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Issues in Social Security Reform

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Changes in social security are on the agendas of many countries. Discussions vary across countries as the finances of social security, the state of the economy, and the details of politics all vary across countries. While these discussions include medical care and provision of income to both the elderly and the disabled, this essay focuses on some of the many issues in the provision of income to the elderly, without in any way discounting the importance of the provision of income to the disabled and the provision of medical care.

Primarily, the essay discusses some basic differences between defined benefit (DB) and defined contribution (DC) pension systems. That is, I will contrast systems built around a benefit formula (like traditional systems) with systems built around mandatory contributions (like the reform in Chile). Along the way, I also touch on issues of funding and the contrast between centralized investment and individual accounts. But first, I want to consider some issues in moving from an old system (or no system) to a new, different system that is intended to last for a long time. The paper concludes with a brief discussion of some reform issues in the United States other than the central issues of funding and introducing individual accounts – indexing, universal coverage, and protection of widows.

Transition to a new system

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Here, the essay has a relatively simple message. Short-run and long-run circumstances are often very different. Therefore, it is important to consider separately the design of short- and long-run systems together with the process of adaptation from one to the other, rather than simply selecting a single system and tinkering with it to try to fit both circumstances. This is part of my view that designing a retirement income system well, rather than poorly, is likely to be more important than whether the system is DB or DC. Both DB and DC systems can be designed well or poorly. This will be illustrated with some examples. Indeed, adaptation of a system designed for the long run to the short run has been done poorly in some countries. The converse is also true – letting short-run concerns dominate the design of a long-run system can also be costly.

The United States, in the 1930s, and Canada, in the 1960s, set up defined benefit systems. Their benefit formulas were designed to eventually use average earnings over nearly a full career. This approach to a DB system is widely seen to be the right approach, since the use of a short averaging period for determining benefits is both highly distorting of the labor market and easy to manipulate, resulting in an excess of undesirable income redistributions and also public disdain. When these systems were new, workers had far few years under the system than the averaging period to be used eventually. In both the US and Canada the answer was simply to use a short (but growing) averaging period until the system became mature. There were two consequences of this approach. One was a large redistribution to retirees when the system was immature, leaving a large unfunded liability for future generations. The second was that this redistribution went particularly to high earners not low earners. While the first consequence might be an appropriate response to the low incomes of retirees when a system is immature, as was true in the US, the second consequence seems to me to be bad policy. In both the US and Canada, this effect was compounded by also starting with a low tax rate, which was steadily increased over time.

Let me spell out how this works. When the system is young, retirees have paid taxes for a short period of time, may have paid a low tax rate, and yet get benefits from a formula that is designed to make sense when the system is mature. Thus, collectively, these early retirees are getting a

large rate of return on the taxes they have paid. In aggregate they receive a large transfer from future generations. But which members of the generation get the most? In an earnings-related system, the higher the earnings the larger the transfer received. If the system is progressive, this reduces the extent of such redistribution but the presence of larger transfers to the better off continues.

How could this result have been avoided, while having a reasonable level of administrative complexity? There are many answers. Let me give one. The DB system could have used a long earnings history right from the start with legislatively chosen earnings levels used for years when the system didn't exist. For example, everyone could have been given average earnings for earlier years. Or everyone could have been given zero earnings, and this could have been combined with a uniform flat benefit. Initially, the level of such a flat benefit should reflect the level of resources that society is willing to make available for retirees. The initial legislation would include a declining level of the flat benefit relative to earnings in the economy as the earnings-related DB system grew. There are other answers to this adaptation problem, such as heavy reliance on means-tested benefits in the short run. But good answers are likely to recognize explicitly that there is a need for two systems plus an adaptation, rather than designing a single system for very different circumstances.

