

VOLUNTARY RETIREMENT SAVINGS: MOTIVATIONS, INCENTIVES AND DESIGN

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MOTIVATIONS

Before considering what we know about the effective design of Voluntary Pension Systems and how the provision of incentives and elements of human behavior influence them, it is useful to review why voluntary pension systems are increasingly important.

In pension systems, demographics is destiny. At current rates of fertility and mortality the steady process of population expansion will soon reverse to population decline in nearly every high and middle income country. We will simply overwhelm the capacity of traditional public pension systems, which have typically relied on pyramid shaped population structures with many workers for each retiree to provide reasonable income replacement rates. While this might be resolved with increased tax rates, setting these at a level that can sustain most systems is surely politically unsustainable in nearly every setting.

In addition, mandatory savings systems that do not rely on these intergenerational transfers have not done a very good job in terms of reaching the full population. In most countries, coverage among these has not been able to exceed about 50% and lifetime contribution rates are not high enough to produce replacement levels of income, so some way will have to be found to supplement these, both to increase benefit levels and reach groups who are not currently participating.

Of equal importance, most mandatory public systems have a significant defined benefit element that provides benefits that are directly linked to labor earnings. Voluntary systems however have become almost exclusively defined-contribution and produce benefits that are a function of returns on capital invested. As any portfolio manager knows, if you have a non-correlated return series, you get better diversification and therefore greater long-term risk and return efficiency. Voluntary systems thus serve as portfolio diversifiers in the retirement income system.

Voluntary pension systems also provide an important means of adaptation in the

new competitive global economy. Employers in more open labor markets need both to compete for the highest value workers and to protect their investment in the training or human capital of the workers. Voluntary systems can provide important tools to facilitate this process by allowing employers to use them to attract and retain workers. This sorting process improves the efficiency of internal labor markets and enhances countries' global competitiveness.

Finally, voluntary systems are important in the political economy of pensions. As pension systems adapt to the emerging demographic realities, benefit promises will have to be reduced for some, usually the higher paid. To make this adjustment politically feasible they need to be given some means to compensate for these reductions. Voluntary pension systems provide this opportunity.

In response to these pressures, three primary groups of voluntary systems have emerged:

1. **Pure Retail Funds**, The Individual Retirement Accounts (IRA); where their commercial asset managers provide a vehicle for a more highly regulated and typically subsidized investment product. Examples include IRAs in the United States; the new Reister pensions in Germany and, interestingly enough, a new system in Pakistan.
2. **Hybrid Systems**. These utilize a combination of public and private institutions. One version of this uses a public interface with the member to collect contributions and maintain accounts and private asset managers for the investment. The best known example of this is the "Swedish Premium Pensions" that uses a publicly managed clearinghouse to direct money to private managers.

Another version of the hybrid design is based on a private interface in which employers organize the system and direct contribution through payroll deductions which are then invested in large public pools or through a highly regulated set of private asset managers.

Voluntary contributions in Chile and Mexico function in this manner as, effectively, do most of the so-called 401K plans in the United States, where most workers now direct their investments to a set of mutual funds selected by the employer who has organized the arrangement and takes money directly from the worker's pay check.

3. **Traditional Employer-Managed Funds** in which the employer establishes the system for its own workers and fully manages all aspects of its operation. These are less prevalent but still very important in many Anglo Saxon countries.

All of these designs require some basic enabling conditions to be able to function, which must be present before issues of incentives and efficiency are of any relevance. These include the presence of reliable financial institutions, long-term savings instruments and an appropriate legal framework of consumer protection. In addition, for employer sponsored systems to work, the efficient market pricing of labor is required. Employers will not sponsor a pension plan and bear the cost and risk, or make contributions on behalf of their workers, unless they can recover those costs in an efficient offset to the wages they pay. These are not paternalistic gifts but rather tools in labor force management.

Beyond these basic questions of design and enabling conditions, the far more complex and interesting issues in voluntary systems are related to incentives for participation and understanding how patterns of behavior among members can be best understood and considered in organizing and operating the systems. This includes two main sets of issues: economic incentives related to decisions about sponsorship of plans and participation, and behavior associated with decisions regarding membership, including how much to contribute and how to manage the account.

