

# PENSIONERS AND THE PUBLIC PURSE

Public Spending Policies and Population Ageing

Vanessa Fry, Stephen Smith and Stuart White

The Institute for Fiscal Studies  
180/182 Tottenham Court Road  
London W1P 9LE

**Published by**

The Institute for Fiscal Studies  
180/182 Tottenham Court Road  
London W1P 9LE  
(Tel. 071-636 3784)  
(Fax 071-323 4780)

**Distributed by**

Woodhead-Faulkner (Publishers) Ltd  
Simon & Schuster International Group  
Fitzwilliam House  
32 Trumpington Street  
Cambridge CB2 1QY

© The Institute for Fiscal Studies, April 1990  
ISBN 0 902992 92 9

**Typeset and printed by**

Parchment (Oxford) Ltd  
Printworks  
Crescent Road  
Cowley  
Oxford OX4 2PB

## PREFACE

This report concludes a research project at the Institute for Fiscal Studies on the public expenditure consequences of population ageing, and of changes in pensioner incomes and wealth. The project was funded by the Economic and Social Research Council as part of its Public Expenditure Research Programme, under grant WB04250002. Data from the *Family Expenditure Survey* are used by permission of the Department of Employment. The analysis in this report, and the views expressed, are the sole responsibility of the authors, and not of the ESRC, nor of the Institute for Fiscal Studies which has no corporate views.

The authors would like to thank Edward Whitehouse for his comments, and Chantal Crevel-Robinson and Pat Francis for preparing the manuscript for publication.

*Vanessa Fry* is Term Fellow in Economics at University College, Oxford, and a Research Associate of the Institute for Fiscal Studies.

*Stephen Smith* is Director of the Public Sector Programme at the Institute for Fiscal Studies.

*Stuart White* was formerly a Research Officer at the Institute for Fiscal Studies, and is now at Wolfson College, Oxford.

## About the IFS

The Institute for Fiscal Studies is an independent centre for the study and discussion of fiscal policy. Its aim is to study issues of topical and practical relevance in order to introduce accurate and relevant information into public debate.

Recent research has examined new ways of treating PEPs, analysing the distribution of the indirect tax burden in the UK, looking at options for reforming local taxation, corporate tax harmonisation in Europe, analysis of poverty in the UK and proposals for reforming National Insurance contributions.

There are some fifteen full-time researchers and the Institute maintains close contact with universities through a network of some eighteen Research Associates.

The IFS has over a thousand members, including many large companies, partnerships, government departments and many individuals. Members receive the journal *Fiscal Studies* and a regular newsletter, as well as details of conferences and publications which are offered to them at a significant discount.

## CONTENTS

Chapter 1. Introduction	7
<i>Section 1. Public spending</i>	
Chapter 2. The level and pattern of public provision	9
Chapter 3. The implications of demographic change	12
<i>Section 2. Pensioner Incomes</i>	
Chapter 4. Trends in pensioner incomes	28
Chapter 5. Inequality in pensioner incomes	48
<i>Section 3. Reappraising the role of the state</i>	
Chapter 6. The scope for greater means-testing	55
Chapter 7. The balance between public and private provision	65
Chapter 8. Conclusions	74
References	80



## CHAPTER 1

### INTRODUCTION

Public expenditure on pensions, other social security benefits and services for the elderly (health care and personal social services) amounted to some £36 billion in total in 1984 — equivalent to about half the total budget of the Departments of Health and Social Security. Pensioners are substantial net beneficiaries from the redistributive and welfare activities of the state; the income of the average pensioner household from private sources was more than doubled when cash transfers and benefits in kind from government spending are taken into account.

In recent years some have come to question this overwhelming importance of state welfare in the lives and living standards of the elderly. The most widely-reported of these reappraisals was in 1988 when the then Chancellor of the Exchequer was reported to have suggested that the growing affluence of pensioners was beginning to make automatic public support unnecessary; some or all of the benefits and services currently provided to pensioners on a universal basis might, it was suggested, be means-tested in future.

Pressures in the same direction have also come from demographic changes. Population ageing over the next 50 years will lead to a significant increase in the size of the elderly population both in absolute terms and relative to the population as a whole. Associated with this is a significant increase in the 'dependency ratio', the number of dependent pensioners per worker, and potentially, therefore, in the support burden the elderly will place on the population of working age. An OECD report on the social policy implications of population ageing (OECD, 1988a) which examined the scale of these pressures and appropriate policy responses emphasised the long lead time in any policy changes in this area. By the time demographic pressures affect public expenditure it will be too late to make policy changes without harming the interests of a whole generation of pensioners.

In this report we consider the role of the state in provision for the elderly, and, in particular, the relationship between, on the one hand, state provision, and on the other, individual provision through occupational pensions and other private saving, and private expenditures. How do the forms of state and individual provision interact? Are rising pensioner incomes reducing the need for pensioners to rely on state provision, and so changing the

appropriate pattern of public support for the elderly? What pressures on public provision arise from demographic changes; and what contribution could be made to easing them by changes in the pattern of state obligations?

The report is in three main sections. Section 1 contains two chapters. In the first we characterise the level and pattern of public provision for the elderly, and describe how and where public provision and private, individual, provision interact. The second sets out the demographic pressures on public spending. In Section 2 we examine evidence on recent and likely future trends in pensioner incomes. Are the elderly in fact becoming more affluent, and why? Then, in the Section 3, we consider two major policy issues surrounding the role of the state in provision for old age — the scope for greater means-testing of public support, and the appropriate form in which public support for the elderly should be provided.



## CHAPTER 2

### THE LEVEL AND PATTERN OF PUBLIC PROVISION

#### 1. The level of public spending on the elderly

Public expenditures specifically directed at the needs of the elderly include the three major categories of pensions, health care and personal social services. Expenditure on pensions, including the basic state pension and the state earnings-related pension ('SERPS') amounted in total to some £21 billions in 1989/90. About 44 per cent of NHS spending and 51 per cent of spending on personal social services may be attributed to pensioners, giving estimated public spending on health care and personal social services for pensioners of some £8.8 billion and £1.9 billion respectively in 1989/90. In addition, pensioners receive transfer payments, including income support and housing benefit. The amounts of these benefits received by pensioners compared with the rest of the population are not set out in the annual Public Spending White Paper, but an allocation based on the 1984 Family Expenditure Survey suggested that some £3.5 billion other benefits might have been paid to pensioners, in addition to about £15.4 billion pensions. If this were to have risen in line with the non-earnings-related component of pensions spending between 1984 and 1989/90 it would imply a current level of benefit spending on the elderly of around £4.7 billion. Taking all of these elements together, total welfare spending on the elderly, including state pensions, would have been around £36 billions in 1989/90, equivalent to half the total budget of the Department of Health and Social Security, and to about one-fifth of total public spending including transfer payments.