A similar problem arises from the system that was common in communist countries. Commonly, communist systems based benefits on years of work and average earnings in a very short averaging period. In consequence, detailed earnings records were not kept. As an aside, let me say that I cannot see any virtues in a mature national system that uses years of service as an important variable in determining benefits; this seems an odd way to base benefits on the history of earnings (and credited non-earning years).[2] The issues in the former communist countries are

[2] It is common for employer-provided DB systems to multiply average earnings over a short time period by the number of years of service as part of determining benefits. This same approach has been used in some national systems (Sweden, until its recent reform, as well as former communist countries). Yet for an economy with labor mobility, such an approach for a national system has very poor labor market incentives. It is necessary to pay attention to the level of earnings in many years in order to have good incentives.

somewhat different from those with the start of a new system since workers have a long history of work under a previous system that is no longer viable. But the question is similar – what to do about the absence of earning records? Excessive reliance on earnings after the setup of a new system has similar problems to the errors made in the US and Canada. The implied income patterns do not do a good job of reflecting history but rather reward those who do well in the new system – not necessarily those who are more in need of benefits. So again, an explicit adaptation mechanism is needed to adjust to the lack of records in the short run, while having a good system for the long run.

Another source of poor design is the use of a system for the long run that has been particularly adapted to short-run circumstances. An economy may choose to encourage early retirements at a time of considerable unemployment, rather that relying on an unemployment insurance mechanism aimed at older workers. But such an economy should not assume that it will always have a large unemployment problem and so design a system that discourages work by older workers indefinitely. It may be very difficult to remove the incentives for early retirement once they have functioned for some time. Similarly, the fact that earnings records are limited in the short run is not a good reason to set up a system that uses a short averaging period for determining benefits in the long run, since a short averaging period is a poor design.

In designing redistribution into the system, there are likely to be important differences over time. There is always a tension between wanting to provide more resources to those with greater needs and wanting to provide resources in response to previous expectations and legislation, possibly with a strong past-earnings related benefit pattern. Recognizing needs is of obvious importance. Recognizing past earnings represents both the ethical claims in justified expectations and the importance for labor market incentives and tax compliance incentives of staying roughly with the rules previously legislated. While the past is past for the present, expectations about the future are affected by how past expectations are honored or not honored. This is relevant for how much benefits should vary with earnings in the short run after a new system is in place.

Similarly, the rules possibly relating benefits to assets and asset income have implications for the incentive to save, just as rules about earnings have implications for labor supply. That is, if saving for retirement lowers benefits, then there is a disincentive to save. To the extent that redistribution depends on total incomes and not just mandatory pension benefits, there is a disincentive for savings. This suggests the advantages of a system with multiple parts (or multiple systems), providing one (low) level of guaranteed income based on total income and a different mechanism that addresses redistribution across pension levels, based on past earnings. Such a split approach is common, including, for example, the US and Chile, countries with very different pension systems in almost every other way. And the degree of reliance on the different parts should plausibly vary over time. If administratively feasible, more use of income testing early and more use of pension level testing later is probably a sensible part of adapting to changing circumstances. That is, as a country goes from a system where benefits are not closely tied to past earnings to one where benefits are closely tied to past earnings, the basis for redistribution should move from heavier reliance on total income to heavier reliance on benefits based on earnings.

In some countries, the short run is a time of poorly functioning markets and very limited regulatory ability of the government. At a time of limited regulatory ability, social security should try to economize on regulatory effort, concentrating regulatory effort on problems that are more pressing, such as tax collection.

As an aside, I want to mark the important philosophical debate as to whether redistribution within social security should be merely an attempt to reduce the level of poverty or whether redistribution up and down the income distribution is a central issue for retirement income determination. Some people view the first, limited objective, as the only philosophically legitimate policy issue. Others, including me, find the utilitarian approach, which recognizes income distribution more widely as the proper concern of government. This is related to the underlying justifications of the role of government in mandating retirement income systems. Some of those who view poverty as the only issue also view the attempt to free-ride on the

altruism associated with reducing poverty as the only legitimate basis for a social security mandate. Others, including me, view the widespread tendency of many people to undersave for retirement and the broad absence of many markets for arranging retirement income as a better philosophical basis leading to a broader program. Moreover, as with the income tax, progressivity in the social security system provides insurance against income fluctuations as well as being redistributional. Let us note that democratic societies have generally gone for the broader program.

