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Agenda

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Myopia or yours? How pension reform can encourage saving for retirement

Most EU Member States have instigated some degree of pension reform and have introduced measures to encourage saving for retirement. Behavioural economics has had much to say about why individuals may make sub-optimal decisions while planning for retirement. How can pension policies address the concerns raised, and what is the trade-off between securing personal commitment to saving and retaining flexibility?

How can governments assist individuals in saving for their retirement? This question has been important for many European countries, as they have tried to reform their national pension systems. In doing so, it is important for governments to understand why individuals make the savings choices that they do.

The way people choose to save depends to a great extent on how much they value the present over the future. Economists claim that individuals 'discount' the future at different rates, leading to different patterns of lifetime consumption—people who care more about today than tomorrow have higher discount rates and save less. High discount rates can be rational if individuals prefer consumption while they are younger. They can also be irrational if they are the result of an impulsive preference for immediate gratification. Later in life, these individuals may regret their earlier consumption and savings choices—such individuals are referred to as 'myopic'. There are both informational problems and self-control issues arising from the existence of myopic decision-makers. Governments can play an important role in addressing these issues and hence reducing future regret through their pension provision arrangements, by helping people to make better long-term plans and decisions.

This article looks at how policy-makers have dealt, or may deal, with the need to encourage more saving, and the ways in which a 'one-size-fits-all' mandatory pension scheme may not adequately account for differences in individuals' actual discount rates. If greater flexibility is desirable, policies to overcome an individual's natural inclination to procrastinate in signing up for saving schemes could be important.

Tomorrow, and tomorrow, and tomorrow: the psychology of saving

Textbook economic theory suggests that individuals will spread their total lifetime income across time, through borrowing and saving. The result of this is to make consumption levels smoother over time than actual earnings.

However, evidence on life-cycle consumption patterns tends to reject this standard theory. Consumption tracks income much more closely than the smooth optimal path would suggest, with 'under-saving' occurring relative to the textbook model. In addition, there is a discrete reduction in consumption at retirement age, leading some authors to conclude that individuals do not save enough in preparation for retirement. As the composition of the adult population shifts towards a greater proportion of retirees, widespread retirement planning shortfalls have become an increasing concern for governments.

The integration of psychological concepts into economic theory has been used to help explain various patterns of behaviour. Under-saving, for example, has been analysed in the context of individuals who have a bias towards immediate gratification—'I want it now'. Such individuals make plans for the future, but fail to adhere to them because, at each point in time, they prefer to consume more immediately.[1] Acting on this impulsiveness may make individuals regret past decisions later on—this is often referred to as a negative 'internality'[2]—a detrimental effect on an individual's future well-being caused by a decision made at the present time, which is not adequately taken on board by the 'present' individual.

Help them that help themselves: issues for pension policy

Pension policy may attempt to address such shortcomings in individuals' decision-making. However, this can lead to some difficult questions.

– Should the government directly intervene in an individual's savings decisions?

– How much flexibility should be retained?

– Are there likely to be any unexpected adverse effects (eg, early retirement)?

Commitment

A simple solution to the problem of getting people to save more for retirement may be for governments to force them to increase their savings—many governments do this through public pensions funded through taxation and by implementing private but mandatory savings accounts. But is such paternalism the best solution? Behavioural economics suggests that individuals are either naive or sophisticated. Naive individuals believe that they will act in the future exactly as they plan to today.[3] Greater mandatory saving may be preferable in this case to overcome the informational problems on the part of individuals—naive individuals are unaware of, or are unable to process, the implications of their future impulsiveness.

Sophisticated individuals, on the other hand, do not suffer from informational constraints, and as such are able to appreciate their own impulsiveness. The theory suggests that they will voluntarily seek out external commitment mechanisms, such as savings products, or use an internal commitment mechanism, such as exercising self-control, without being forced to do so.

An additional implication of myopic preferences is that they alter decisions in situations where costs and benefits are received at different times, which is relevant for pension savings plans. When an action imposes an immediate cost on an individual, but the benefits from that activity are received at some point in the future, myopic individuals tend towards delaying taking action or inertia. The costs of making a decision can include the following.

