

**The Social Contract Revisited**

# The Rise in Uncertainty and Reforms of Social Security Systems in Chile and Sweden

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## Executive Summary

- In the new society, the individual and the family are subject to substantial increases in uncertainty in the economic environment. These are caused by globalization, technological changes, shifts in global power structures, and developments in labour and family relations.
- One would expect that the welfare safety net provided by the state would improve to meet the increased risk, but the reverse has happened in most countries. This phenomenon is particularly salient in pensions policy. The trend in pension reform has seen a movement from defined benefits (DB) to defined contributions (DC), which shifts the risk bearing from the government to the participant.
- Chile and Sweden set precedents in recent decades that were followed by many countries in their pension reform. In Chile, the universal pension coverage of pay-as-you-go was replaced by privatized plans which converted the system from DB to DC. In Sweden, the DB social security system was replaced by a combined notional defined contribution (NDC) system and a smaller privatized DC system. While the NDC is not privatized, it does shift most of the risk from the government to the participant.
- For a pension system to be viable in the twenty-first century, with the twin challenges of increased longevity and early retirement, some of the risk must be internalized by the individual. The Swedish DC system, however, is much better at recognizing and overcoming the shortcomings of the market, through the operation of a special agency, the Premium Pension Authority (PPM).
- The Swedish example has shown that privatization is not the only way to achieve the twin goals of fiscal stability and a viable welfare system, by combining the best of the market and government regulation to devise a pension system that is both economically efficient and equitable.

# The Rise in Uncertainty and Reforms of Social Security Systems in Chile and Sweden

## Introduction

The last three decades have seen a rise in uncertainty in the economic environment and in important social institutions. The economic environment is changing from regulated to free markets; capital markets are now integrated, causing periodic financial stress. The rapid technological change associated with the information age leads to unequal growth and prosperity, as in the industrial revolution of the Gilded Age prior to World War I, and the dramatic effect of the economic development of China and India on world markets also adds to the current uncertainty and instability.

The global competition and the declining need for labour in the industrial sector due to advances in technology and productivity are changing the notion of work as a source of stability. Individuals now expect to be able to undertake mid-life career changes that would have been unthinkable a generation ago, when jobs, let alone careers, were for life. This economic transformation is accompanied by significant changes in the structure of the family, with divorce rates and the prevalence of single parent families. In both work and family arenas, increased mobility has resulted in a concomitant increase in uncertainty and risk. It is for these, amongst other, reasons, that Ulrich Beck characterized our post-industrial society as *The Risk Society*.

One might expect that the safety net provided by the state would be strengthened to meet the increased risk, but the reverse has happened in most countries. This phenomenon is particularly prominent with respect to pensions and unemployment benefits.

In many countries, Chile setting the example, the universal pension coverage of pay-as-you-go was replaced by privatized funded plans. In the former system the risk is borne by the government; in the

latter, by the insured. In other countries, the need to render the pay-as-you-go pensions viable introduces considerable uncertainty about the rights of the insured, emanating from the unpredictability of the political process, again borne by the insured persons. The employer's pension was commuted from Defined Benefit (DB) to Defined Contribution (DC), once again shifting the risk from a shared burden of the employer and state to one borne solely by the employee. When benefits are defined, the employee knows how much he or she will receive at retirement. If the money in the fund is not enough to sustain the benefits promised, the employer or the government is beholden to meet the difference. Conversely, when only the contributions are defined, whatever money is accumulated in the fund is expected to suffice for the benefits.

## Chilean privatization of the social security system

Chile was the first country to privatize its social security system, in 1981, and is therefore worthy of further scrutiny. Chilean economic policy was heavily influenced by the Chicago school of free market economics, led by the eminent economist Milton Friedman, who visited Pinochet in 1975. Beginning in 1981, all contributions were invested in the financial markets by special pension funds (AFP) that were highly regulated. Contributions and profits (or losses) from investment were accumulated in individual personal accounts. At retirement, to calculate the pension, the sum accumulated was divided by an actuarial coefficient that was based on life tables and interest rate. The government guaranteed a minimal pension and issued 'recognition bonds' to participants in the social security system for the rights that they accumulated. Thus, the contributions of employers and employees no longer paid for the benefits of the elderly, but rather were invested in the economy. Benefits were henceforth paid by the government from its general tax revenues.