Over time, current legislation does not necessarily commit future resources – the political process can change the system. So the real issue is how current legislation sets the political default and so influences future political outcomes. Indeed, predicting how the political process will adapt the retirement income system to changing economic and demographic circumstances and to changing political forces is central for considering alternative systems.

DB vs. DC

Now, let me turn to a central issue in social security design – the choice between DB and DC systems for some or all of the retirement income system.[3] Since the Chilean social security reform, there have been a number of countries that have legislated systems similar to that in Chile. Moreover, some economists in the World Bank are particularly enamored with the Chilean approach (World Bank, 1994). What I want to do is contrast DB and DC systems in general and then discuss the experience in Chile for concreteness.

It is important in this discussion to do comparisons that have similar footings. One can compare idealized DB and DC systems. One can compare politically plausible, well-designed DB and DC systems (along with the option of no economy-wide earnings-related system). But one should not compare a well-designed system of one kind with a poorly designed system of the other. That sort of comparison may be the stuff of polemics, but does not belong in good policy

[3] For more on this comparison, see Bodie, Marcus, and Merton, 1988, and Diamond, 1995, 1997.

analysis. It is worth noting that some imitators of Chile have done less well than Chile in their designs.

In comparing DB and DC systems, let me first define terms. There are many ways in which systems differ from each other. I want to single out the element that seems most important in affecting how the overall system is likely to work. The central element in a DB system is that the level of benefits is given by a formula (preferably indexed in some way) which depends on the history of earnings that have been subject to tax. The benefits might be annuitized or might have a lump-sum option (or a phased withdrawal mechanism). The central element in a DC system is a level of mandatory contributions that will determine benefits. Thus one critical element in the extent of difference between systems is whether the tax rate will be stable. If so, this aspect of difference may be small. If not, differences in intergenerational redistribution will be present. Of course, a DC system may also have some form of minimum benefit guarantee or some redistribution, without altering the central design characteristic.

Both systems can have any degree of actual funding, although the political outcome for funding is likely to vary with type. Both systems can have redistribution and protection of family members. In practice, the different systems lend themselves, indeed frame, the political process to result in different levels of redistribution both intra and intergenerationally. The presence of redistribution affects labor market incentives and both systems can combine redistribution and incentives roughly equally well. Both systems can make benefits available beginning with some age without any retirement test or only in conjunction with some degree of retirement. Insofar as access to benefits is delayed, there must be rules or market determination of the extent to which benefits are increased as a consequence of a delayed start of benefits. Again, the two systems can function very similarly. Both systems can be set up to work along with private provision of retirement income through both individual and corporate efforts.

Thus the central differences between the systems are how they affect the political process determining the details of the system, how they adapt to variable and changing circumstances, and how much they cost to administer.

Given the unpredictability of the future, a DB system needs to be adjusted from time to time in order to preserve the level of funding designed for the system (whether it is positive or zero). Similarly, given the unpredictability of the future, a DC system needs to be adjusted from time to time in order for the system to deliver the level of benefits expected from the system. That is, with a DC system, both the risk in the return on assets and the risk of changing life expectancy fall directly on individual workers without a mechanism for wider risk sharing. Insofar as the funding for a DC is notional, actual funds may also need adjusting. For both DB and DC, we should think of initial legislation as analogous to an incomplete contract – there are elements that will be worked out later. In principle, there can be a variety of degrees of automatic adjustment in either type of system. In practice, use of automatic adaptation (or indexing mechanisms) has been quite limited. The difference between a DB's financing issues and a DC's level of benefit issues may generate very different pressures for legislative change. That there is more pressure on a DB system to respond to changed circumstances is a plus if the response is well managed and a minus if it is not.