ECONOMIC INCENTIVES

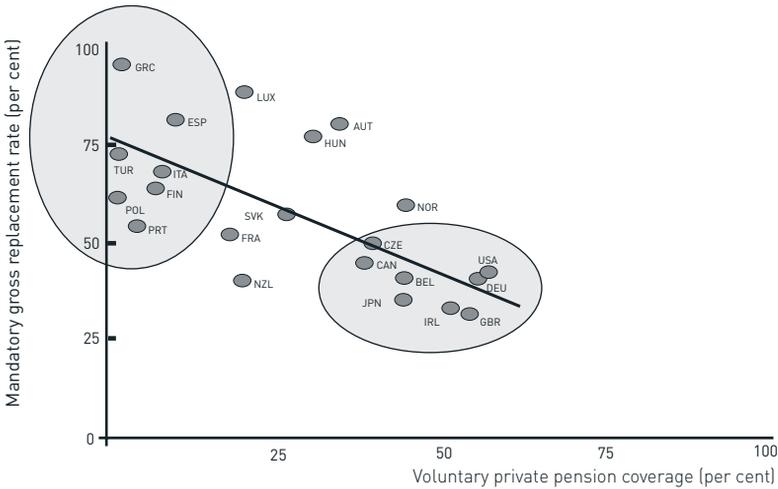
Economic incentives may be seen as both negative and positive. Negative incentives motivate individuals to save through an awareness of the necessity. Positive incentives motivate individuals through inducements. Before turning to a discussion of the primary manner in which countries have sought to establish incentives for voluntary pension coverage, the provision of tax subsidies, it is instructive to review the broader evidence on prevalence of these systems. This comes from the OECD countries where they are far more common than elsewhere and from which most of what is currently known about these systems is derived.

Generosity of the Public System

In evaluating what factors are of the greatest influence in determining the extent of voluntary pension coverage, the evidence indicates that in fact it is not the availability of subsidies but rather the limitations of the existing mandatory public pension system that appears to have the greatest influence on voluntary pension coverage. A recent OECD study compared the percentage of voluntary pension coverage with the income replacement rates for a typical worker from the mandatory public system and found that, as expected, there is an obvious and relatively strong relationship as shown in Diagram 1 below.

DIAGRAM 1

PUBLIC PENSION GENEROSITY AND VOLUNTARY PENSION COVERAGE



SOURCE: OECD, PENSIONS AT A GLANCE, 2007

This indicates that the best way to motivate the development of a voluntary pension system is simply to reduce the generosity of the public system, and the market forces will compensate in the expected manner.

