<table>
<thead>
<tr>
<th><strong>Title</strong></th>
<th>Transformation in Central and Eastern Europe: economic theory in practice: provision of private pension schemes in Poland</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Authors(s)</strong></td>
<td>Durkan, Joe; McDowell, Moore</td>
</tr>
<tr>
<td><strong>Publication date</strong></td>
<td>1993</td>
</tr>
<tr>
<td><strong>Series</strong></td>
<td>UCD Centre for Economic Research Policy Papers; PP93/1</td>
</tr>
<tr>
<td><strong>Publisher</strong></td>
<td>University College Dublin. School of Economics</td>
</tr>
<tr>
<td><strong>Item record/more information</strong></td>
<td><a href="http://hdl.handle.net/10197/1079">http://hdl.handle.net/10197/1079</a></td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>A hard copy is available in UCD Library at GEN 330.08 IR/UNI</td>
</tr>
</tbody>
</table>
Transformation in Central and Eastern Europe: Economic Theory in Practice

Provision of Private Pension Schemes in Poland

by

Joe Durkan
Moore McDowell
March 1993

Policy Paper 93/1

UNIVERSITY COLLEGE DUBLIN

Department of Economics

BELFIELD, DUBLIN 4, IRELAND
Transformation in Central and Eastern Europe: Economic Theory in Practice

Provision of Private Pension Schemes in Poland

Joe Durkan
Moore McDowell
Department of Economics
University College Dublin

Paper presented at conference organised by:
The Centre for European Research in Economics and Business, Staffordshire University Business School and The British Review of Economic Issues
Provision of Private Pension Schemes in Poland

Abstract

This paper considers the problems of the social security system in relation to pensions in Poland. It concludes that the system that prevailed up to recently had the capacity to cause the Social Insurance Fund to be permanently in deficit because of structural issues deriving from the conditions of the scheme, early retirement and recent increases in the dependency rate. Over the long term this deficit was likely to widen for demographic reasons. The recent reforms are unlikely to eliminate the deficit, so that the system may be driven to the private provision of pensions. This in turn raises fundamental property right issues. Finally, the issue of the private provision of pensions need to be seen in the light of the economy’s need for domestic saving and financial markets and instruments to accelerate development.

1. Introduction

Industrial Market Economies have evolved a set of pension arrangements that suit, in varying degrees, the requirements of society. In some, a state scheme based on the principle of pay as you go is the main form of pension; in others private funded pensions provide a significant supplement to a state scheme, which in turn may be either a pay as you go or a funded scheme; or private funded/unfunded pensions are the main source of income for pensioners. In these economies the policy issues in relation to pensions relate to: the adequacy of private funded pension schemes; the tax treatment of pension contributions, pension fund income, lump sum payments and pension income; the integration of state and private schemes; and the principles that should govern the development of pensioners’ income in an environment where real incomes are expected to increase.

In the transition economies of East and Central Europe where market related reforms are being sought to existing economic structures and market solutions
adopted for economic problems, attention has shifted to private pension schemes as an alternative to state schemes. However the issues for transition economies are more than the simple question of public versus private pensions. In this paper we consider some of the issues that arise in relation to the Polish economy.

2. The Polish Pension Scheme - Characteristics prior to 1992

In principle state pensions in Poland are paid from the Social Insurance Fund, which is not a fund in the strict sense, but operates on a pay as you go basis, as do state schemes in many countries. The resources required to pay for pensions come from payroll taxes on enterprises, with no direct contribution from employees. Up to recently these payroll taxes were 43 per cent of the wage bill, and have since been raised to 45 per cent. They thus constituted a significant portion of labour costs of enterprises. On the benefit side the standard retirement age for women and men was 60 and 65 years respectively, with a minimum of 20 and 25 years employment history to benefit. The earnings base on which pensions were calculated relates to earnings in the three highest earnings years over the twelve years prior to retirement. The replacement rate could have been as high as 80 per cent, and the minimum pension was set at 35 per cent of the average monthly wage in the state enterprise sector.