In practice, either system can be designed well or badly. Among bad features, some countries have used multiple DB systems as a mechanism for redistribution in ways that are viewed as perverse by those not receiving the redistribution. Hence, the importance of a single DB system. Many DB systems have a powerful disincentive to work past the initial age of eligibility for benefits, creating sizable labor market distortions. But other DB systems are close to actuarially fair on average and without excessive distortions. While many DB systems have very low administrative costs (less than 1% of annual benefits), others manage to be expensive. All DC systems relying on individual choice in the market are expensive, but some of them have design features that result in much larger administrative costs. For example, the UK system of opt-out accounts is estimated to use up 40-45% of potentially accumulated resources in administrative

costs (Murthi, Orszag, and Orszag, 1999).[4] I consider the role of analysts to encourage good design to be at least as important as the issue of the basic choice of type of system.

Given the centrality of the experience of Chile in the widespread interest in DC systems, I will consider the accomplishments and shortcomings of the reform in Chile and note how these might or might not apply to other countries.

Chile

Chile had a poorly designed set of DB systems before reform.[5] Switching to a DC system included phasing out the previous systems (except for the military), with their poor design elements. In Chile, it was certainly not politically necessary to switch to DC in order to reform a poor system. For other countries with DB systems in need of reform, switching to a DC system may or may not help with the politics of reform.

Chile had a government budget surplus at the time of implementation of the change. The surplus has been used to finance much of the transition costs for the increased funding in the DC system. In Chile, it may well be the case that the financing needs of the transition helped preserve a larger contribution of the government budget to national savings. In some other countries, there may be a surplus, which is more easily protected by switching to a DC system. On the other hand, it may be possible in some countries, as President Clinton has proposed, to preserve higher national savings by increased funding of a DB system. However, in many countries the political problem is how to deal with deficits, not how best to use surpluses. At a time of overall deficits, it is unclear how increasing demands on the government budget for funding social security helps with budgetary politics. Of course, a DC system can be set up without increasing national savings, but then increased savings are not an advantage of such a change.

[4] In the UK, an individual can leave the government-provided DB system for either an employer provided system or an individual account held with a financial intermediary. In addition, individuals can leave an employer-provided system for an individual account.

[5] For a detailed view of Chilean pension developments, see Diamond and Valdes-Prieto, 1994.

Since initiation of its pension reform, Chile has gone through many legislated changes in the implementation of the system. By and large these have been improvements and there has not been use of the pension system for other purposes. Success in insulating the pension system from political use for other purposes will vary country by country. There is no guarantee that the future politics of DC systems will be better than those of well-constructed DB systems. For example, a DC system may end up requiring high levels of investment in government debt at below market rates, high taxation of portions of accounts (e.g., through taxing "excess accumulations" defined in some way), or heavy taxation of what may be the most readily available tax base in the country.

The funds accumulated in the Chilean accounts have earned a high rate of return overall, although there have been poor years as well as good ones. This is a reflection of high rates of return in Chile generally, including the return on government debt, and not a sign of particularly good investment choices. There have not been politically required investments in below market return opportunities. Protecting the rate of return from political interference may be made to work for a funded DB system. In particular, a country with active index funds may be more likely to set up a transparent indexed investment mechanism. It will be interesting to follow how Switzerland and Canada do with their investment of DB funds in a diversified portfolio.

The presence of pension investments in Chile (and insurance company investments as backing for annuities) has strengthened the hand of capital market reformers, leading to capital markets that function better than before. No doubt some other countries could benefit from pension investments in the same way, whether DB or DC. However, some countries already have capital markets that function well. Since significant regulatory oversight is needed for capital markets to work well, some other countries do not have the regulatory abilities to have well-functioning capital markets in the near term, with or without pension investments.

