis, and from their analysis of 1998 and 2001 surveys of consumer finances they found that (p. 6):

By age group, median and mean net worth show a “hump” pattern that generally peaks in the 55-64 age group. This pattern reflects both life-cycle saving behaviour and the lower expected total lifetime earnings of progressively older age groups.

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The theory presumes that workers in their youth tend to be dis-savers, using borrowed funds to support current consumption; in their middle-aged years individuals become net savers and accumulate wealth through the purchase of assets to finance future consumption requirements in retirement; and in retirement, portions of these assets will then be used to meet consumption patterns (Mitchell & Utkus 2006).

However, a report compiled by the OECD (2005) "Improving Financial Literacy", emphasises that individuals generally lack an awareness of the importance of saving for retirement and that a number of surveys conducted in different OECD countries identifies discrepancies between assumed life-cycle theory and actual retirement saving behaviour by individuals. Helman, Greenwald, VanDerhei and Copeland (2008) report on the Employee Benefit Research Institute retirement confidence survey 2008 conducted in the US which found that only 18 percent of workers were very confident about having enough money to retire comfortably and that 53 percent of workers or their spouses had not attempted to calculate how much money they required for a comfortable retirement. Other evidence from this survey indicated that savings levels amongst US workers were modest and that most workers underestimated their retirement needs.

In Australia, the ANZ A.C.Nielsen (2005) survey of 3,500 adults found that only 34 percent of respondents under 65 years of age with superannuation expected to live about as comfortably in retirement as they are currently living. A survey of Australian workers by ANOP Research Services (2006) identified that only 35 percent of workers surveyed believed that their current savings would adequately fund their retirement. They also found that the mean age planned for retirement had increased from 59 years in 2001 to 61 years in 2006. They concluded that the identification of inadequate retirement savings by Australians has led to the expectation of later retirement. The AXA Retirement Scope Survey (AXA 2008) also shows that 49 percent of Australians are not prepared for their retirement. These surveys provide tangible evidence that individual retirement saving behaviour does not meet the expectations of the life-cycle model.

From the available evidence, it appears that both internationally and domestically a significant number of individuals may not be adequately planning and saving for retirement. Individual behaviour does not appear to accord with what is predicted by the life-cycle model, and survey literature does not support what is theorised by the life-cycle model as significant individual behaviour deviates from what is prescribed by this model.

3. Behavioural Implications

Kahneman and Tversky (1979) used cognitive psychological techniques to explain a number of documented anomalies in rational economic decision making. These anomalies are researched in the field of behavioural finance.

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Loveridge (2008, p. 222) describes behavioural economics as “the most recent addition to the fragmenting field of economics”. Behavioural finance combines the two disciplines of psychology and economics to explain why and how people make what seem to be irrational decisions when they spend, invest, save and borrow money (Belsky & Gilovich 2000). Even though some individuals have the cognitive skills to solve the retirement saving problem, they are influenced by other behavioural factors that will limit their ability to meet their retirement saving plan. Venti (2004) describes the impact of psychological and behavioural influences as fundamentally irrelevant when it comes to the financial decision of saving. However, Venti (2004, p. 3) does acknowledge their relevance in the behavioural savings model by suggesting that:

...their importance in actual saving decisions suggest that policies designed with psychological and behavioural factors in mind may help individuals who find it difficult to save.

Modigliani and Brumberg’s (1954) life-cycle theory of saving has received widespread criticism for its economic theorising and simplifying assumptions made in order to model saving and consumption behaviour throughout an individual’s lifetime (Shefrin & Thaler, 1988). Thaler (1994, p. 186) asks that:

If households are acting in accordance with the life cycle theory of saving, then under-saving is impossible, so why do they need to have their psychology redressed? And how does this psychology fit into the model?

Shefrin (2002) suggests that any successful retirement plan should recognise the need to accomplish a series of key tasks. Shefrin (2002, p. 139) describes these tasks as follows.

1. Identify financial needs during retirement.
2. Save an appropriate amount over time.
3. Select a portfolio of assets with a risk-return profile that is appropriate for reaching the retirement goal.
4. Have procedures in place to prevent those assets from being consumed too early.

These tasks assume that households can solve “multi-period dynamic maximisation problems” (Thaler 1994). Behavioural finance presents three important ways in which humans deviate from the standard economic model (Mullainathan & Thaler 2000).