The new system undoubtedly improved the fiscal situation of the social security system in Chile. However, since the benefits were paid by the government from its general expenditure in the budget, the system created additional fiscal burden on the government. Fortunately for Chile, this burden was met by a surplus in the other parts of the budget. If the Chilean government had increased its debt instead of introducing fiscal austerity, the reform would have had no impact on the fiscal solvency of Chile.

This last point is particularly significant: the crucial aspect in the success of the Chilean policy was that it relied upon fiscal discipline; that is, it included the obligation of the government to present and future social security beneficiaries in its fiscal accounting. However, privatization of the social security system is not necessarily directly related to the improvement of the fiscal stance of the government. The Chilean reform obtained it by issuing recognition bonds and by meeting the fiscal burden. The Netherlands and Sweden achieved this goal simply by creating a large surplus in their social security system, by having benefits lower than taxes. They achieved this in a standard pay-as-you-go system without the mechanism of privatization. American attempts to create a surplus in the form of an increased trust fund were not as successful.

In the privatized model of social security, the employee savings are deposited in pension funds that will look for the best investment. Pension funds are major players in Western capital markets, and the intention behind the Chilean government's decision to privatize the pension programme was to invigorate the capital markets, fostering growth and obtaining the best yield for the members. Moreover, the increased pension was intended to give employees an added incentive to participate in the labour market.

The Chilean pension reform was intensively studied, because of the symbolic importance attributed to it by the Chicago school, which saw it as a successful application of their free market principles. The scheme has, in fact, encountered a number of

difficulties that would suggest that it has been less than an unmitigated success. Firstly, competition is very limited, with a small number of pension funds, and the portfolio of the funds has not been diversified, with little investment in stocks, and much in government bonds. The cost of managing the money is very high, yet the yield on the portfolio has steadily declined, with returns averaging 13.8 per cent from 1981 to 1994 but only 4.6 per cent from 1995 to 2001. Furthermore, the scheme is far from comprehensive; with no coverage for the self-employed, and even those covered effectively contribute for about half of the potential working years, which would result in a relatively low pension, especially given normal rates of return on investment. Lastly, there is insufficient knowledge amongst the population of employee's rights and employer contributions, leaving the system open to abuse.

Despite these obvious limitations of the Chilean system, the reform served as a model for many countries in Latin America and in Eastern Europe. The model advocated by the World Bank in its highly influential *Averting the Old Age Crisis*<sup>1</sup> was also based on the Chilean reform. Unsurprisingly, studies of other Latin American systems found similar faults in the system to those described above.

### **The Swedish reform**

The Swedish reform is an interesting alternative to the privatization approach. It deals with the problem of the viability of the pay-as-you-go (PAYG) system by changing the system itself to make it inherently more financially sound, by borrowing ideas from free market economics and modifying them to suit the needs of the system.

The Swedish pension system was founded in 1947, with a flat rate state pension. Subsequently, there was a movement to extend the scope of the pension and make it earnings-related, and an interesting debate emerged between those who favoured a DC-funded system and advocates of a PAYG system.

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1. World Bank (1994) *Averting the Old Age Crisis*. Oxford University Press.

The social democrats and the workers' union preferred the latter, as it could give workers a pension relatively quickly. The 1960 referendum decided in favour of a PAYG system. Because PAYG systems decrease national savings, the system accumulated a large trust fund to encourage saving.

A second tier of occupational pension was added to the universal state pension, negotiated between the unions and the employers. It began as DB, and is now changing into DC. This tier covers about 80 per cent of all employees, but it increases the pension for an average worker by only about 10 per cent. There is also a rather meagre saving for retirement through insurance companies.