While some people expected that switching from a DB to a DC system would result in dramatic improvements in the efficiency of the labor market, this has not happened in Chile. There is some evidence that there has been some shrinking of the informal sector in Chile compared with what might otherwise have occurred. However, this may have resulted more from the large decrease in the payroll tax rate than from the change in the form of the system. Indeed, Argentina, which initiated a similar reform, but without a tax rate decrease has not had even the modest labor market improvements that appear to have occurred in Chile.

In a DB system there is intergenerational risk sharing of the return on any portfolio that exists. DC systems are designed to concentrate portfolio risk on the holders of the assets, which can lead to sizable fluctuations over short periods in anticipated retirement incomes. Indeed, the Chilean equity market has shown significant swings. This can be both an economic and a political problem. Unlike most other aspects, this concentration of rate of return risk is an inherent difference between DC and DB systems.

In addition, the high cost and only partial use of annuities reflects another shortcoming in risk sharing in Chile. Design of annuitization appears to be an afterthought in some reforms rather that a central element in any retirement income system. In general, reliance on the market to supply annuities, even mandatory annuities, will involve a considerable cost from marketing and the attempt to sell to attractive (short-lived) customers.[6] This problem is further compounded by the failure of many to understand the role of annuitization and the benefits of alternative annuity design, particularly indexing for inflation. Thus current voluntary markets include both significant costs and many choices that seem very poor from the perspective of economic theory (for example wide preference for nominal annuities over indexed and wide use of guaranteed payments, decreasing the extent of annuitization).

The redistribution in Chile is in terms of a minimum benefit guarantee, paid from general revenues – there is no explicit redistribution within the individual accounts. As with the income

[6] On the cost of annuities in the US, see Mitchell, Poterba, Warshawsky, and Brown, 1999.

tax, progressivity in a social security system provides insurance against income fluctuations as well as being redistributional.

Being a DC system, Chile's will adapt to longer life expectancy by cutting benefits. This raises the issue of whether benefits will be large enough when people are living considerably longer. A DB system could index to life expectancy to produce the same outcome. However, this seems to me to be poor design – longer lives should result in a combination of both greater taxes and lower benefits, not just lower benefits. If indexing is used, which is probably politically expedient, more complex indexing is called for.

Like any DC system, the system in Chile leaves considerable funds in estates, whether individuals value that as much as potentially larger retirement benefits or not. A DB system puts all the available resources into retirement benefits and explicit survivors benefits. Those interested in larger estates can purchase life insurance. In contrast, it is harder to use rolling annuitization to convert accumulations that would go to an estate in the event of death before retirement into larger benefits given survival until retirement. Given variation in life expectancy, how to deal with the consequences of early death is an important part of the redistributional pattern of a system.

Lastly, the administrative costs in Chile have been considerably larger than was anticipated. Fifteen to twenty percent of what would otherwise be available for benefits goes to administrative costs. Some have argued that it is the nature of the regulations in Chile that have resulted in high costs. I believe that is not correct – that, in fact, the Chilean regulations have held costs down relative to less regulated systems (such as the voluntary opt-out individual account in the UK, which have considerably higher costs).

I think that high administrative costs are part and parcel of any private market investment system that is organized around individual choice from a wide market. Indeed the voluntary equity mutual fund market for individuals in the US has higher costs (in percentage terms) than the

Chilean system (Rea and Reid, 1998). It is true that a centralized DC system can function with significantly lower costs than a decentralized system, possibly only one-fifth as much or less. However, in some countries, the concern about political interference with investment is similar for centralized DC systems and DB systems.

Organizing individual account investments

Since this is a central issue, let me spell it out in more detail. One can have a DC system where workers have no choice whatsoever in the investment of the funds - a provident fund system. Indeed there may not be any funds, with benefits based on rates of return that may or may not reflect market rates. But such an approach cuts against the underlying motivation of such systems – to move investment choices from government to workers, to have the funds channeled through private institutions. So I want to discuss different ways of designing the choice of portfolios. Here I draw heavily on a report of an expert panel of the National Academy of Social Insurance, which I chaired.