#### 2. Public spending in relation to private resources

Table 2.1 illustrates the impact of these various welfare activities of the state on the total level of resources available to retired households, and compares it with the impact of state welfare and redistribution on non-retired households.<sup>1</sup> In per capita terms, the 'original income' of the average retired household was some £1500 in 1986, compared with nearly £6000 per adult in non-retired households. These figures comprise all 'private' sources of income, both earned and unearned, including private and occupational pensions. Transfer payments in the form of state cash benefits augmented the household's original income by some £2000 per capita in the case of retired households, and £600 per capita among

TABLE 2.1

## Average household incomes and allocation of public expenditure benefits, 1986

	Non-retired		Retired	
	per household	per capita	per household	per capita
Original income	12,320	5,866	2,290	1,527
+ Cash benefits:	1,340	638	3,070	2,046
Retirement pension	180	86	2,440	1,627
Other contributory	300	143	130	87
Non-contributory	870	414	500	333
= Gross income	13,660	6,504	5,360	3,573
- Income tax, NI	2,560	1,219	490	327
= Disposable income	11,100	5,285	4,880	3,253
- Indirect taxes	2,760	1,314	1,220	813
= Income after cash benefits and all taxes	8,340	3,971	3,660	2,440
+ Benefits in kind:	1,700	809	1,220	813
Education	840	400	20	13
NHS	700	333	1,050	700
Housing subsidy	60	29	80	53
Other	100	48	70	47
= Final Income	10,040	4,780	4,870	3,246

Source: Economic Trends, December 1988

non-retired households. More than 80 per cent of the transfer payments received by retired households were from contributory benefits, mainly the state retirement pensions, whilst only about one-third of the benefits received by the average non-retired household were contributory. Taking into account the original income and benefits received, and subtracting direct and indirect taxes paid, the net cash income of retired households averaged some £2400 per head, 60 per cent higher than the average original income, but still 40 per cent lower than the average net cash income per adult in non-retired households.

The benefits in kind received by both retired and non-retired households from government spending were approximately equal at about £800 per adult member, although the mix between services was sharply different. Half of the benefits received by non-retired households were from education spending, which benefited retired households to a negligible degree. Almost nine-tenths of the benefits in kind received by retired households were from the health services,

reflecting the sharply-increasing costs of health care with age; public spending on health per person in the 65-74 age group is three times the level of spending per head on the 16-64 age group, and spending per capita on those aged 75 and over is more than six times as high as on those aged 16-74 (HM Treasury, 1989). Overall, benefits in kind increased the net cash incomes from all sources of retired households by about one-third; taking benefits in kind into account, the final incomes of retired households averaged about £3200 per capita, about 68 per cent of the final incomes per adult of non-retired households.

#### NOTES

1. Retired households are defined in Table 2.1 as households where retired members contribute at least half the total gross income of the household; retired persons are those describing themselves as 'retired' (see *Economic Trends*, December 1988, p.115 for more details).

## CHAPTER 3

### THE IMPLICATIONS OF DEMOGRAPHIC CHANGE

#### 1. Demographic trends

Over the next few decades most industrialised countries will experience a sharp rise in the number of elderly people. In the OECD countries as a whole, the population aged 65 and over is projected to rise from some 100 millions in 1990 to 130 millions in 2010 and 180 millions in 2030 (Table 3.1). In some individual countries the rise will be particularly dramatic; in the USA and Japan the elderly population will almost double over a period of 40 years. There has been considerable concern about the implications of these demographic changes for the future cost — even, perhaps, the sustainability — of the social provision for elderly people in these countries. The issues and policy options have been the subject of many analyses — for example, OECD (1988a) and OECD (1988b).

A key indicator of the ‘burden’ of population ageing is the ratio of elderly people to people of working age. This indicates the number of elderly people which each person of working age has to ‘support’, in the form of current output which has to be devoted to the needs of the elderly. Table 3.2 shows that in the OECD countries this ‘aged dependency ratio’ will rise from 19.4 in 1990 to 22.9 in 2010 and 33.3 in 2030. In other words, whilst each elderly person has on average five people of working age to support them in the OECD

TABLE 3.1

Projected population aged 65 and over, 1990-2030

	<i>millions</i>				
	1990	2000	2010	2020	2030
United Kingdom	8.5	8.3	8.4	9.5	11.3
France	7.7	8.7	9.4	11.2	12.5
Germany	9.5	10.2	11.5	11.5	12.6
Italy	7.9	8.7	9.6	10.3	11.2
USA	30.4	32.2	35.8	47.4	58.9
Japan	14.0	19.4	24.0	26.4	24.4
OECD	102.7	115.8	131.1	155.7	178.6

Source: OECD (1988a) p. 21

TABLE 3.2

## Aged dependency ratios, 1990-2030

	<i>percentages</i>				
	1990	2000	2010	2020	2030
United Kingdom	23.0	22.3	22.3	25.5	31.1
France	20.9	23.3	24.5	30.6	35.8
Germany	22.3	25.4	30.6	33.5	43.6
Italy	20.1	22.6	25.7	29.3	35.3
USA	18.5	18.2	18.8	25.0	31.7
Japan	16.2	22.6	24.0	26.4	24.4
OECD	19.4	20.8	22.9	27.6	33.3

Note: Aged dependency ratio defined as population aged 65 and over as percentage of population aged 15-64

Source: OECD (1988a), p. 29

countries in 1990, forty years later each elderly person will have to be supported by the output of only three people of working age.