– **Monetary costs**—savings products are not free of charge, and savers may require professional advice.

– **Time and effort costs**—making a savings plan is complex, and requires a great deal of work to fully understand how different savings choices will impact future well-being.

While such costs may be small compared with the actual benefits of making a retirement plan, individuals with a bias towards the present will tend to put off the decision until a later date. Thus, even if they are able to appreciate their own impulsiveness and the internalities that present consumption choices may create for future well-being, they may not be able to deal with this. Pension policy could, therefore, look to encourage individuals to overcome their natural inertia. Forcing people to save will do this, but the government may be able to introduce less drastic incentives to achieve the same outcome.

Flexibility

Given that individuals may either fail to understand their self-control problems, or may understand these problems but find that they put off enacting a plan to counter them, why don't governments simply dictate all savers' behaviour? One possibility is that individuals (and hence, their governments) also place a value on the flexibility arising from the effect of uncertainty and the fact that individuals may differ from each other in a number of ways, which may not be known by policy-makers. An overly paternalistic pension policy may offer insufficient flexibility.

– Uncertainty about future incomes may make stringent contribution rules excessively arduous in low-income periods. If income fluctuates over the year, mandatory monthly contribution rates could reduce welfare compared with yearly contribution rates. For individuals who experience rising wages over their working life, it is generally optimal to save at a higher rate in later life—consumption, rather than saving, is what needs to be smoothed.

– Not all individuals will have the same preferences—it can be a problem for policy-makers to distinguish individuals who have strong but rational preferences for consumption in early periods from those who have strong preferences for the present period due to myopia. A pensions policy would need to provide sufficient commitment to encourage greater saving from the myopic individuals, but enough flexibility to avoid excessively constraining those individuals who are saving rationally. Given the policy-makers' informational constraints over an individual's 'type', the design of a saving scheme will need to be based on a trade-off between commitment and flexibility.[4]

Early retirement

In a standard life-cycle model, individuals decide simultaneously how much to save for retirement and when to retire. The distortionary effect of pension schemes on retirement ages has been well documented,

but the issue has received little consideration in the context of a behavioural model with myopic individuals.

A myopic individual may impulsively decide to take retirement earlier than originally planned, due to their desire for immediate gratification.[5] This decision would be conditional on the amount of savings they have accumulated, and the proportion immediately available. One conclusion of this is that myopic individuals who are forced to save more than they would otherwise have done may switch to earlier retirement as a means of maximising their short-term utility. Clearly, this would cancel out the benefits from increased saving. It is therefore not sufficient simply to encourage people to save for retirement when they are young—it is also necessary for them to make good decisions about retirement when they are older.

A far, far better thing: will recent reforms succeed?

The above shows that pension policy should encourage commitment while maintaining adequate flexibility, and avoid causing undesirable consequences (eg, early retirement). How have different countries attempted to achieve this?

A recent OECD working paper discusses different countries' pension schemes in the context of a behavioural economics approach to the savings decision.[6] The focus of the paper is on alternative theories of risk aversion, over-confidence and 'bounded rationality'.[7] It discusses how these behavioural traits may cause problems for individuals' decisions about how to invest the pension savings accumulating in their mandatory individual accounts, since individuals may not choose to invest their savings in a portfolio that best matches their preferences relating to risk and returns. The following considers not the question of 'how to save', but rather the question of 'how much to save'. The focus is on the self-control issue, the effects of procrastination and the requirements of flexibility.

There are a number of policies that governments can, or have, adopted, which are relevant to this discussion, ranging from interventionist approaches to less drastic measures:

- mandating a given level or rate of saving;
- setting default options;
- introducing tax incentives to motivate certain behaviour;
- offering financial education and improving financial literacy.

Mandating saving rates

Many Member States have pension systems which require individuals to save a certain proportion of their income each year. This mandatory saving can occur in different ways. First, countries may operate a public pension system as the first pillar of retirement provision, which is funded through taxation or social security contributions, and which guarantees individuals at least a minimum income at retirement.