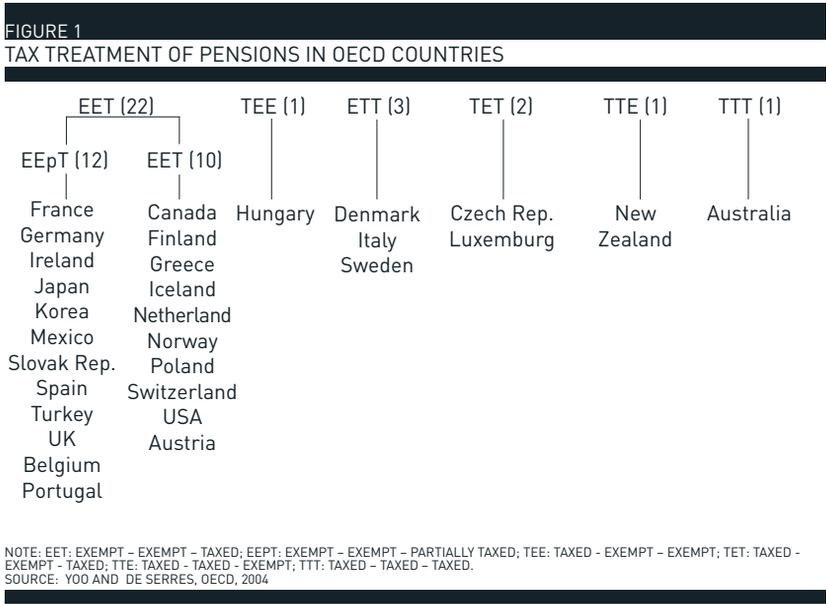
Tax Incentives

The other means that policy makers more typically (or at least openly) focus on are the establishment of positive incentives in the form of tax preferences. These nearly always exclude some aspect of the voluntary pension system from taxation to either defer or fully remove it from the taxation. Typically this occurs at three points: (1) the taxation of income when contributions to a system are excluded, (2) the exclusion of earnings or appreciation of investments from taxation or (3) excluding benefit payments from taxation. The tax treatment of pensions are typically classified on the basis of the treatment at each these points. A typical tax treatment of non-pension savings would tax income, tax the earnings on any savings when they accrue, but exempt the value of the accrued savings when they are withdrawn. This would be depicted as a TTE (Taxed-Taxed-Exempt) treatment. A common treatment of voluntary pension is exactly the opposite of this, in which income that is contributed

is not taxed, earnings are not taxed and the whole amount is then taxed at a later date when it is withdrawn: an EET (Exempt-Exempt-Taxed) treatment.

As long as tax rates are the same at every point in time, these should be equivalent. However, in a progressive income tax system in which rates are higher for higher income, most individuals have lower effective tax rates after they retire because their income is lower and so they may pay a much lower amount in taxes and at a much later date, which every first-year economics student knows has some value.

Within the OECD countries there is a wide range of tax treatments of pension systems, that range from the traditional examples of “Exempt, Exempt, Tax” to various forms of partial taxation. These are shown in Figure 1 below:



Tax Policy Issues

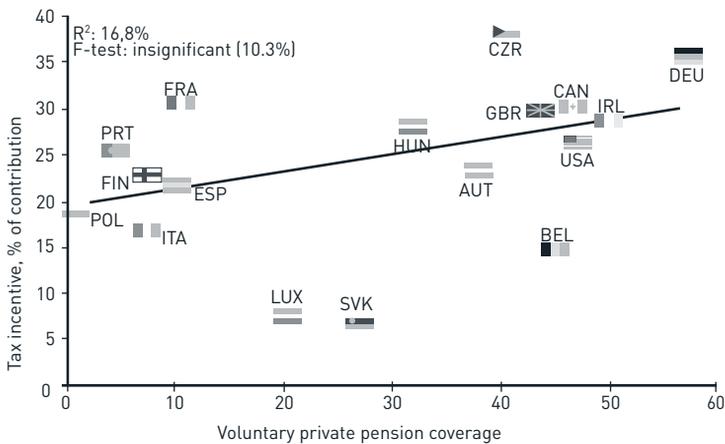
The use of tax incentives for voluntary pension systems raises a number of important questions that must be considered in evaluating whether this is an efficient and cost-effective way to create incentives. Three of the most important questions are: does participation in voluntary pension system improve with the level of tax incentives; do they lead to an overall increase in savings on an individual or national level; and

is the distribution of subsidies fair and desirable. The variations and experience of these OECD countries provides some interesting, if not fully conclusive evidence on all three of these questions.

Is the Generosity of Tax Incentives related to the Level of Coverage?

A recent analysis by OECD staff that compares the value of tax subsidies with coverage levels is shown in Figure 2 below:

FIGURE 2
THE VALUE OF TAX INCENTIVES AND VOLUNTARY PENSION COVERAGE



SOURCE: OECD, 2007

As is evident from the distribution of the little flags (depicting each of the OECD countries with a voluntary pension system) there does not appear to be a very strong relationship between the value of tax subsidies and voluntary pensions. While the ultimate level of voluntary coverage is due to a variety of factors, there is little evidence that the tax subsidy itself is among the strongest. This, of course, is consistent with the point made earlier about the important of the size of the public system.

The distribution of tax benefits

In this topic some of the best evidence is from the United States which has the largest voluntary pension system and probably the greatest overall tax subsidy at about 100 billion dollars per year of foregone revenue at the federal level. The table below shows how this was distributed among the quintiles of the income distribution in 2004.

TABLE 1
DISTRIBUTION OF TAX EXPENDITURES FOR RETIREMENT SAVINGS IN THE US

Income Quintile	% of Units	Share of total	Average Value (US\$)
Lowest	2.0	0.2	6
Second	12.7	2.9	78
Middle	25.0	8.2	218
Fourth	43.0	19.3	513
Highest	61.0	69.3	1,838
Total	28.7	100.0	531

SOURCE: BURMAN ET AL., 2004

This indicates that, of the overall value of the tax subsidy, only two-tenths of one percent accrued to the lowest fifth of the income distribution, while seventy percent went to the highest earning group. To some extent one would anticipate some higher share for the groups that get a lower return and benefits from the mandatory public system. However, this kind of outcome illustrates the extent of the challenge that tax subsidies present in achieving equitable outcomes.