As Table 3.3 shows, the UK will be rather less affected by population ageing over the next decades than many other OECD countries. The UK begins with a higher dependency ratio than the other major OECD countries shown in Table 3.2, with 23 elderly people per 100

TABLE 3.3

## Growth in population aged 65 and over, and in the aged dependency ratio, 1990-2030

	<i>percentage growth</i>			
	Population aged 65 +		Dependency ratio	
	1990-2010	2010-2030	1990-2010	2010-2030
United Kingdom	-1	35	-3	39
France	22	33	17	46
Germany	21	10	37	42
Italy	22	17	28	37
USA	18	65	2	69
Japan	71	2	82	8
OECD	28	36	19	45

Source: OECD (1988a)

of working age compared with 19.4 on average in the OECD. Over the next 40 years, the dependency ratio in the UK will rise to 31.1, but will in fact be overtaken by the average dependency ratio in the OECD area.

Indeed, the number of people aged 65 and over in the UK is projected to decline slightly over the next decade, and to be no higher in 20 years time than now. Over the longer term, demographic developments in the UK are less favourable. From the end of the first decade of the next century the number of people of pensionable age and the dependency ratio will rise substantially, as the large post-war 'baby boom' cohorts (born between about 1950 and 1970) begin to retire, and are not replaced by working age cohorts of equivalent size.

Over the whole period, however, the elderly population is, itself, projected to become steadily older; the number of very elderly people (i.e. aged over 75) is projected to rise in the UK from some 4 million in 1990 to 4.4 million in 2010 and 5.4 million by 2030. As the discussion below shows, it is the rise in the number of very elderly people which has the most significant implications for non-pension social expenditures.

## **2. Demographic change and public spending**

The obvious starting point for considering the public expenditure consequences of an ageing population, or of other demographic changes, is the current pattern of expenditure and service use by different groups in the population. A common approach (used for example in the OECD's study of the social policy implications of ageing (OECD, 1988a) is to use data on the average public expenditure cost per person in different age groups to weight projected population numbers. The results can be interpreted as projected spending levels in future years, assuming the current 'standard' of services provided to each group of the population is maintained.

This approach has the merit of simplicity, and of focusing research efforts on the pattern of service usage by different groups in the population — key parameters which have been investigated only rarely. Weighting population changes by the current average costs of spending may often be of considerable value in showing the broad direction of the public expenditure changes that can be expected. Nevertheless, the assumptions underlying this approach are strong. In particular there are three important reasons why public spending

would not respond proportionately to population changes: the marginal cost of serving an extra client may not be equal to the average cost; different cohorts may have different requirements or entitlements; and the economic system may adjust, as a consequence of demographic change, in such a way as to alter other determinants of the cost of public spending (such as wages). We discuss each in turn.

(i) *Average and marginal cost*

A fundamental assumption underpinning the whole approach is that the *average* public expenditure cost of providing public services to the current population is a close approximation to the *marginal* public expenditure cost of providing services to extra or fewer individuals in a particular age group in future years. This assumption is equivalent to saying that, over the relevant range of population numbers, there are no economies or diseconomies of scale in the provision of public services. The plausibility of this assumption is rather greater over the long run than over short periods.

In the long term, the most significant reason for expecting economies of scale in public service provision is the geographical dispersion of the population. Given the labour-intensive nature of many public services, economies of scale are unlikely to be large, and within large cities public services such as health care tend to be provided by a number of establishments, each of which is likely to have exhausted all significant economies of scale. Outside urban areas, however, it is more possible that hospitals or other establishments could be operating below minimum efficient scale (in terms of the costs of the activities they perform) in order to provide the full range of facilities without requiring undue travelling. In other words, to ensure adequate public access, services in less-densely populated rural areas may be provided in smaller-scale establishments than in urban areas, leaving some scope for greater economies of scale if client numbers rise.

In the short term there is more reason to expect a divergence between the average cost of public spending provision, and the marginal cost of providing public services to an extra individual. Whilst in a particular city, a permanent fall of ten per cent in the number of elderly people might lead to an adjustment of the number of old peoples' homes from ten to nine, each of them operating at minimum efficient scale, a temporary fall in the number of elderly people might not warrant any adjustment in the number of establishments. Some

or all of the ten homes would then have to operate at below minimum efficient scale for a period, and unit costs would rise.

Thus, using the current average cost of public services as a measure of the future marginal cost is likely to be more appropriate where steady trends in population numbers are involved, and less appropriate when dealing with short-term fluctuations in population numbers.

*(ii) Cohort differences*

A second major assumption underlying the use of current average cost data in public spending projections is that successive generations or 'cohorts' of individuals will have the same needs for or rights to public services. In other words, the group of people who will be aged over 75 in ten years' time are assumed to have the same level and pattern of per capita requirements for public services as the group of people who are currently aged over 75. In the case of the health services this assumption may give a reasonable approximation, but, even so, differences in smoking behaviour, diet, and exposure to environmental hazards are likely to give rise to at least *some* differences between cohorts in medical needs. In the case of spending on public pensions, cohort differences in entitlements are far greater, and over the next few decades, as we will describe below, outweigh the effects of purely demographic trends in determining future changes in state pensions costs.

*(iii) System-wide effects*

The third assumption underpinning the use of the current average cost of public services as a guide to future marginal costs is that the implications of demographic changes for the economic system as a whole can be ignored in assessing the effects on public spending. Such system-wide effects could, in principle, arise from the effects of demographic change on the cost of inputs used in public services, or from other effects either on public spending 'supply' or 'demand'.

There is a growing literature on the effects of demographic change on macroeconomic variables including productivity, wage rates and investment (Bös and von Weizsäcker, 1989). These macroeconomic effects may mean that the 'ceteris paribus' assumption is difficult to maintain; demographic changes may affect the level and rate of growth of incomes, and may thus have indirect effects on public spending through the effects of these induced income changes, as well as the direct effects measured by expenditure-weighted population



numbers. It is not inconceivable that there could be effects in the other direction too; changes in the level of incomes could affect both the birth rate (De Cooman, Ermisch and Joshi, 1987) and the rate of mortality.