The report distinguished between government-organized DC accounts and individually-organized DC accounts. Government-organized accounts are those where the government makes available a small number of alternative investment vehicles. The government negotiates contracts with private firms to manage these investment vehicles. The pricing that occurs is the pricing that the market provides to large investors – referred to as institutional pricing in the US. These prices are considerably lower than the prices offered to individuals. Interestingly, Bolivia used competitive bidding for two halves of its market in setting up its new DC system. The costs are very low, but as with other bidding settings, Bolivia now needs a mechanism to ensure that adequate services are provided in return for the charges.

In contrast, the Chilean approach has individuals free to deal with any approved investment vehicle provided in the market, and the approval mechanism is meant to be quite easy and open – easy entry to hold down market power. Thus, the mandatory markets are meant to mimic

voluntary capital markets, although highly regulated markets. But voluntary capital markets that deal with individuals are expensive everywhere in the world. In the US, which has the best-developed capital markets in the world, the typical individual investing in equity mutual funds pays nearly 1.5 percent of the value of assets in annual charges. Over the course of a 40-year career such charges will cut the value of the accumulation by roughly 30 percent. That is, these annual charges on benefits compound over time since deposits are subject to annual charges each year until retirement.

This is what the voluntary market does when it functions well. Can a mandatory, more highly regulated market do better? The UK experience suggests that it can indeed do worse, as it draws on investors who are inexperienced. Chilean experience suggests that higher regulation that effectively limits both portfolio choice and the pricing structure can do better – but still at considerable expense. An interesting question is whether there are really benefits to the Swedish approach, which is to give workers access to the entire market, but with centralized record-keeping and aggregated investments, not separate individual investments and with government negotiation of allowable charges.[7]

There is no question that centralized record keeping can be cheaper if the government does it well itself or does a good job of taking bids for privatizing this function. But the key question is the incentive for firms to hold down prices as a method of attracting more business and the role of advertising to try to take advantage of the markups that happen given limited worker response to differences in prices. First, let us be clear that the evidence in both the US voluntary market and the Chilean mandatory one is that individual workers are not very sensitive to price differences. This is not surprising. First, at any moment in time, there is not much at stake to warrant continuous serious attention by a typical worker. Second, the choices may be complex, either because the pricing structure is not transparent (as has been the case in the UK) or because alleged differences in performance draw attention away from cost issues (as is the case in the

[7] That is, in Sweden the government keeps all records for the 2.5 percent of payroll devoted to individual accounts. Financial firms negotiate a price structure with the government to become eligible to accept deposits, and those deposits are made in bulk by the government, not separately by individual workers.

US). The highly stochastic nature of investment returns makes it hard to judge the quality of portfolio management.

It is hard to know, but I do not see anything in the Swedish system that will make demand more price sensitive and so competition more concentrated on low prices rather than heavy advertising. That the investment firms may not know who their customers are will change advertising, but may not lower its overall cost. Thus, I see no reason to think that this form of organization itself will result in a particularly cheap system.

Another approach is to limit the market to firms that have very low charges. Both the apparent intent of access to the full current Swedish market, and the likely political pressures from investment firms suggest that mandating very low charges is not likely to be a viable political solution. Effectively, this would be a form of price regulation, and price regulations generally do not work well. So I look for the Swedish example to be as expensive as is the Chilean – much more expensive than government-organized systems need to be.