In the 1980s it became clear that the PAYG system was not viable for the long term, due to a range of factors facing most Western countries at the time, including increased life expectancy, a decline in birth rates, a decrease in the growth rate of the economy (a result of the decline in labour productivity and the birth rate), and a decrease in labour participation rates at ages fifty-five and above. In 1998, a new pension system was introduced in an attempt to provide a solution that would lead to long-term stability in the pension system.

The system combines a notional defined contribution (NDC) with the DC system, though the two parts are completely independent of one another. The total contribution rate on all earnings is 18.5 per cent, of which 16 per cent constitutes the NDC and 2.5 per cent is the DC. The individual has a separate personal account in both systems. The notional accounts are a part of a PAYG system in which the contributions are used to pay for the benefits of retirees in the system, hence the term, 'notional': there is no money in them. The DC system is funded and the contributions are invested by private pension funds. The return on the notional account is the growth of the average wage, and that of the DC account is the return on the investment.

Under the revised Swedish pension scheme, from the age of sixty-one, the insured may retire, fully or partially, at any time. The payout is in the form

of two annuities, based on the sum accumulated in the two funds, divided by the corresponding annuity coefficients. The NDC coefficient is the average life expectancy and the annuity is indexed to the Consumer Price Index increasing by 1.6 per cent per year. (This is the assumed growth of real per capita contribution growth. If it changes, the rate of increase will be adjusted accordingly.) The DC coefficient is the standard actuarial annuity coefficient, which is based on an interest rate of 3 per cent per year. The system also provides a guaranteed basic benefit available from age sixty-five, at the level of one-third of the average wage, to ensure a minimum standard of living in retirement. This guaranteed benefit is means-tested and offset by the income from the NDC component; it is financed by general tax revenues and is conceptually separate from the earnings-related scheme. Notice that the two parts of the system yield different rates of return: the NDC yields 1.6 per cent real, and the DC yields the market rate on its portfolio. The DC yield is higher on average (if it were invested in US stocks it would enjoy the historical real rate of return of about 6.5 per cent), but it carries more risk. Assuming that these variables are not correlated, the Swedish system offers a diversification of the two types of risk.

The DC fund is supervised and partly managed by a new government agency, the Premium Pension Authority (PPM). The tasks of the PPM as a clearing house are as follows:

- to enter into contracts with funds applying to participate in the system;
- to execute aggregate purchases vis à vis the participating funds;
- to collect and make available information on fund share values on a daily basis;
- to keep the individual accounts for the system; and
- to provide the insurance products specified by law.

The individual can choose from between one and five of some 600 registered funds. The contributions of those who do not make an active choice of funds are managed publicly by a special default fund, making this 'clearing house' model a unique combination of

the competitive market and government regulation and intervention. The flexibility of such an approach is evident in, for example, the provision of annuity insurance, which, since this is rather technical and no advantage is to be had from entrusting it to the market, was efficiently and reliably managed by the PPM at low cost.

The Swedish reform created a system which is financially stable by establishing a connection between the benefit level and the ability of the system to pay. It also created incentives for insured persons to stay longer in the system and thus to increase their pension by offering a higher pension to cover fewer years of retirement. At the same time, the guaranteed minimum pension, equal to one-third of the average wage, covers much of the exposure to risk that is introduced by the new system.

### *Comparing generational risk in the Chilean and Swedish reforms*

The pension system is a social and economic mechanism that shifts income and risk between generations. In this section we examine some possible risks associated with the retirement benefits of pensioners, and which generation would bear the burden of the risk under the various systems previously described.

#### *Increase in life expectancy*

Under the PAYG Swedish system, the benefits were defined by a formula, independently of their cost. If life expectancy increases, the young generation will have to pay higher social security taxes to meet the extra expenditure needed to provide a pension over increasing years of retirement. In the NDC system, the reverse is true: if life expectancy increases by 3 per cent, then the benefits will be reduced exactly by 3 per cent, and the effects borne by the older generation currently in receipt of benefits. (Recall that the benefits formula is the notional balance divided by the life expectancy.) Similarly, in both the privatized Chilean system and the Swedish DC system, the increase in life expectancy will result in lower benefits, because the accumulated balance at retirement will be spread

over more years. The risk is mitigated somewhat by the guaranteed minimum pension of both Swedish NDC and Chilean privatized systems, which serves to distribute the risk between young and old generations, with more borne by the young as the level of the minimum pension increases.