1. Bounded rationality which reflects the limited cognitive abilities that constrain human problem solving.
2. Bounded willpower that captures the fact that people sometimes make choices that are not in their long-run interest.
3. Bounded self-interest incorporates the comforting fact that humans are often willing to sacrifice their own interests to help others.

4. A Theoretical Framework for Superannuation Fund choice

Behavioural factors were identified by Brown, Gallery and Gallery (2002) as a major reason why superannuation fund members failed to exercise choice. They suggest “the nature and scope of appropriate member education is contingent on the capacity and willingness of members to exercise choice” (p. 85). They propose the use of a universal default fund for all those members who are unwilling or feel unable to exercise choice. The universal fund they propose would be a government run national superannuation fund. The intention of introducing such a fund is that it would alleviate the investment risks the members face when making uninformed choice. They argue that “...there is responsibility on government to facilitate passive choice by providing a fund that is secure and preserves superannuation entitlements throughout working careers” (p. 86). They also identified a superannuation choice framework that implies that informed choice will not occur because of various endogenous and exogenous constraints. Figure 3.1, adapted from Brown, Gallery and Gallery (2002, p. 74), depicts this framework.

Figure 1 refers to endogenous constraints as inadequate financial expertise, member disengagement and risk transfer costs. Brown, Gallery and Gallery (2002) suggest that a certain level of financial literacy is essential if members are to make informed investment choices. Informed decisions require an evaluation of fund investment strategy, investment portfolio, and the expected risks and returns, in order to evaluate a match to members’ risk-return preferences. They also argue that many superannuation fund members lack the financial knowledge and skills necessary to perform such tasks.

Listed as exogenous constraints in Figure 1 are both information asymmetries and regulatory failure. Brown, Gallery and Gallery (2002) suggest that at the core of informed active choice are policy resolutions on regulatory intervention, disclosure standards and education programs. They argue (p. 79) that:

Even if all the (endogenous) constraints could be effectively addressed the exogenous constraints of information asymmetry arising from multiple agency problems remain a pervasive problem confronting all employees in a choice environment. These problems are compounded by regulatory failures in the extant regulatory regime.

A policy resolution listed in Figure 1 is a member education program. Brown, Gallery and Gallery (2002, p. 86) argue that:

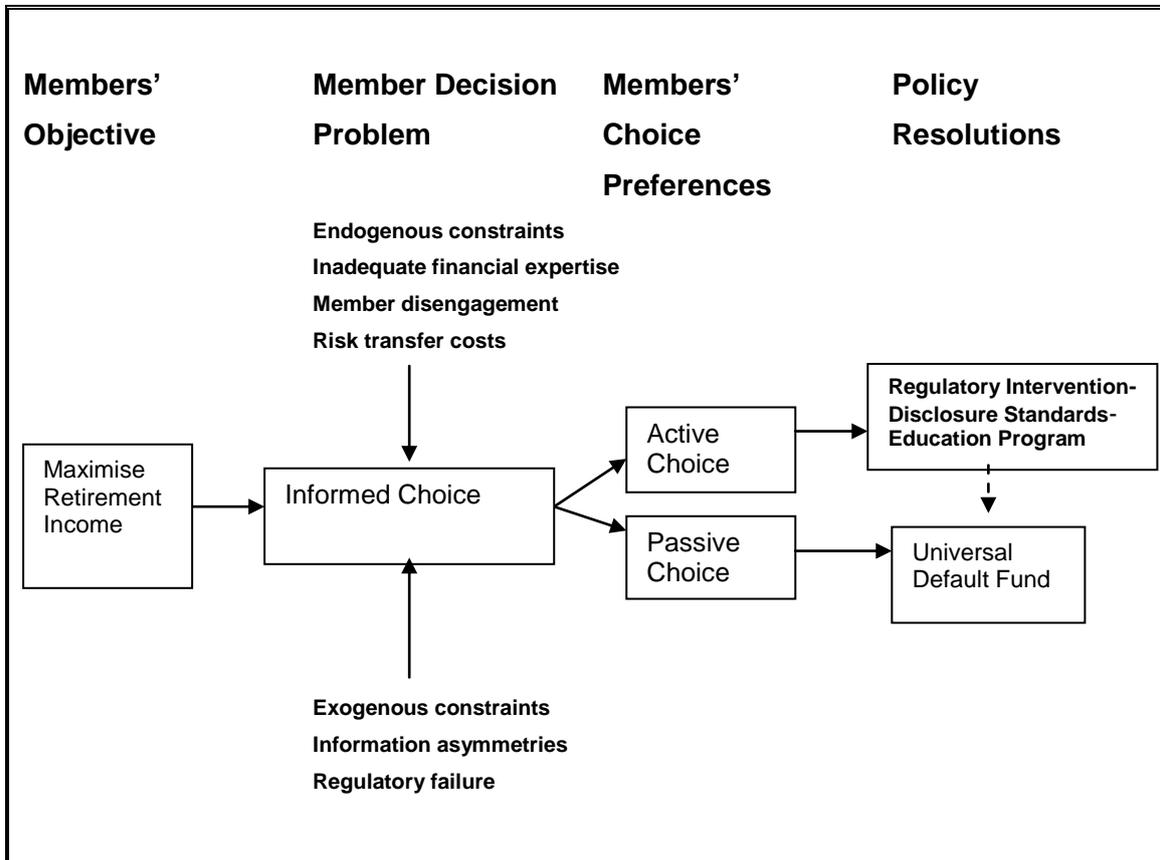
...education programs should be targeted to those members who are prepared to actively engage in decisions regarding the management of their superannuation savings.