Hallmarks of a market with limited pressure on pricing is the presence of prices above marginal costs and very similar products charging different prices at the same time. Idealized markets satisfy the law of one price – you can't sell the same item as someone else at a higher price. But real markets fail this test of idealized markets. Whether in a regime of price-posting or bargaining, real markets have different prices – and wide differences. Since retail markets generally are far from ideal markets, it is useful to review why the case for limited choice and a large role for the government does NOT extend to consumer goods generally. First we are considering a mandated market. This both reflects the need for a mandate because workers do not do an adequate job of saving for retirement and an obligation for the government to see that the mandate does not lead to inferior outcomes. Second, saving for retirement during a working career is something people do just once. There isn't the opportunity to learn to do it better the next time. Third the principles of investment in the presence of risk are not simple to master. Fourth, as long as the mandate is small enough that many people are saving outside the system,

portfolios held outside the system can be adjusted to offset some of the limitations on choices for portfolios held inside the system. And fifth, the presence of the government is not likely to stifle innovation in financial markets since the mandated savings remain only a part of overall savings and investment.

There is a basis of comparison that one sometimes hears that I have not used, because it is not valid. Some people argue that if the rate of return on assets is greater than the rate of growth of the economy then a DC system is better than a DB system. This argument is wrong on two counts. One count is that access to market rates of return can be done through funding either DB or DC systems. Indeed because of administrative costs, the rate of return available on assets held by a DB system is considerably larger than the rate available on assets in a DC system with wide individual choice. The second count on which the argument is wrong is that there is a transition cost in order to generate funding. Once one includes the cost of financing the funding, then a funded system overall does not have a higher rate of return than an unfunded system. What is true is that eventually there can be a higher rate of return for some workers, but that comes at a cost of a lower rate of return for other workers while the funding is being built up. So one must consider both the cost of funding and the return from funding. It is wrong to consider just the return without considering the cost; it is wrong to consider the long run without considering the short run.

My bottom line is that one can design a good DC system. One can also design a good DB system. Good design is the important element, and DC systems do not guarantee good design, nor do they live up to the overselling that has occurred. High costs and poor risk sharing seem to me inevitable parts of reliance on DC systems since countries seem to select high cost approaches and intergenerational risk sharing is not possible with a standard DC system. On the other hand, the quality of a DB system, particularly the quality of intertemporal risk sharing, also depends on the quality of political decision-making, about which one naturally has worries. Analysts and international organizations should push for good designs. The system most likely

to come out better from the political process is likely to vary across countries. One size does not fit all.

Some reform issues in the United States – indexing, universal coverage, and protection of widows

Much of the recent debate in the US is on the problem of restoring actuarial balance and whether to introduce a DC element into the system. These questions have received considerable attention.[8] But, there are also some reforms that are needed as part of making the system function better. I identify three for which there are easy solutions, relating to indexing, universal coverage, and the protection of widows. I also raise two issues on which issues are more complex – treatment of the family and use of all earnings in determining benefits.

At the time of the 1972 legislation, it was understood that the system was not correctly indexed for inflation. Congress proceeded with the legislation anyway in the expectation that the flaws in indexing would not matter greatly. That expectation proved to be false as inflation soared. The 1977 legislation overhauled the inflation indexing in the system. However, it remains the case that indexing is not correct. While this has far less potential to be of great importance, there is no reason to continue with an incorrectly indexed system. There are two places where indexing is done incorrectly, and I will describe what it would take to fix each of them. Each of these fixes can be done in a revenue neutral way if that is desired.

In determining the average indexed monthly earnings (AIME), which is the first step in determining benefits, earnings in all earlier years are indexed up to the year in which the worker turns 60 by means of an average earnings index (with benefits related to the index in the year a worker turns 60). Benefits are increased to reflect increases in the cost of living after age 62. Thus there is a two-year gap in the indexing – a wage index being used until age 60 and a price index being used after age 62. This is an unfortunate feature in the system since two years of

[8] See, in particular, Arnold, Graetz, and Munnell, 1998 and National Academy of Social Insurance, 1999).

high inflation would adversely affect a cohort. Thus, there is the potential of an unfortunate shock to real benefits. There is no reason not to have a smooth transition between indexing methods. The simplest adjustment would be to start price-indexing of benefits in the year a worker turns 60, rather than the year he or she turns 62. Benefit levels could be adjusted to be revenue neutral on an expected value basis.