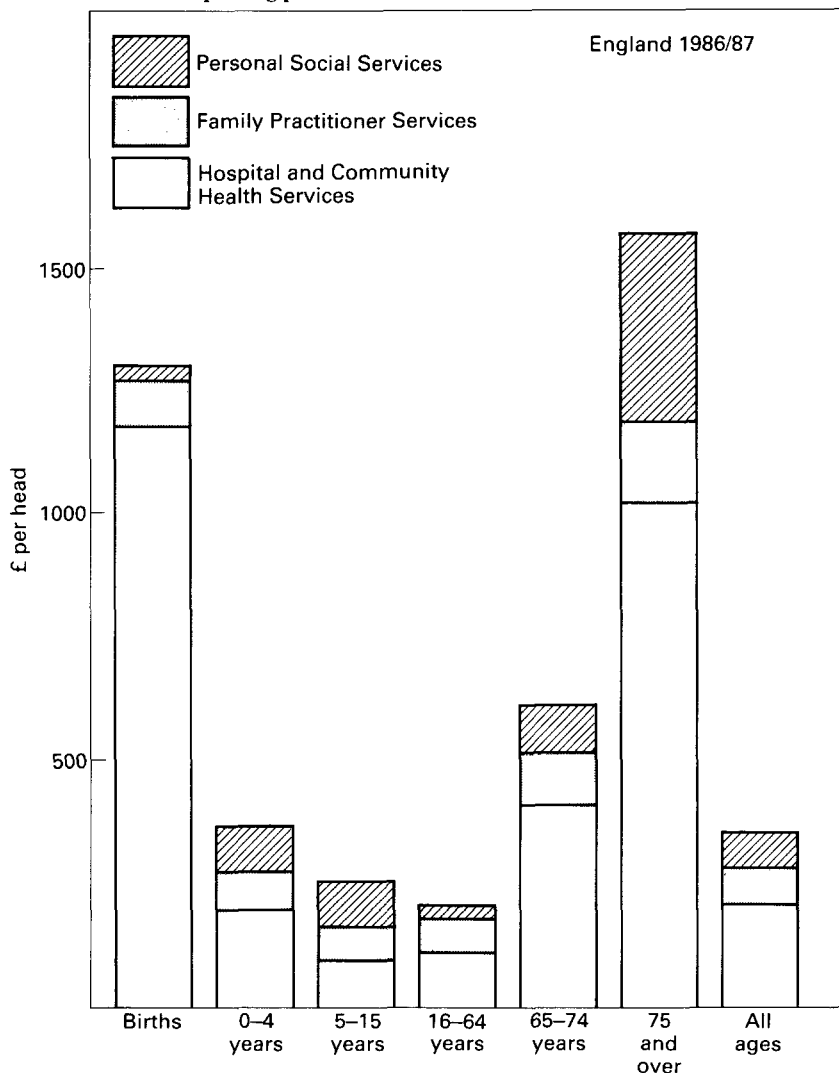
More specifically, the effects of demographic change on wage rates, both in the aggregate and for specific groups of the population, may affect both the costs of providing services, and the demands made on public services by different sections of the population. The effects on wage rates may be greatest if workers of different ages are not regarded by employers as providing fully-substitutable labour. Thus, for example, there is some official concern (Department of Employment, 1988) about the effect of the declining teenage labour force on youth wages and on the supply of new entrants to particular occupations (such as nursing). To the extent that the wages of this age group are bid up, public services that have relied on a continual inflow of cheap young recruits may face higher wage costs, and the need to look to other age groups for alternative sources of labour.<sup>1</sup>

A further issue about the system-wide effects of demographic change that has attracted some attention has been the effect of ageing on political decisions about the provision of public services. As the proportion of elderly people in the population rises, the concerns of the elderly may come to be more reflected in the political decisions that are reached about the provision of public services (Clark and Spengler, 1980, p.46). Such demographically induced changes in the standard of provision of particular services are also ignored in estimates of the effects of demographic change based on current patterns of provision and usage.

### **3. Demographic pressures on health and social services**

Use of public health and social services varies greatly with age. As Figure 3.1 shows, estimated spending per head on the 65-74 age group was three times the level of spending per head on the 16-64 age group, and spending per capita on those aged 75 and over was almost eight times as high as on those aged 16-64. Within the health service, people over the age of 75 place a particularly heavy burden on the hospital and community health services; on average four out of every ten hospital beds are occupied by people aged 75 or over (DHSS, 1986). Spending per head on the Family Practitioner Service is more evenly incident across age groups; the very elderly account for little more than twice the per capita spending of those of working age. Social services spending is heavily weighted towards the

FIGURE 3.1  
**Spending per Head on Health and Personal Social Services**

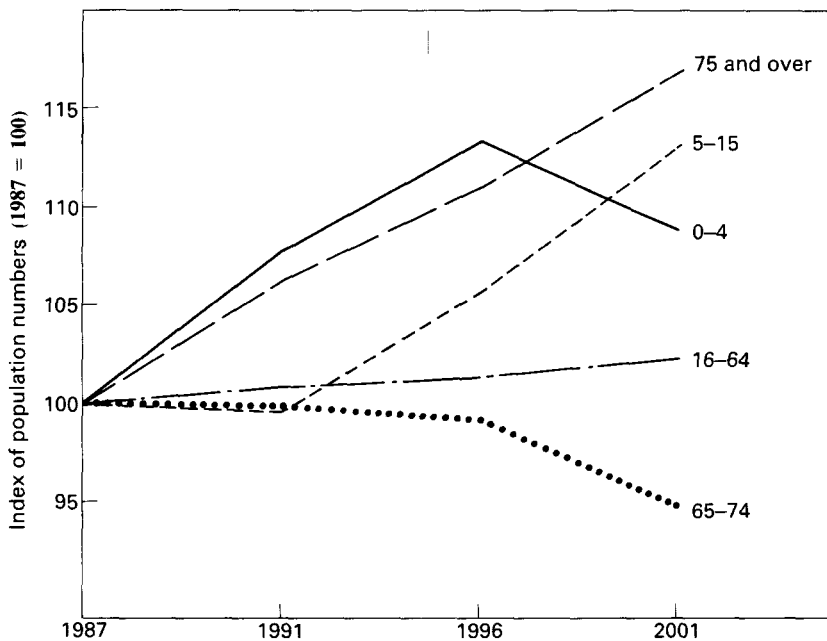


Source: The Government's Expenditure Plans 1989-90 to 1991-92  
 Chapter 14 (cm 614)

very elderly, through the provision of accommodation, home helps and other services.