The problems of pay as you go pension schemes derive from a simple relationship: the relative level of pension is inversely proportional to the dependency rate, for a given employment rate and contribution rate.
The Dependency Rate

In the case of Poland, as with Central and Eastern Europe in general, the dependency rate is increasing, and, ceteris paribus, this implies a reduction in the relative level of pensions over the medium and long term. (Table 1)

Table 1. Life Expectancy and Dependency

<table>
<thead>
<tr>
<th>Country</th>
<th>Life Expectancy</th>
<th>Dependency Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1990</td>
<td>2010</td>
</tr>
<tr>
<td>USA</td>
<td>75.5</td>
<td>19.1</td>
</tr>
<tr>
<td>Japan</td>
<td>78.3</td>
<td>16.8</td>
</tr>
<tr>
<td>Northern Europe</td>
<td>75.5</td>
<td>23.4</td>
</tr>
<tr>
<td>Western Europe</td>
<td>75.5</td>
<td>21.3</td>
</tr>
<tr>
<td>Poland</td>
<td>71.5</td>
<td>15.4</td>
</tr>
<tr>
<td>Hungary</td>
<td>70.2</td>
<td>20.1</td>
</tr>
<tr>
<td>Czechoslovakia</td>
<td>71.2</td>
<td>17.7</td>
</tr>
</tbody>
</table>

Source: UN

The level of the formal dependency rate in Poland in 1990 was low by reference to market economies, and towards the lower end of the range for transition economies. However in common with all countries covered in the Table the dependency rate is set to rise over the next 15 years, with an acceleration over the subsequent 15 years. The demographics of the situation confronting many economies have already induced major changes in pension entitlements (Japan) and in attitudes towards retirement (USA). Thus, for Poland, the continuance of the system in the long run must have been in doubt as a result of demographic pressure.
Furthermore the formal dependency rate understates the true dependency rate. The effective retirement age for women and men was 57 and 58 years respectively. Since 1990 there has been a marked increase in the number of pensioners as a consequence of early retirement following on mass layoffs, and the treatment of some layoffs as early retirement rather than unemployment.

**The Employment Rate**

Up to 1990 unemployment did not exist in Poland, though there was considerable underemployment as enterprises hoarded labour. The system of planning guaranteed cost recovery and this created an incentive for labour hoarding to meet plan targets, produced full employment, an active labour market with high turnover and accelerating wage inflation, though there remain doubts about the extent of real wage growth because of the scale of inflation. It is not obvious that real living standards improved. Since 1990 unemployment has emerged as a characteristic of the Polish economy. From an effective zero rate of unemployment at the beginning of 1990, the rate increased to just over 6 per cent by end year, and to almost 11 1/2 per cent by the end of 1991. Thus the economy experienced a reduction in the employment rate which exacerbated the problems of the Social Insurance Fund.

**The Contribution Rate**

Prior to 1992 the rate of contribution to the Social Insurance fund was set at 43 per cent of the wages bill of enterprises. Even with this level of contribution the Social Insurance Fund was in deficit, and required transfers from the state. The shortfall became particularly acute in 1990 and 1991 as the Fund
faced into the effects of the reduction in employment, an unanticipated increase in the number of pensioners due to early retirement, and the effect on outgoings of the Fund as a result of the rules in relation to the earnings base. The acceleration of wage inflation in the two years of 1988 and 1989 resulted in an increase in real earnings of 25 per cent, and for those newly pensioned these years formed the base for pension entitlement. For existing pensioners pensions were indexed to the average wage in the State enterprise sector and this rose sharply in the second half of 1990. In an attempt to deal with the size of the shortfall in the Fund the Government suspended indexation in the second half of 1991.

The following Chart, taken from the OECD Economic Survey – Poland 1992, illustrates the problem of the Social Insurance Fund very neatly: there was a significant increase in the average number of pensioners, a reduction in the number of employed people, and a significant increase in the relative value of pensions. Since, for all practical purposes there was a fixed contribution rate, the Social Insurance Fund was faced with permanent and widening deficits – permanent because of the mismatch between receipts and expenditure, and widening because of the increasing dependency rate.