Another way of mandating savings is through compulsory private pension schemes, which may take the form of mandatory individual accounts, to which individuals make contributions that are invested. Sweden has led the way with such a system in Europe, and mandatory individual accounts systems have also been implemented in Poland and other countries in Central and Eastern Europe.

Mandatory saving schemes force individuals to save more than they otherwise may have done by committing them to future saving behaviour. While some European countries provide generous public pension schemes or have established mandatory private pension schemes with minimum contributions, in others, governments have focused more on providing commitment mechanisms for savers to use on a more voluntary basis—trading off more flexibility for potentially less commitment. As discussed by Amador, Werning and Angeletos (2006), a minimal saving policy may be optimal when trading off demand for commitment with the need for flexibility.[8]

Fixing default options

Default options have been shown to be a major determinant of behaviour in situations where choices are complicated, both in terms of how much to save, and getting individuals to save in the first place. A summary of evidence is provided by Beshears et al. (2006), who argue that participation in savings schemes has been shown to be influenced by a move from opt-in to opt-out arrangements, and that default contribution rates in voluntary saving schemes also appear to be influential in determining individual behaviour.[9]

For example, in the UK, the new Pensions Bill plans to automatically enrol individuals who are not enrolled in some other occupational pension scheme to a Personal Account. Automatic enrolment makes contributing to a savings scheme the default option—this may be expected to overcome the inertia that many people experience.

Default options exploit human psychology in order to increase saving. However, unlike mandatory saving rules, they retain flexibility—individuals who value such commitment less or value flexibility more are able to leave the scheme. Furthermore, it is likely to be the less myopic individuals that make this decision—individuals that, by definition, require less external pressure to achieve their optimal amount of retirement saving, and place a higher value on flexibility.

Introducing tax incentives

Tax incentives have been used in many countries to promote saving—this is where contributions to a pension scheme or particular forms of saving offer the individual saver a tax shield. It is unclear what effect tax incentives have on the extent of saving, especially as many of these incentives amount to tax deferrals rather than complete exemptions. For example, in several countries, there has been a move from TEE systems to EET systems.[10] The former impose a tax on income before it is saved, but no tax on retirement saving payouts; EET systems do not tax income that will be saved, but tax retirement saving payouts. Hence, an EET system is a tax deferral. No tax is paid on capital gains or returns, leading to a 'modest' tax advantage. These may increase saving, but not necessarily living standards, because increases in saving may be used to offset higher taxes in retirement rather than decrease under-saving impulses. The deferral of taxes may, in some cases, lead to an individual facing lower tax rates in the future compared with now, which would encourage additional saving. Alternatively, tax incentives may induce savers to switch assets within their existing portfolio, but generate little new saving.[11]

For a given saving scheme, tax deferrals may have an additional effect: they give myopic individuals higher incomes in earlier periods at the expense of lower retirement income. This is desirable to an individual who wants to avoid future self-control problems but still has a bias towards consumption today. A shift from a TEE to an EET framework may reduce delaying in signing up for a saving scheme by making the immediate benefits of a given scheme greater. This in turn may incentivise savings into the scheme, meaning that the tax deferral on saving contributions may be beneficial overall.

Educating people

An additional role that governments can play is through education and the provision of information. Some positive effects of financial education on retirement saving have been reported in academic studies.[12] Such findings can be interpreted within the framework of a procrastinating myopic individual—general financial education programmes or specifically targeted retirement seminars may reduce the costs of retirement planning by decreasing complexity, and reinforcing the benefits. The use of education programmes permits flexibility, as myopic individuals are more likely to voluntarily deal with their self-control problems if they are given (and able to process) the information that can assist them to make better retirement decisions.

Improving financial literacy is now a major policy objective across Europe, and governments have stated ambitions to increase the ability of individuals to make more informed financial decisions, including in particular those relevant to retirement savings.

Concluding remarks

Individuals may save insufficiently for retirement, due to a preference for immediate gratification which they may regret later in life. Enhancing the level of private retirement savings is likely to remain high on the policy agenda.