Figure 3.2 shows the projected change between 1987 and 2001 in population numbers in each of the age groups shown in Figure 3.1. Whilst a fall is expected in the number of people in the 65-74 age

FIGURE 3.2  
Population Projections for England and Wales



group, the numbers in the most 'expensive' age group, people aged over 75, are projected to increase by nearly one-fifth over the period. Overall, the direct implications of these demographic changes for spending on health and social services, calculated as the product of spending per capita and population numbers in each age group, are summarised in Table 3.4.

TABLE 3.4

**Demographic Effects on Spending on Health and Personal Social Services, 1987-2001**

	Index of projected spending, constant prices, 1987 = 100			
	1987	1991	1996	2001
Hospital and community health services	100	103	106	107
Family practitioner service	100	102	104	105
Personal social services	100	103	107	109
<b>Total, health and personal social services</b>	<b>100</b>	<b>103</b>	<b>106</b>	<b>107</b>

Since the rise in the number of over-75s, which is the major source of the predicted increase in spending, is both predictable and steady, a comparatively smooth adjustment of the capital stock (the number of hospital beds, etc.) to the rising level of need could be expected. The marginal cost of health services for the additional numbers of over-75s may thus be reasonably close to the average cost, across all over-75s.

However, some possible qualifications to these estimates have already been noted. In particular, health service labour costs may be adversely affected by demographic developments affecting the youth labour market, and hence the inflow to the nursing profession. Some cohort differences in morbidity may also be possible reflecting differences between generations in working conditions, behaviour (including smoking), incomes, and other factors which may bear on the incidence of sickness across the population.<sup>2</sup>

Cohort differences between successive generations of the very elderly in access to informal care, especially by children and other family members, may affect both the need for personal social services expenditure, and in-patient demands on the health service. Evandrou and Winter (1988) find that elderly people living alone are more likely to receive local authority home helps, and those without children or other potential informal carers are obviously more likely to place demands on public services. The family circumstances of the present cohort of the very elderly are probably rather different to future cohorts. Owing to the First World War a higher proportion are women who never married, and never had children. This factor will tend to reduce the pool of carers available to present cohorts of over-75s relative to future cohorts. But, on the other hand, other demographic and economic developments, notably increasing divorce rates, the smaller average size of families, and an increase in married women's participation in the labour force, may reduce the pool of carers available to future cohorts of elderly people relative to present cohorts, so that, on balance, they place rather higher demands on public services (Parker, 1985).

One further cohort difference which may be thought relevant, particularly since the 1989 Budget announcement of tax relief on private medical insurance premiums for those over 60, is in the usage of private sector alternatives to the NHS. Between 1979 and 1983 there was a substantial increase in the proportion of the population covered by private medical insurance schemes. This reflected a rise both in the number of people covered by schemes provided by their employers, and in the number of people taking out cover on their

own behalf through individual or group schemes. The rise in coverage was more marked amongst those aged under 65, reflecting the difficulty of entering private insurance schemes after 65.<sup>3</sup> The question therefore arises of whether the current low level of private insurance cover amongst the elderly can be expected to continue, or whether the proportion of over-65s covered by private insurance policies will rise, as younger cohorts, more of whom have taken out policies before age 65, begin to retire. It may, however, be doubted whether expansion of private insurance cover amongst the elderly would have a large impact on public spending needs, since most private insurance policies limit the extent to which they are prepared to cover the kinds of chronic illnesses frequent in old age.

#### **4. Demographic pressures on pensions spending**

The relevant time horizon for considering the policy issues raised by demographic change is rather longer in the case of public expenditure on state pensions than in other areas of spending. This is because of the very limited scope for altering levels of pensions expenditure even one or two decades ahead. It has been generally accepted that it would be undesirable to alter in a substantial way the terms on which state pensions are paid to the existing generation of pensioners or on which pensions will be paid to those 'close to' retirement. In part this consensus reflects the contributory origins of the British state pensions system; individual 'entitlements' to state pensions are built up through national insurance contributions made during a person's working life.<sup>4</sup> More generally, individuals' own provision for retirement will have been conditioned on expectations about the level of state pension they can expect; those who have got beyond the age at which they can make effective alternative provision would be clearly disadvantaged by a change in the pensions system which reduced current and expected future entitlements. For these reasons, changes to the pensions system have generally proceeded by extending or adapting existing structures rather than radical reorganisation, and where, as in the case of the 1988 reforms, changes have been introduced that reduce future state pension entitlements, significant changes have been restricted to those who were at least fifteen years from retirement at the time of the reform.

Thus, in addition to the perspective of ten or fifteen years which might be the longest time horizon needed for planning health or education services, it may be appropriate to look at the costs of retirement provision thirty years or more ahead. As far as the UK is

concerned, there is a noticeable contrast between these two perspectives, and we consider them in turn.

Up to the first decade of the next century the total number of people above minimum pension age (65 for men, 60 for women) is projected to increase only slightly, while the ratio of pensioners to people of working age (the aged dependency ratio) is expected to remain constant. Nevertheless, pensions expenditure is expected to rise significantly, reflecting major differences in the accumulated pension entitlements of current and future pensioner cohorts.

As Chapter 4 describes, there are two major reasons for these cohort differences, both stemming from the 1975 Social Security Pensions Act. Firstly, an increasing proportion of women will in future retire with a basic state pension in their own right, as a result of increasing female participation in the labour force, and a fall in the proportion of working women who have been making national insurance contributions at the reduced rate. Since this option was severely restricted by the 1975 legislation, the proportion of working women paying the reduced rate has fallen sharply, from 45 per cent in 1978 to half that level in 1984, although the reduction has been much less marked amongst age-groups close to retirement. A second reason for the rise in pension entitlements of future retirement cohorts is the build-up of entitlements to the earnings-related state pension (SERPS), which was introduced in 1978, and, despite severe modifications in the 1986 Social Security Act, remains largely unchanged for those retiring before the turn of the century. The average SERPS entitlement of men currently retiring with a full contribution record based on average earnings is around £1000 per annum; men retiring in 2001 are likely to have an average SERPS entitlement of about two and a half times this level (Pearson, Smith and White, 1989).