As stated above, for determining the average indexed monthly earnings (AIME) earnings in all earlier years are indexed up to the year in which the worker turns 60. Earnings in later years enter the formula without any indexing correction. This approach represents an enhanced incentive for continued work compared with uniform indexing. There is no apparent virtue in having this incentive fluctuate with the level of nominal earnings growth. It would be better to index all earnings to the same base year and enhance the incentive for additional work in an explicit way. This can be done in a variety of ways. While some other ways might be better, the current pattern could be imitated without the dependency on nominal wage growth by multiplying later earnings by an age-related factor before beginning the process of determining AIME. Delays in the availability of the average earnings index would require some adjustment, such as a conservatively estimated adjustment followed by a correction. This approach would maintain the current approach to work incentives, the approach of increasing future benefits as a consequence of continued work. It might be useful to enhance incentives by allocating part of the return to continued work to contemporaneous partial benefits, while preserving the rest for larger future benefits (Diamond, 1982).

At present there are roughly four million state and local workers not covered by Social Security (Munnell, 1999). Universal coverage is an obvious feature of good design of a national social security system. Omission of state and local workers means that they are at risk from lapses in coverage as they move between state and local jobs (with their retirement systems) and jobs in the private sector covered by social security. Also, some state and local systems do not contain the protections, against inflation and for surviving spouses, that are part of social security. It also means that uncovered workers do not pay their fair share of the unfunded liability of social

security as a consequence of the generosity to early cohorts. Also, since state and local workers are above average earners, they do not pay their fair share of redistribution to contemporary lower earners. There is no good reason not to phase in universal coverage for state and local workers.

It is widely recognized that the poverty rate for elderly widows is much higher than the poverty rate for elderly married couples. While there are many steps that could be taken to change the treatment of the family, such a wide reform of the system is difficult to design to both work well and be politically acceptable. As an example of the difficulty of finding an acceptable reform, note the long list of reports that grappled with this problem - Consultant Panel on Social Security to the Congressional Research Service, 1976, United States Department of Health, Education, and Welfare, 1979, United States Department of Health and Human Services, 1985, Congressional Budget Office, 1986, United States House of Representatives Select Committee on Aging, 1992. One proposal to just address the position of widows without considering wider issues is to base the benefits for a survivor on the benefits of both husband and wife (Burkhauser and Smeeding, 1994). This can be done with or without adjusting benefits when both are alive. A simple rule would give the survivor 70-75 percent of what the couple received (apart from actuarial adjustments). Since this would cost revenue, a revenue neutral proposal requires some decrease in some benefits. There are obviously a variety of ways to do that. Another approach is to base benefits of both the couple and the survivor on both AIME's (Consultant Panel on Social Security to the Congressional Research Service, 1976).[9]

At present benefits are based on the best 35 years of indexed (and, partially, unindexed) earnings. There are proposals to increase this to 38 years. Additional years of earnings give no additional benefits – although in the case of early earnings years, they had the potential of contributing to the determination of benefits either as a result of disability or low earnings later on. Similarly, many spouses receive no additional benefits as a consequence of additional earnings. In contrast, some systems, such as Italy and Sweden count all years of earnings by cumulating all earnings,

[9] For discussion of how reform proposals might affect widows, see Holden, forthcoming.

using an average earnings index, as the first step in determining benefits. Both of these approaches consider only simple combinations of earnings in different years. Considerations of providing insurance against low earnings years, as well as considerations of labor market incentives, suggest that one might do better by giving some, but not full, credit to additional years of earnings. This approach is worth researching to see whether a better pattern of benefits and incentives would result.

When the US comes to grip with the long-run fiscal problems of social security, it would be good to make further changes to improve the overall system.

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