THE STRUCTURAL PROBLEMS OF PENSION FINANCING
1987 = 100
3. The Polish Pension Scheme - The 1992 Reform

In early 1992 major changes were announced in respect of the Social Insurance Fund. First the level of contribution was raised from 43 per cent to 45 per cent of each enterprises wage bill. Second a new method of estimating pensions was adopted and this was to apply to all current pensions. As with all reforms there were potential gainers and losers, but in practice there were only gainers as government failed in its attempts to get agreement on those parts of the reform which involved loss to existing pensioners. The additional costs are thus a charge on the state finances. Third a change was made to the qualifying base income on which the pension will be paid. In future the qualifying period will be progressively increased to 10 years out of the previous 20, rather than 3 years out of 12. Fourth, the value of the pension is determined by number of working years, and the relationship between the average income of the employee and the average income in state enterprises, but the maximum value of the pension is two and a half times the average wage in state enterprises i.e. there is a ceiling on the pension. Fifth the degree and timing of indexation were reduced.

The reform was directed at two of the elements that impact on the viability of the state pension scheme, viz. the relative value of the pension, and the rate of contribution. There are two major caveats about the reform measures. First the payroll cost is very large for what is being provided. Second there will continue to be large numbers of people whose pensions remain very low. The state scheme in Poland has some of the hallmarks of private occupational pension schemes in market economies, but lack the safety net that the state itself provides in these economies. Furthermore these measures may not be enough, even if one were to discount these caveats. The failure to
limit the scale of existing pensions remains a serious problem for the public finances. This suggests that further change in the provision of pensions will be required in Poland. In the remainder of the paper we look at some of the issues involved in the private provision of pensions, or more accurately the privatisation of pensions in a transition economy.

4. Privatisation of Pensions in a Transition Economy

Given the central role of pension funds in the mobilising of savings and the market for corporate control in many Western economies, it is clear that some consideration should be given to existing pension arrangements and possibilities for change when discussing the transition process. This paper looks at Poland, but the lessons involved are, we believe, of wider application.

There has not, we believe, been adequate attention paid to the problems of social security, pensions and savings in analysing the directions in which policy needs to be guided in the transition process. As an example of this, it is instructive to read one of the most widely cited references on transition economies in general and on Poland in particular, the 1990 Brookings Papers study of Lipton and Sachs\(^1\). The paper is deservedly widely known, but is remarkable for the lack of consideration given to the need for the creation of relatively sophisticated capital market institutions and instruments for both macroeconomic and microeconomic reasons.

In a general survey of reform in Eastern Europe Jozef van Brabant\(^2\) concentrates the reader's attention on the resource allocation aspect of capital markets: "Allocating capital resources is essentially a matter of how best to organise capital markets in the sense that some ownership forms are better suited to allocate capital services at a smaller cost than others." He goes on to chide reformers for being unduly concerned with creating local capital markets and market institutions. There is, he believes, in an integrated world economy room for only a few fully fledged capital markets. Banks will remain the principal source of investment funds in transition economies in the short to medium term. The banks should be commercial and investment banks on the German/Japanese model rather than on the UK/US model "...to ensure that savings be earmarked in the most rewarding manner..."

The question of the interaction between the existence of a varied menu of financial assets and the household sector's willingness to exchange present for future consumption seems to us to have been inadequately stressed in the debate on economic reform. This is curious, since no one doubts that to the extent that transition economies can not depend on aid flows from the West it is axiomatic that the transition process involves reducing real consumption now in order to enjoy higher consumption levels in the future. This can be achieved on a compulsory basis, by taxation, rationing, inflation or other devices to lower real consumption given aggregate money incomes (which in general means using the state as the mobiliser and allocator of savings), or it can be done by offering the household sector attractive and credible claims on

future consumption in the form of claims on financial market institutions. If this is accepted, it implies that the savings ratio will be affected by the institutional reforms implemented in the capital market. At the same time, following van Braband, we accept that on average private market institutions will be more efficient in allocating savings than the state.

The two principal forms in which savings are mobilised for private sector investment in mature capitalist economies are retained earnings of capitalist firms and contractual and employment related savings from household incomes, which are channelled through what may loosely be described as institutional funds. In economies organised along the lines of the US and the UK this is overwhelmingly the case. A very small proportion of risk capital for investment is raised through equity or debenture sales via the stock market. By and large, banking houses do not hold long term equity assets in their portfolios, nor do they invest in long term marketable debt paper issued by the corporate sector as part of their portfolio of assets. This, it is widely known, is less the case in other capitalist economies, such as Japan or Germany. In the latter case there is a long-standing and strong tradition of direct banking participation in commercial equity funding of investment. "Funds", however, remain an important source of investment funds to the private sector, even if in the main (as in the UK and the US) largely at the securitisation rather than primary stage of the investment process.