The appropriate form of policy intervention remains a controversial topic—it depends on the source and nature of the problem of under-saving. Greater mandatory saving and paternalism may be required when individuals are badly informed about the future, and specifically their future impulsiveness. However, dealing with the pure 'internality effect'—'I don't care so much about my future self'—may not require such paternalism if individuals fully appreciate their own impulsiveness. There may be a role for government in enabling people to combat this by decreasing the tendency for myopic savers to put off making decisions.

Different policies can and have been used to increase individual saving. They must retain enough flexibility to deal with the reality that individuals differ in a number of unobservable ways. Pension policy may mandate greater saving, but a 'one-size-fits-all' policy may not be optimal if it offers inadequate flexibility. Alternatively, the government could introduce incentives to encourage individuals to save more—for example, by providing tax incentives for retirement savings. The manipulation of default positions, as well as increased emphasis on financial education, have also been shown to be additional policy tools.

[1] While the literature on this dates back to Strotz (1956), the popularisation of such preferences can be credited to David Laibson. Strotz, R.H. (1956), 'Myopia and Inconsistency in Dynamic Utility Maximization', *The Review of Economic Studies*, **23**:3, pp. 165–80; and Laibson, D. (1998), 'Life-cycle Consumption and Hyperbolic Discount Functions', *European Economic Review*, May.
[2] Whitman (2006) discusses the literature on internalities, and why their existence is not necessarily an argument for government intervention. Whitman, G. (2006), 'Against the New Paternalism: Internalities and the Economics of Self Control', Policy Analysis No. 563, CATO Institute, February.
[3] Similar implications come from an alternative model by Loewenstein, O'Donoghue and Rabin (2003), who suggest that individuals suffer from a projection bias (meaning that they do not fully appreciate their future preferences) and a tendency to form habits. Like naive individuals, they do not appreciate how they will under-save. Loewenstein, G., O'Donoghue, T. and Rabin, M. (2003), 'Projection Bias in Predicting Future Utility', *Quarterly Journal of Economics*, **118**:4, pp. 1209–48.
[4] Amador, M., Werning, I. and Angeletos, G.M. (2006), 'Commitment vs. Flexibility', *Econometrica*, **74**:2, pp. 365–96.
[5] See, for example, Diamond, P. and Koszegi, B. (2003), 'Quasi-hyperbolic Discounting and Retirement', *Journal of Public Economics*, **87**, pp. 1839–72.
[6] Tapia, W. and Yermo, J. (2007), 'Implications of Behavioural Economics for Mandatory Individual Account Pension Systems', OECD Working Papers on Insurance and Private Pensions No. 11.
[7] A fully rational individual is able to process all available information relating to the consequences of their choices. For example, they understand exactly what a given saving rate will mean for expected retirement income, and can decide what life-cycle saving profile will maximise their lifetime utility. A 'boundedly rational' individual is not able to do this; as a result, their behaviour may deviate from that predicted by purely mathematical models. A common example of such bounded rationality is the use of 'rules of thumb' in saving—a large proportion of individuals save 10% of their income, regardless of circumstances. Many of these individuals are unable to predict what such a saving rule will mean for their retirement income.
[8] Amador, M., Werning, I. and Angeletos, G.M. (2006), op. cit.
[9] Beshears, J., Choi, J., Laibson, D. and Madrian, B. (2006), 'The Importance of Default Options for Retirement Savings Outcomes: Evidence from the United States' NBER Working Papers 12009.
[10] Attanasio, O., Banks, J. and Wakefield, M. (2004), 'Effectiveness of Tax Incentives to Boost (Retirement) Saving: Theoretical Motivation and Empirical Evidence', IFS working paper.
[11] Attanasio, O., Banks, J. and Wakefield, M. (2004), op. cit., conclude that little new saving resulted from tax-advantaged savings accounts in the UK.
[12] Oxera (2008), 'Financial (Il)literacy: Do Consumer Education Programmes Work?', *Agenda*, March. Available at www.oxera.com.