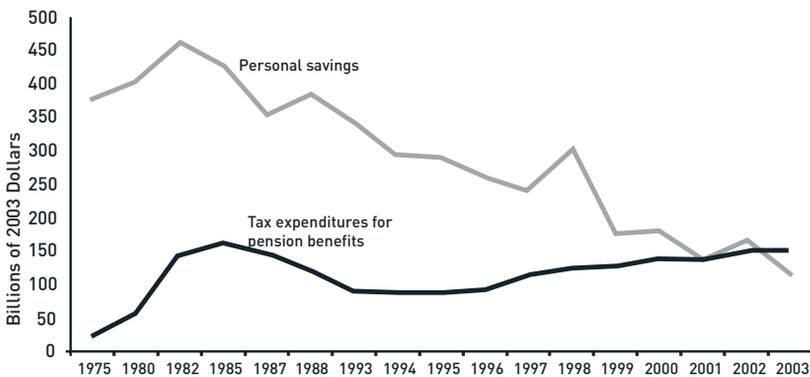
New Savings

Perhaps the most important question related to the provision of tax incentives is whether they really produce new levels of savings. There are two ways to look at this question. The first is at the individual level and asks whether individuals simply replace savings that they would have made otherwise with tax-subsidized savings. This has been a much studied issue in the US with the emergence of the defined contribution pensions that receive significant tax benefits. Some studies of the US conclude that nearly all of the additional contributions to tax-subsidized savings vehicles are offset by reduced savings elsewhere or by borrowing. Others find evidence of some degree of additional savings and conclude that there is a net addition. However, even the assessments that find net positive savings report

that, most optimistically, only about one third of tax-preferred savings are actually additional.

An alternative approach is to look at overall national savings. Here there is less specific evidence because it is very hard to distinguish the effects in relation to many other influences on overall savings rates, so the evidence should be interpreted as primarily anecdotal. The aggregate savings and pension tax expenditures for the US are shown in Figure 3 below.

FIGURE 3
TAX EXPENDITURES AND NATIONAL SAVINGS IN THE UNITED STATES



NOTE: TAX EXPENDITURE IS NOT STRICTLY ADDITIONAL. THE CASH-FLOW MEASUREMENTS ON THE GRAPH DO NOT REFLECT THE PRESENT VALUE OF PENSION SUBSIDIES.
SOURCE: TAX POLICY CENTER, 2004

This indicates that overall personal savings rates have declined despite an increase in tax subsidies in the decade from 1993 to 2003. There are of course many other very complex issues related to whether tax incentives are an effective way of increasing national savings levels or can make a positive contribution to economic growth. Most important among these are how they may influence the investment of pension fund assets and how the tax expenditure is financed.

On balance, however, there is not very compelling evidence that purely financial economic incentives through the tax system are the primary factor that determines the success of a voluntary pension system. On the contrary, the evidence seems to suggest that while they may have a net positive influence, tax incentives are a relatively imprecise and inefficient way to create high levels of participation.

Moreover, they come with a significant hazard in that they will not have a large net effect on savings and that the distribution of benefits in favor of higher income groups is well out of proportion to their impact on improving the savings of others.

Contribution Matching

The most commonly used alternative to tax incentives is some form of contribution matching to induce individuals to participate in voluntary pension savings arrangements. These may take the form of a one time “start up” grant to sign up members or an ongoing “match” of some portion of the amount contributed. This is perhaps the most direct and readily understood form of economic incentive.

A common practice in the 401k system in the United States is for the employer sponsoring the pension plan to provide a match of 1/2 of the first 6% of a participating worker’s pay that is contributed to the pension plan. Similar to studies on the effect of tax subsidies, the analyses of the net effect that this has on workers’ savings behavior remain somewhat inconclusive. Some show very small effects, while others conclude that the match increases savings by about 25% above what it might otherwise have been. This approach appears to be very effective in getting workers to begin saving. Longer-term evaluations seem to indicate that many eventually adjust their overall savings rates to the matching funds and do not indicate much long-term addition to savings.