If Poland moves to a system of funded rather than pay as you go pension provision this will have substantial implications for the body of laws affecting corporate structures. In general contractual savings for pension purposes are organised through firms rather than being left to individual decision making. The latter type of contractual saving tends to be of a "top up" or
optional nature.

Pension funding via the employee's firm raises a variety of property right problems. These are principally concerned with employees' rights to the assets of the funds. Leslie Hannah\textsuperscript{3} has noted that even in the UK putative beneficiaries from pension funds appear to have very inadequate information about the funds they "own" and about the options available. This informational asymmetry creates possibilities for opportunistic behaviour by firms, extreme cases of which are luckily relatively rare.

A simple example of the kind of issue which needs to be resolved can be found by examining the question of actuarial funding. If the rights acquired by contributors are of the Defined Benefit type, then a fund can easily prove to be over or under funded actuarially. If it is over funded, the surplus assets in the employees' pension fund represent a liquid asset which the firm (or, frequently, a takeover raider) can appropriate for other purposes. If, on the other hand, it is under funded, then the fund may face technical or real bankruptcy. In this event the cost of the under funding is visited on employees who have little control (and little incentive individually to acquire information to exercise control) over the management of the funds. Hannah points out that in the UK in general firms have accepted a liability to top up funds if under funding occurs. The question for a transition economy is whether it can rely on the emergence of a customary procedure underpinning the financial position of funds, or whether it will need to create statutory regulation and policing of that regulation in order to guarantee pension fund solvency.

To a considerable extent the solvency problem arises from the prevalence of Defined Benefit rights in funds rather than Defined Contribution rights. Under DB, the contributor purchases a deferred annuity (and frequently a lump sum). This annuity is based on some arbitrary expected income, typically the average income of the last two or three years of employment, or even of retiring salary. Since this base line income is not known with certainty in advance, the certainty of retirement relative income acquired by the employee has to be matched by the assumption of significant risk by the management of the fund. One justification for firms being entitled to appropriate surpluses in funds is that these represent a return to assuming the risk. The corollary, of course, would be that firms would have an obligation in law to meet any deficiency in the fund arising from an under-writing failure.

In the case of a transition economy, leaving aside all the other problems, firms will clearly face difficulties in trying to determine the actuarially appropriate level of contribution because of difficulties in estimating the distribution of employee base line incomes. For this reason it may be thought preferable to proceed to "privatise" pensions on a Defined Contribution basis. DC pensions, in the absence of fraud, are by definition not exposed to insolvency risks. The employees' rights are simply to receive the pension and/or lump sum accumulated in the fund over their working lives. While this by definition transfers the risk to the contributor (which, leaving aside considerations of equity, will to some extent diminish the attractiveness of contractual savings in the first place), it has certain advantages for the contributor. Bodie, Marcus
and Merton⁴ point out that the principal of these are (i) enhanced "portability" of pension rights, which makes the labour market more flexible, and (ii) the enhanced ability of the contributor to modify the level of his contractual savings and (if he wishes) to change the assets in which his savings are invested. For higher income and variable income earners this form of contractual savings has obvious attractions.

Another feature of DC funding which is worth noting in the context of encouraging and mobilising savings is the stronger positive interest response probability under DC funding. Bernheim and Shoven⁵ have pointed out that DB funding implies lower contributions if real interest rates rise, a significant factor, in their opinion, in finding an explanation for the apparent perverse response of the US savings ratio to higher real interest rates.

Given that DB and DC funding are options which are open to employees or self-employed earners, the dominance of DB schemes in the market place in the West may, one suspects, be treated as an example of revealed preference by risk averse savers. There is no reason to believe that in transition economies the same preference would not dominate. The problem, unfortunately, is that DC funding is institutionally easier to organise, offers more encouragement to saving and enhances labour market flexibility. Our suspicion is that a fully fledged DB regime may have to await the increased certainty which will prevail when the transition process is more advanced.


⁵ B.D. Bernheim and J.B. Shoven: Pension Funding and Saving; Chapter 3 in Bodie, Shoven and Wise, op. cit.