The expenditure implications of the projected growth in the proportion of pensioners aged 75 and over during the 1990s are complex. Historically, older pensioners have been especially dependent on means-tested state benefits (Dawson and Evans, 1987). On the other hand, as Ermisch (1981) points out, an increasing proportion of very elderly pensioners are likely to possess occupational pension entitlements (these being the first cohorts to benefit fully from the expansion in occupational pensions coverage in the late 1950s and early 1960s). A larger proportion of this age group are in future also likely to have some investment income, or to own their own homes. These factors will provide some offset to the rise in the numbers of elderly pensioners, and it is conceivable that

expenditures on means-tested benefits for the elderly might even fall. Even if such spending does fall, however, it is unlikely that this will compensate for increased spending on flat-rate state pensions and SERPS, and, overall, spending on pensions and other forms of income support for the elderly is likely to rise. Nevertheless, given the stability in the aged dependency ratio between now and the turn of the century, it is likely that this higher level of spending is equivalent to only a modest increase in the tax burden on the population of working age.

The longer-term rise projected in the aged dependency ratio described earlier in this chapter has already led to government concern over the sustainability of generous income support programmes for the elderly, and particularly over the coincidence of these demographic changes with the maturation of SERPS. Initial projections contained in the 1974 White Paper suggested the future cost of SERPS and related changes to the national insurance system would be quite manageable, requiring only a 3–4 per cent point increase in the combined national insurance contributions of employers and employees to finance it. These initial projections did not go forward beyond the end of the first decade of the next century because, it was argued, ‘any estimation of contributions so far into the future would be very speculative’. Subsequent analysis was not so inhibited, and, as the time horizon over which projections were made was expanded, it became clear that these initial projections significantly understated the long-term costs of the scheme (Hemming and Kay, 1982). Beyond the first decade of the next century, demographic changes, combined with the increasing generosity of the scheme as it moved towards maturity, meant that the cash cost of the original scheme would have risen sharply. Table 3.5 shows that the real cost of SERPS, based on the original rules and assuming that the national insurance floor and ceiling were uprated in line with wages, would have risen from about £1/2 billion per annum in 1987 to £5½ billion at the turn of the century, and over £16 billion by the end of the second decade of the next century. In addition, the adverse demographic changes implied a substantial rise in the costs of the flat rate state pension over the same period. By 2030 its real cost is estimated to rise by some 52 per cent overall, of which demographic changes account for 32 percentage points (Table 3.6).

The recent Fowler reforms of the state pensions system<sup>5</sup> were, in large part, motivated by the desire to cut these costs. The 1985 White Paper estimated that the changes would cut the cost of SERPS, in

TABLE 3.5

**Projections of the Cost of the State Earnings-Related Pensions Scheme***£ billion, 1988 prices*

	Original scheme	Post-Fowler scheme
1987	0.7	0.7
1991	1.6	1.5
1996	3.3	3.1
2001	5.6	4.7
2006	8.1	5.7
2011	10.9	6.2
2016	13.8	6.8
2021	16.4	7.1

Note: Projections assume NI floor and ceiling indexed to wages; real wages are assumed to rise by 2 per cent per annum.

Source: IFS SERPS model projections

TABLE 3.6

**Real Costs of the Basic State Pension, 1990-2030***1990 = 100*

	Total	Due to demographic change	Due to changes in entitlements
1990	100	100	100
2000	98	97	101
2010	108	103	105
2020	129	116	112
2030	152	132	115

Source: IFS Basic State Pension Model

real terms, by up to 50 per cent in the next century. Table 3.5 broadly confirms this assessment; the Fowler reforms will have little impact on the cost of SERPS in 2001, but by 2021 will have cut the annual cost by some £9 billion, in 1988 prices.

In addition, however, medium- to long-term pension expenditure commitments are being reduced by the indexation, since the start of the 1980s, of the flat rate state pension to prices, rather than earnings. Taking the pension system off the 'labour standard' in this



way obviously leads to a steady reduction in expenditures on the flat rate pension. Table 3.7 shows that by 1990 indexation of the basic pension to prices rather than wages had already reduced the public expenditure cost of the basic state pension by about 20 per cent, and between 1990 and 2000 continued indexation would reduce the cost by a further 20 per cent. In the long run, prices uprating will also reduce SERPS costs, though by comparatively small amounts over the period under consideration. Unlike the Fowler reforms, which will only begin to affect pension expenditures in the next century (when the adjustments to SERPS take effect), the indexation of the state pension scheme to prices (rather than earnings) is already affecting expenditures and, if maintained, will significantly reduce real expenditures on the basic state pension, even over the period up to the turn of the century.

TABLE 3.7

**Simulated real cost of the basic state pension under alternative indexation provisions, 1980-1990 and 1990-2000**

(a)	1980 = 100	
	Indexation to prices	Indexation to wages
1980	100.0	100.0
1985	99.3	108.1
1990	100.5	127.7
(b)	1989 = 100	
	Indexation to prices	Indexation to wages
1990	100.1	101.6
1995	99.0	112.2
2000	98.2	120.3

Source: IFS Basic State Pension Simulation Model

## 5. The sustainability of current policies

Demographic pressures on UK public spending between now and the end of the century are therefore relatively small. If the current level of per capita spending on public services for different age groups were to be maintained, demographic change would require a rise of about 7 per cent by the year 2001 in spending on health and social services (mainly due to the projected rise in the number of over-75s

who ‘consume’ more than four times the average NHS spending per person). Public spending on pensions is likely to rise much more substantially, by some 25 per cent over the period, but the purely demographic element in this is small. The main reasons for the sharp rise in projected pensions spending are cohort differences in pensions entitlements; more married women will be entitled to state pensions in their own right, and individual entitlements to earnings-related state pensions (SERPS) increase rapidly amongst those retiring during the next decade.

Over a longer time horizon, the number of elderly people rises more sharply, both in absolute terms and in relation to the number of people of working age. By 2030 each person over 65 will have to be ‘supported’ by only three people of working age, compared with five people now. Nevertheless this does not, of itself, indicate that current policies are likely to prove an unsustainable burden over this period, even though public spending would be likely to rise sharply.