#### *Real wage growth*

Under the PAYG system taxes are levied on wages, so their growth depends on wage growth. In the traditional system, benefits are fixed. If wages grow slower than expected, the social security taxes on the young must be increased to meet the extra cost. By contrast, in the NDC, the benefits are linked to the average wage. Even after retirement, benefits will increase in line with wage increases. So in this system, this risk is borne by the old.

#### *Working population growth*

The total social security tax collected depends not only on the average wage, but also on the number of workers making contributions, a factor that is affected by population growth and labour participation. Whilst this risk is borne by the young, the incentives against early retirement may encourage sufficient participation in the labour force to mitigate this burden.

#### *Interest rates*

The advantage of the PAYG system and the NDC system is that they shield the individual from the vicissitudes of the financial markets, which the privatized system does not. This is weighed against the fact that the privatized and DC systems shield the individual from uncertainties in the population growth rate.

#### *Low contributions and early retirement*

There is always the possibility that some workers will choose not to contribute to the pension system, which represents a particularly high risk in Chile where, on average, workers contribute to the system only in half of the potential working years. The increasingly popular option to take early retirement represents another strain on the system, which is borne by the younger, working generation in

all systems except the PAYG. All reform efforts in recent decades have produced systems that force the individual to internalize the cost of their actions, so that, for instance, deciding to retire early will diminish the benefits of the retiree without any cost to the younger generation.

### *What did the two reforms accomplish?*

Both of the reform efforts are internally consistent from a financial and actuarial viewpoint, establishing financial stability and viability through the internalization of risk on the part of each employee. This has resulted in a shifting of the risk from the younger generation to the old, as the consequences of the various risk factors are borne by the pensioners rather than the workers. Both systems also present the insured in the system with the correct incentives for retirement saving, preventing abuse of the system.

And yet, in terms of their originating ideologies, the two systems are very different: one stems from social democratic values of mutual support and equity, adjusted for the realities of incentives and actuarial balances; the other stems from free market principles. The Swedish system maintains the PAYG, an essential connection between generations, while the Chilean system has severed this Gordian knot, leaving every man for himself.

This difference is reflected in the burden of the reform, and who bears it. The Chilean reform necessitated a large surplus in the government budget to pay for the transition, which was borne mainly by the young, who paid higher taxes and suffered from reduced government expenditure. The Swedish reform did not have such a cost, and the surplus in the system was instrumental in limiting the unique burden caused by the Baby Boom retirement. This transitional burden on the young in Chile is partially offset by the higher rate of return offered by the market, compared to that provided by the Swedish system.

### *The future of pension reforms: lessons from economic theory*

Given the long-term nature of the pension arrangement – up to eighty years for the oldest participants – pension reforms, be they radical rethinks or mere modifications, occur relatively often; generally, every fifteen to twenty years. This can be attributed to the fact that the economic, demographic, ideological, and political factors that determine the nature of the pension system are constantly in flux, making adjustments to the pension system a necessity. We are gradually improving our appreciation of the shortcomings of existing pension systems and our understanding of the behaviour of economic agents involved with welfare systems; this knowledge shapes the ideas and strategies of reformers. In the 1960s, when it was believed that the economy would keep expanding, the reforms extended the coverage of the pension systems. In the 1980s and 1990s, the reverse happened.

One major policy change that was accepted by all countries has been the need to maintain fiscal discipline: to keep government budget deficits at low levels and to maintain reasonably low levels of government debt. This did not signal the end of the welfare state, since the state could still finance social expenditures by implementing suitable taxes, but it was recognition of the fact that fiscal policy must be planned and transparent. The alternative was to suffer inflation, exchange rate instability, and even financial crisis, as experienced by Sweden in the early 1990s. The pension system had to be 'rationalized'.