Characteristics of members in voluntary pensions

The analysis in the US does provide an overall set of characteristics of those workers who seem to be induced to participate in these voluntary plans. If the overall economic incentives may have mixed effects, this at least suggests groups who might be targeted more specifically where the maximum outcome could be achieved. As would be expected, workers’ income is the strongest predictor. The age of the worker is also very important: there is a much higher rate of participation for workers over the age of 35. Length of time in a job (tenure) as well as union membership and the size of the employer also seem to be related to voluntary participation. The cause and effect of these secondary factors indicate some very complex issues in terms of employers selecting workers with certain attributes, or self-selection of workers into jobs with greater potential for voluntary coverage, so there is still very much to be learned.

What can be derived from the experience in these settings is that, where retirement savings are concerned, purely financial economic incentives by themselves are a useful, but not obviously sufficient way to increase voluntary pension savings. There are many other characteristics of individuals and their behavior that create a complex puzzle in understanding the best kind of designs and incentives.

BEHAVIORAL ISSUES

This puzzle has led to a great deal of interest and research in recent years into what has generally become known as behavioral finance, the study of how people respond to various other kinds of influences and what factors seem to be associated with different patterns of behavior. A great deal of this work has been directed to retirement savings and is very useful in considering the design of voluntary systems.

Soft Compulsion

There are typically three types of designs in voluntary pension systems that come under the rubric of soft compulsion. These are (1) automatic enrollment programs (sometimes called opt-out) programs that place individuals in a retirement savings program and require them to make an active decision not to participate (rather than the more traditional approach of requiring a decision to join), (2) establishing default choices that similarly simply make a decision for the member about savings rates and investment choices and (3) deferred savings programs that allow individuals to make savings commitments that become effective only in the future. All of these are attempts to address the problems of procrastination and the difficulty many people seem to have in making decisions in this area. They all seek to exploit the phenomenon of inertia which appears to apply as much in human behavior as it does in physics.

Among these, the most compelling evidence of importance to pensions is the impact of automatic enrollment. A series of studies in the US and the UK on programs that automatically enroll individuals in savings programs have indicated that this design increases participation by up to 60% in the first year and 15 to 30% over the longer term. A very recent study (Breashers et al, 2007) concludes that automatic enrollment has a greater overall effect than matching contributions over the long term. Another concluded that the effect on increasing participation in voluntary pension savings of this design was the greatest among younger and lower-wage workers, precisely the groups that have the lowest rates of participation. This has led several countries, including the United States and the UK, to include the ability to establish these programs specifically in their regulatory systems. New Zealand has incorporated it into the design of the new national pension program.

Default savings rates and investment choices have been found to have similar effects. Individuals seem to have some difficulty in making savings decisions and respond positively to guidance on choices if these are presented in the form of defaults which do not require them to make active decisions. The early studies of these indicate that a high proportion will simply choose the default choice rather than try to make a

decision. These indicate that a high proportion stick with the default savings rate for extended periods. In Sweden, 60% of contributions to the Premium Pension System (a defined contribution add-on to the national system) chose the default investment option after the first year.

A related issue with similar results has to do with deferral of savings decisions. In their well-known study, Benartzi and Thaler (2004) found that if workers were given the choice to save a portion of future pay increases, they had much higher savings rates over the longer term than when they had to make a decision in every time period to increase their savings. All of this provides important evidence, in the sense that it is likely that the most powerful means to increase pension savings is to exploit people's tendency to avoid decisions and to remain with a course of action once it has been imposed on them. This has led to the widespread incorporation of "escape from freedom" principles in the design of voluntary systems.

Financial Literacy, Trust and Information

There are a number of other important behavioral factors that are also of great relevance to patterns of participation. These primarily have to do with understanding the characteristics of individuals who are more or less likely to become members and how these can be included in the design of systems.

An important factor that influences the likelihood of an individual's saving through a voluntary program is the degree of understanding of how financial systems work and the role of long-term savings in retirement income, two issues that are included typically in what is more broadly termed "financial literacy". A recent study (Agnew et al, 2007) found that the degree of financial literacy of individuals had an effect on the probability of their participating in a voluntary pension savings, equivalent to the impact of the financial incentives. The capacity to plan over the relevant time horizons for pensions seems to be an important part of this process. An earlier study (Munnell et al, 2001) found that the planning horizon of individuals was a significant factor in explaining their participation in employer-sponsored voluntary savings plans.