Much depends on the rate of economic growth over the next 40 years, and, in the case of non-transfer expenditures, the rate of productivity growth in public sector services compared with the economy as a whole. Table 3.8 shows the average tax rate required to finance the flat rate pension scheme under alternative future

TABLE 3.8

**Alternative macroeconomic environments after 1990\***

Average tax rate on earnings required to finance the basic revision				
	‘reasonable’	‘pessimistic’	‘even worse’	‘optimistic’
1980	9.14	9.14	9.14	9.14
1990	6.93	6.93	7.00	6.93
2000	5.45	5.45	5.73	4.61
2010	4.94	5.42	5.70	3.47
2020	4.89	6.48	6.81	3.18
2030	4.95	7.93	8.33	2.40

\* ‘reasonable’: after 1990 real wage growth of 2% p.a., unemployment 8% (men) and 5% women

‘pessimistic’: after 1990 real wage growth tends to 2% p.a. until 2000 and thereafter 1% p.a., unemployment to 8% (men) and 5% (women)

‘even worse’: after 1990 real wage growth tends to 2% p.a. until 2000 and thereafter 1% p.a., unemployment to 13% (men) and 8% (women)

‘optimistic’: after 1990 real wage growth tends to 4% p.a., unemployment to 8% (men) and 5% (women)

Source: IFS Basic State Pension Model

scenarios for real wage growth and unemployment levels. Even on quite modest assumptions about the rate of growth, the level of Gross Domestic Product (GDP) available to finance specific services for the elderly will be substantially higher in 2030 than now; an annual growth rate of 2 per cent would more than double the level of GDP over the whole period. In the context of economic growth of this sort, the public expenditure costs of health and social services provision for 33 per cent more over-65s by the year 2030 appear easily affordable, if the cost per pensioner stays at current levels.

This caveat, however, is less straightforward than it might appear at first sight. Even if the physical standard of provision of health services and social services for the elderly in 2030 is identical to what is provided now, the real cost of the resources used in providing public services would be expected to rise over the long term, broadly in line with the rise in GDP. Salary costs in public services will over the long run have to move in line with salary costs in the rest of the economy. Therefore without productivity growth in the public sector, provision for a constant number of pensioners would take a constant share of GDP, regardless of the level of GDP. Productivity growth in public services, which has historically tended to be well below the rate of growth of productivity in the industrial sector (partly because of the labour-intensive nature of public services, with limited scope for automation), thus turns out to be one of the key issues in determining the costs of current levels of public provision in the face of population ageing.

#### NOTES

1. Thus, policy is beginning, rather belatedly, to address the issue of the wastage of trained nurses from the profession, and to encourage women to return to nursing after childbirth. Changes to the 'earnings rule', designed to encourage more of the elderly to remain in employment, are also an attempt to address this problem (Whitehouse, 1990).
2. Cohorts with fewer smokers would have less need for treatment for smoking-related diseases, but a greater proportion of the cohort would survive to suffer the illnesses of old age.
3. Most insurers allow existing subscribers to continue their cover after reaching 65, although at higher premiums, but do not accept new subscribers after age 65.
4. As Dilnot and Webb (1988) and others have pointed out, however, the contributory nature of the national insurance system has been steadily eroded over the past 25 years.
5. An account of the reforms is given in Creedy and Disney (1988).

## CHAPTER 4

### TRENDS IN PENSIONER INCOMES

In this chapter we examine evidence on recent and likely future trends in pensioner incomes. There is an increasingly widespread belief that the economic circumstances of the elderly have undergone a significant improvement in recent years, and this view has been supported by a number of recent official studies.

Fiegehen (1986) found a substantial improvement in the relative income position of the elderly over the post-war period. According to his estimates the per capita income of the pensioner population has risen from about 40 per cent of the per capita income of non-pensioners in 1951 to 70 per cent in 1985. Dawson and Evans (1987), examining trends in the absolute income position of the elderly over a shorter time period, concluded that average pensioner income had risen by more than one-third in real terms between 1970 and 1985. This increase had been accompanied by a narrowing of traditional income gaps between various sub-groups of the pensioner population. Both these studies emphasised the importance of higher social security benefits (in particular the national insurance retirement pension) in explaining these favourable trends.

Other studies (e.g. Abrams 1984) have presented a less optimistic picture, and Fiegehen's results, in particular, have been the subject of some controversy. Abrams, for example, noted that the average per capita expenditure of elderly households had fallen relative to that of non-elderly households, and argued that this indicated a deterioration of the relative resource position of the elderly rather than an improvement.

However, as Falkingham and Johnson (1988) have argued, much of this divergence in results can be explained by the different units of analysis used in the respective studies; while Fiegehen uses individuals, Abrams and Thomson use households. Given the growth in the number of elderly people living alone, a household analysis naturally presents a more pessimistic picture than one in which the individual is taken as the appropriate income unit.

Dawson and Evans' proposition that the average income of pensioners has increased significantly in absolute terms at the aggregate level is less controversial. But there is, perhaps, still much to be learned about how far this improvement has been the common experience of all sections of the pensioner population rather than

being specific to only some, and about how far the trends observed in pensioner incomes over the past can be expected to continue into the future.

## 1. The structure of pensioner incomes

In this section we consider evidence from the UK Family Expenditure Survey (FES) on the income of 'pensioner units', defined, as in Dawson and Evans (1987), as single people over state pension age and married couples where the husband is aged 65 or over. The FES is an annual survey, conducted by the Office of Population Censuses and Surveys, of the household circumstances, incomes and expenditures of a representative sample of about 7000 households in the UK. For this analysis we have been able to draw on data from eighteen years of the survey, 1969-86, in each of which there are some 2000 pensioner units.

Table 4.1 shows the structure of incomes of single and married pensioner units, averaged over the three years 1984-86. As in all the tables in this chapter, incomes are shown in pounds per week, adjusted to 1985 prices. The incomes of pensioner couples are 'equivalised' to a single-person basis throughout by dividing by 1.63. This factor is intended to reflect the relative income requirements of a couple compared to a single person for both to have the same standard of living, and is broadly equivalent to the ratio of income requirements implicit in social security levels.