The Brown, Gallery & Gallery (2002) model also incorporates a default fund option. It has been argued that it is justifiable for the government to run a default fund as it is obliged to provide support to those members who are incapable or unwilling to manage their own savings (Brown, Gallery & Gallery 2002; Brown, Gallery, Gallery & Guest 2004; Gallery & Gallery 2005). Brown, Gallery and Gallery (2002, p. 87), argue that:

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In combination, a standardised disclosure regime, appropriate member education and the option of a government-run default fund are more likely to lead to an environment where informed choice is achievable...

Figure 1 Superannuation Choice Framework



Source: Brown, Gallery and Gallery (2002, p. 74)

Clark-Murphy, Kristofferson and Gerrans (2002) surveyed members of UniSuper around the time of the formal introduction of the choice of fund legislation. Unisuper is an industry superannuation fund that covers employees in Australian universities. Clark-Murphy, Kristofferson and Gerrans (2002, p. 77) conclude that:

The issue of knowledge is significant since there is consistent evidence that employees feel they are ill-informed about superannuation and may not be equipped to make decisions required of them.

The Clark-Murphy, Kristofferson and Gerrans (2002) study reviewed demographic influences on the extent to which respondents found the decision to stay with the defined benefit fund or switch to a defined contribution (accumulation) plan difficult, and why they found it difficult to make a choice between funds. The defined contribution fund offered a choice from four different investment strategies varying from low risk (conservative) to high risk (aggressive). They found that 31.6 per cent of Unisuper members failed to respond to a request to make a choice of fund. Of those who did

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respond, 51 percent chose to remain with their existing arrangements (defined benefit fund), whilst the other 49 percent opted to move to a defined contribution fund. Brown, Gallery and Gallery. (2002) argue that member disengagement results from the individuals choosing to avoid having to make the complex investment decisions necessary as part of active choice. Further results, from the Clark-Murphy, Kristofferson and Gerrans (2002) statistical tests revealed that gender and age were significant factors in identifying which employees will experience difficulty with superannuation choice decisions. It was found that women and younger respondents were more likely to find the superannuation choice decisions more difficult.

Brown et al. (2004) surveyed a random sample of 620 academic staff from 14 Australian universities who were selected from staff from two Schools (Accounting and Finance, Physical Science). They examined why the majority of Unisuper members chose to remain in a defined benefit fund when offered the option of transferring to a defined contribution fund. Their findings indicate risk transfer costs played a key role in the majority of members rejecting the contribution fund choice. Brown et al. (2004, p. 6) state that:

Becoming informed is costly, particularly in relation to complex superannuation issues. Such costs include the time taken to acquire, read and interpret relevant fund reports and other investment material, attend training sessions, and seeking professional advice from financial experts or other information intermediaries. There is also the risk and associated costs of making the wrong decision.