Most importantly, the provision of some education and especially advice on a personal level has proven to be among the most effective means of inducing contributions to voluntary arrangements. In what is probably the best-structured experiment that combines many of these factors (Duflo et al, 2005), individuals were provided with the opportunity to obtain a meaningful matching payment if they made a contribution to retirement savings at the time of filing their income tax. The match was explained to them by a professional who assisted them in preparing their tax filing. This experiment found a significant effect from the provision of

this personalized advice. Perhaps most interesting, it found significant differences among the outcomes, depending on who provided what was essentially identical advice. This tells us that it is not just the provision of education that matters, but that there are meaningful differences in outcomes associated with the way in which that advice is delivered.

In some respects this experience confirms the old adage that savings products are sold rather than bought. Another study of financial education (Lusardi, 2004) concluded that the provision of seminars to educate individuals about the importance of retirement savings and how the arrangements worked were more effective with less educated workers. All of the research in this area suggests that the design of financial education programs and how they are delivered is one of the most important determinants of the success of any attempt to provide incentives for savings. The studies also find that the degree of trust in financial institutions was important as well. Persons who expressed a low level of trust were less likely to respond to incentives, regardless of how they were communicated. This informs us about a more general problem and where these programs need to be targeted.

Choice and Liquidity

There are also some interesting findings about the design of savings programs that address the question of how much choice people are able to handle in these, and the more basic problem of stimulating savings by ensuring them that they will be able to access their money if an emergency arises. Several studies have tried to evaluate the effect of providing flexibility and choices. One study (Papke, 2004) concludes that the ability to choose from among several investments raises savings rates by 3 to 8%. However, it appears that too many choices have the opposite effect of reducing participation. An often cited study of this (Iyengar et al, 2004) found that each additional ten choices reduced participation by 1.5 to 2 per cent.

The ability to borrow against one account also seems to have an effect. Workers often respond that they do not participate in voluntary retirement savings because they are concerned that they will not have access to their money if they need it in the shorter term. Analysis of the availability of loans in 401K plans has found positive effects of greater participation to varying degrees when workers are permitted to borrow against their account balances. This is a design feature that involves more complex tradeoffs however. There is evidence that many of these loans are not ultimately paid back.

CONCLUSIONS

This brief review of the experience with voluntary retirement savings in more developed countries, where they have been prevalent for several generations, provides some important lessons that can be applied in other settings. It is evident that tax incentives and other types of direct financial subsidies such as matching contribution are associated with significant levels of participation in these systems. It is also clear that this approach does not necessarily result in an increase in overall savings that is commensurate with its high cost. These kinds of incentives also come with the closely related problem of distributional outcomes and are probably not the best way to reach the lower-income and less-educated populations who have the lowest savings rates. At best, in response to the question of whether this approach is effective, one can conclude that there is currently no conclusive evidence to the contrary. Perhaps a more positive view would be that these are a useful but not sufficient aspect of the design.

There is also now considerable evidence that human nature and behavior, which is not always consistent with the “rational economic” model, has a strong influence on voluntary retirement savings. These behavioral patterns are a major aspect of understanding how these systems work and how they are best designed. Among the key issues that the research has identified are:

- Inertia and procrastination are major impediments to retirement savings. These however can be exploited through automatic enrollment programs and default choices that guide individuals in making the “right” choices. Imposing decisions on many individuals is probably at least as effective as providing financial incentives, if not more so.
- People are generally reluctant to make choices in the face of uncertainty and this aversion increases with the number of choices. Limiting the number of decisions to a reasonable level is an important aspect of design.
- Most people fear making poor decisions rather than want to make good ones when it comes to investing their money. They need simple choices with clear risks and help in understanding what the choices are and how to make optimal decisions.
- Persons who do not save for retirement generally have low levels of financial literacy and trust in financial institutions. These impediments can be overcome, but only to a certain degree, through advice and education.
- How such advice is delivered is as important as the content of the advice. Retirement savings programs need to be effectively marketed to be successful.

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