The economic profession has also changed. The simple belief in the advantages of the market was replaced by a more complex view, with an emphasis on the role of information asymmetry which accounted for the less than fully rational behaviour of economic agents. Economists began to accept what other professions knew already: that economic agents would not always make the decisions that would achieve their optimum benefit. The recently established fields of behavioural economics and behavioural finance have shown that agents do not always make rational decisions in the

stock market, and that they have difficulties in understanding the complex financial instruments such as pension plans or life insurance policies. The sellers of these instruments have a clear information advantage that they use in marketing them. Whilst one can count on the market to deliver good quality and price for tomatoes, the same is not true for life insurance or pension products. Meanwhile, experimental economics has shown that agents want to demonstrate responsibilities towards, and be fair to others, changing the simple paradigm of selfish agents, and supplying a conceptual basis for social policy.

The Swedish pension reform can be seen in light of these new economic ideas. The concept of the asymmetry of information applies to the decision of the participant to retire early, living on unemployment or disability benefits, since s/he has much better information than the government regarding their need or ability to continue working. The PAYG system did not supply the right incentives to prevent early retirement, and was unjust, since those who chose to stay in employment and continue to contribute to the system did not benefit any more than those who opted out early. The new system seeks to address these problems, providing a pension system that is both economically efficient and equitable.

The behavioural finance approach also helps to illustrate the problems of the Chilean reform. The high transaction costs resulted from the restrictions on competition for complex insurance products, mentioned above. Furthermore, many participants in the system do not understand the products or have a proper conception of their rights, in order to be able to make informed decisions about their pension plan. The DC part of the Swedish system, and specifically the PPM, was established exactly for that purpose: to promote informed competition by supplying standardized information to participants; to balance the market power of insurers by issuing auctions to save on transaction costs; to supply standard insurance products at cost; and to save on administration costs by keeping the accounts of the participants and thereby shielding the investors from insurance companies.

## *Conclusions*

We are now in a position to attempt to answer the question presented at the beginning of this brief: why, with the increases in economic uncertainty, was the welfare safety net not strengthened, but was rather weakened? It seems fair to say that the participants in the systems relied on this safety net too heavily, because the design of the system encouraged it. When more people became dependent on the system than it was originally designed to hold, it was at the risk of entire collapse. The safety net had to be re-designed to deter and strengthen it against those who abused the system, but this would necessarily involve less insurance, in order to force the participants to internalize the risk. This ideological change could be seen across all the welfare systems, not just the pension systems. The practical solution to reduce the risk borne by the system and pass it to the participants varied from country to country and from system to system, but the guiding principles were the same.

## *Policy implications*

This policy brief presents in detail two possible blueprints for pension reform, as demonstrated in the experience of Chile and Sweden. These precedents make clear that, whatever the exact nature of the system, some risk-bearing by the persons insured by the social security system is a necessary requirement for sustaining these systems in the face of the combined challenges of increased longevity and early retirement. The Chilean and Swedish reforms both introduce the correct incentives for insured persons, as well as basic elements of a self-balancing mechanism. However, the Swedish NDC system maintains the social contract between generations. The application of these principles should differ between countries, according to the history, legal system, values, and tradition of each country, but the realization that the elderly have to bear some of the risks must be integral to every reform. A difficult balance must be struck to internalize risk sufficiently to encourage full contribution to the system, and to discourage abuse of the system and the desire to provide sufficient coverage against risk for all. It is the fine detail of this balance that will determine the success or failure of the reform.





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The aim of the Foundation's programme, *The Social Contract Revisited*, is to establish the theoretical and institutional underpinnings that characterize the reciprocal rights and obligations amongst citizens and between the citizens and the state in modern liberal society. Through publication of the findings of such study, the Foundation will enrich both the theoretical and the policy debate concerning some of the most fundamental issues facing modern Western societies.

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