Brown et al. (2004) suggest a risk-return trade-off in the decision to stay with the defined benefit plan or transfer to a defined contribution fund. A switch to the contribution plan option could potentially provide higher returns but with less certainty, whilst remaining in the existing defined benefit plan had a more certain future outcome.

5. The Role of Financial Education

Bernstein (1996) states that the behavioural research evidence suggests irrationality, inconsistency, and incompetence in the way people approach and arrive at decisions and choices when faced with uncertainty. Financial education is recognised as a potentially important avenue to improve the quality of financial decision making (Duflo & Saez 2003). Therefore, the role financial education plays in changing the behaviour of individuals towards retirement saving will be highlighted. Financial education has many different meanings in various contexts. Choi, Liabson, Madrian and Metrick (2002, p. 100) suggest:

The definition of what constitutes 'financial education' is also subject to interpretation and is likely to vary from one respondent to another.

Fox, Bartholomae and Lee (2005, p. 195) state that:

Financial education can include any program that addresses the knowledge, attitudes, and/or behaviour of an individual towards financial topics and concepts.

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The most comprehensive and broadest definition of financial education is provided by an OECD Report (OECD 2005, p. 26) that defines financial education as:

The process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being.

The OECD further define information, instruction and advice as follows (OECD 2005, p. 26):

- information involves providing consumers with facts, data and specific knowledge to make them aware of financial opportunities, choices, and consequences;
- instruction involves ensuring that individuals acquire the skills and ability to understand financial terms and concepts, through the provision of training and guidance; and,
- advice involves providing consumers with counsel about general financial issues and products so that they can make the best use of the financial information and instruction they have received.

The broadness of this definition is necessary to capture a myriad of educational vehicles, materials and programs now provided to superannuation fund members by superannuation funds.

6. Implications of Financial Education on Behaviour

The provision of financial education to those who lack adequate levels of financial literacy is one of the tools that have been utilised, in various forms, to assist those making investment decisions. Hilgert, Hogarth and Beverly (2003) concluded that increases in financial knowledge may lead to improved financial management practices. It has been shown that as an individual's financial knowledge increases so will their ability to plan better and save for retirement (Lusardi 2005; Lusardi & Mitchell 2007; Hershey & Mowen 2000). Further, on this issue Clark, d'Ambrosio, McDermed & Sawant (2006, p. 47) argue that:

A lack of financial education may cause workers to start saving too late in life to realize their retirement goals. As a result they are unlikely to achieve an optimal balance between current consumption while working and future consumption in retirement. In addition, a lack of information concerning the risk-return distribution of various investments might lead them to misallocate their retirement portfolios.

Research has been conducted to evaluate the influence of financial education in changing individual savings behaviour and investment decision making for retirement savings. The implications of this research support the premise that

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various types of education programs do change the retirement saving intentions and behaviour of individuals (Bayer, Bernheim & Scholz 1996; Clark & Schieber 1998; Lusardi 2003; Bernheim & Garrett 2003; Muller 2003; Nyce 2005; Lusardi 2005; Kerry, Clayton & Olynyk 2007; Clark et al. 2006). Maki (2004) argues that it is greater financial knowledge gained through education programs that alters household decision making. The importance of financial education was emphasised by Alan Greenspan (2002), former head of the US Federal Reserve, and reported in a prepared statement, that:

Education can play a critical role by equipping consumers with the knowledge required to make wise decisions when choosing among the myriad of financial products and providers.

In Figure 2 'Tools for Achieving Adequate Retirement Income' the OECD (2008) recommends that financial education should be complemented by regulation and other approaches such as automatic enrolment. However, the OECD emphasises the importance of financial education as a central tool in providing awareness, information, instruction and advice in ensuring that adequate retirement income is achieved. The OECD (2008, p. 112) concludes that:

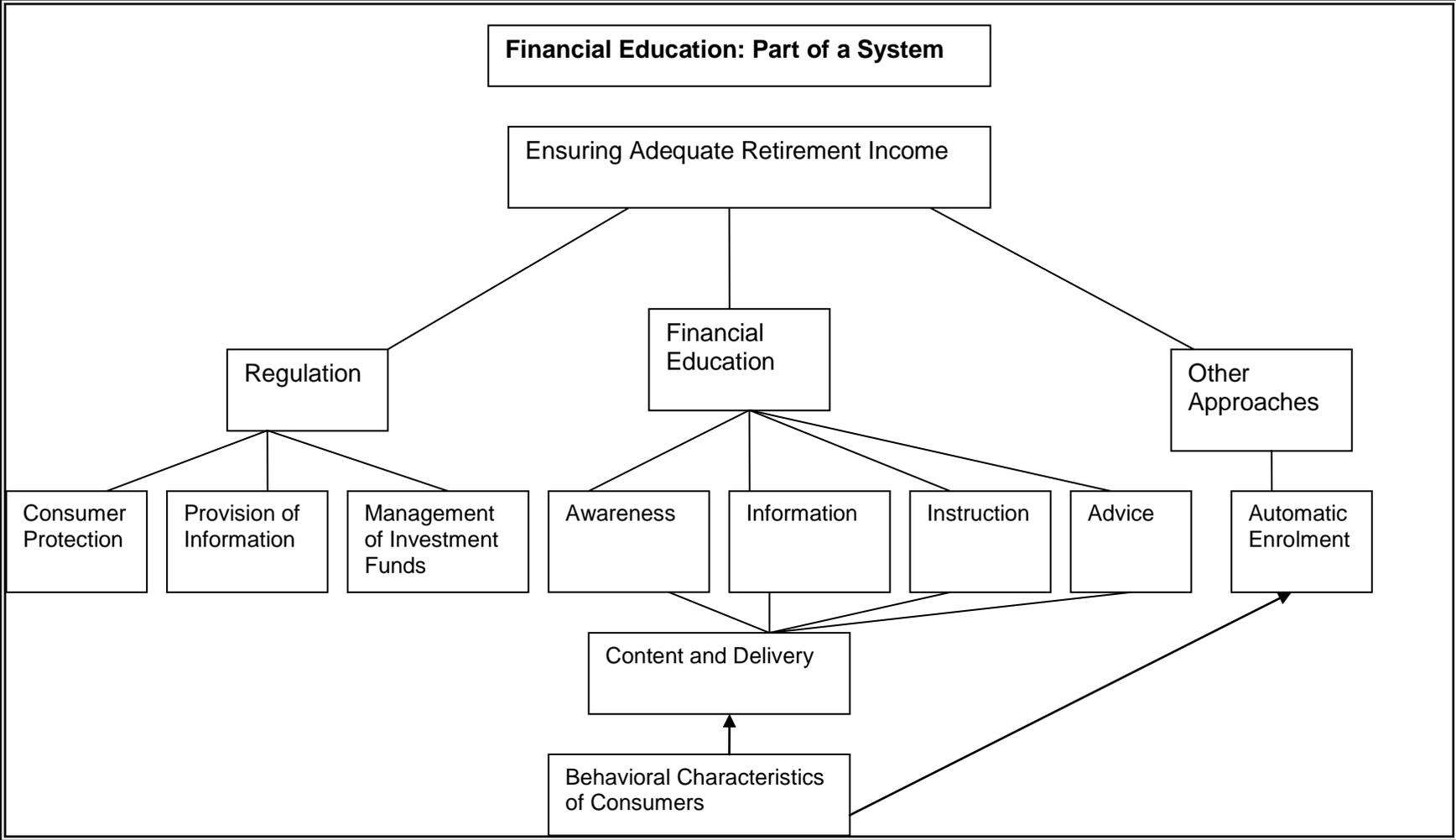
Surveys and experience show how financial education is urgently needed, and can play an important role in helping workers achieve an adequate retirement income.

Content and delivery of financial education form an important element of the education model presented in Figure 2. The OECD (2008, p. 112) state that "providers of financial education must ensure that the content and the mode of delivery are appropriate for the target audience". Therefore it is vital that we investigate whether superannuation fund provided education is providing defined contribution members with the resources necessary to make informed choices.

7. Conclusions

In this paper it has been shown that the importance of financial education for informed investment decision making is well documented in the literature. It has also been shown that individuals without appropriate financial knowledge and skills are likely to lack the capacity to save adequately for their retirement needs. Therefore, well directed and structured educational programs are required to eliminate individual gaps in knowledge. This approach may lead to more informed decision making on retirement savings issues.

Figure 2 Tools for Achieving Adequate Retirement Income



Source: OECD (2008, p. 116)

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