In 1984-86 the average gross weekly income of a single male pensioner was £75.04, and of a single female pensioner £63.63. The average income of a pensioner couple was £125.60 which on the single-person-equivalent basis shown in Table 4.1 was £77.06. Around half the income of single male pensioners and slightly less than half the income of pensioner couples came from the state pension, and a quarter from occupational pensions. Single female pensioners were more reliant on the state pension than the other two groups; 57 per cent of their income came from this source, and only 15 per cent from occupational pensions.

Table 4.2 shows how the average level and pattern of pensioner incomes changed between the mid-1970s and the mid-1980s. Across all pensioner units, average equivalent gross weekly income rose from £59.68 in 1974-76 to £61.83 in 1979-81 and £70.12 in 1984-86, percentage rises of 4 per cent and 13 per cent respectively. Incomes from the state pension, from occupational pensions and from investments have all grown over the period as a whole, with the

TABLE 4.1

Average Incomes of Pensioner Units,<sup>a</sup> 1984-86

	1985 prices £ per week, equivalised <sup>b</sup> (shares in brackets)		
	Single male pensioners	Single female pensioners	Pensioner couples
State pension	37.99 (50.6)	36.21 (56.9)	36.37 (47.2)
State benefits	3.49 (4.7)	6.26 (9.8)	3.71 (4.8)
Occupational pension	17.65 (23.5)	9.81 (15.4)	19.12 (24.8)
Investment income	11.74 (15.6)	8.07 (12.7)	10.34 (13.4)
Earned income	4.01 (5.3)	2.97 (4.7)	7.36 (9.6)
Other income	0.16 (0.2)	0.32 (0.5)	0.17 (0.2)
Total (excl. imputed income)	75.04 (100.0)	63.63 (100.0)	77.06 (100.0)
Imputed income from owner-occupation	6.30	5.99	9.90
Total (incl. imputed income)	81.34	69.62	86.96
Deductions (tax, NI)	7.41	4.64	7.70
Net income (excl. imputed income)	67.64	58.99	69.37

- a. Defined as single people over state pension age and married couples where the husband is aged 65 or over.
- b. Basis of equalisation: an income of 163 for a pensioner couple is assumed to be equivalent to an income of 100 for a single pensioner.

largest percentage increase (66 per cent) in average income from occupational pensions. Both the share and, indeed, the average level of income from earnings has fallen; over the period 1974-76 to 1984-86 the share of earnings in gross income halved.

The observed changes in the structure of pensioner incomes over past years, and likely changes in the future structure of pensioner incomes, are the outcome of effects of two sorts.

Firstly, there are the effects of past changes in pensions systems, and past patterns of incomes and working behaviour on the pension entitlements of those 'cohorts' currently retired and approaching retirement. Entitlements to both the state and occupational pensions accumulate over the course of an individual's working life and reflect

TABLE 4.2

Average Incomes of Pensioner Units,<sup>a</sup>1985 prices  
£ per week, equivalised<sup>b</sup>  
(shares in brackets)

	1974-76	1979-81	1984-86
State pension	30.56 (51.2)	33.27 (53.8)	36.51 (52.1)
State benefits	4.20 (7.0)	5.04 (8.2)	4.95 (7.1)
Occupational pension	8.62 (14.4)	9.77 (15.8)	14.30 (20.4)
Investment income	7.61 (12.8)	7.18 (11.6)	9.40 (13.4)
Earned income	8.30 (13.9)	6.28 (10.2)	4.72 (6.7)
Other income	0.40 (0.7)	0.28 (0.5)	0.24 (0.3)
Total (excl. imputed income)	59.68 (100.0)	61.83 (100.0)	70.12 (100.0)
Imputed income from owner-occupation	5.28	6.60	7.47
Total (incl. imputed income)	64.96	68.43	77.59
Deductions (tax, NI)	5.59	4.76	6.14
Net income (excl. imputed income)	54.09	57.06	63.98

- a. Defined as single people over state pension age and married couples where the husband is aged 65 or over.
- b. Basis of equivalisation: an income of 163 for a pensioner couple is assumed to be equivalent to an income of 100 for a single pensioner.

the pensions schemes in operation at each stage. Although successive modifications to the state pensions scheme have changed the basis on which pensions entitlements are established, they have tended to leave existing accumulated rights intact. Much the same tendency can be observed in occupational schemes. The pension entitlements of individuals when they reach retirement thus have a 'geological' quality reflecting the pension schemes in operation during their working lives.

The second influence on the structure of pensioner incomes are current economic conditions and the current rules of the tax and social security systems. Thus, for example, the state of the labour market and the rules governing the tax and benefit treatment of the earnings of pensioners are both likely to affect the earned incomes of pensioner households; the real rate of interest and the rate of inflation

may affect the share of investment incomes, and so on. In the next section, the contribution of both sets of factors to changes in the principal sources of pensioner incomes over the past two decades are set out and evaluated.

## **2. Income sources of the elderly**

### *(i) The basic state pension*

The basic state pension established in 1948 in the wake of the Beveridge Report is a flat rate benefit to which individuals are entitled if they have reached pensionable age (60 for women, 65 for men) and have made sufficient national insurance contributions during their working lives.<sup>1</sup>

Originally national insurance contributions were also flat rate, but as the rising cost of the new state scheme pushed contribution levels upwards during the 1950s the burden of flat rate contributions on low earners became intolerable. Earnings-related national insurance contributions were introduced in 1960, and they now take the form of a second income tax, albeit one with a different base, structure and rates to the principal income tax (Creedy, 1982; Dilnot and Webb, 1988).

If contributions are insufficient to claim the basic state pension at the standard rate, it can be paid at a reduced rate. Those over 80 with a poor national insurance record are entitled to a non-contributory (old person's) pension. A woman, who, because of interrupted labour market activity, might not have a full contributions record, can claim a pension in her own right at a reduced rate or, if she is married, can claim a dependant's pension on her husband's insurance, providing he is also over pensionable age. A widow effectively inherits her husband's pension in place of a dependant's pension, providing she is over pensionable age when he dies.

Until 1975, married women had the right to opt to pay a reduced rate of national insurance contributions, which did not entitle them to a state pension in their own right. This provision reflected the expectation that few married women would have a contribution record which entitled them to a greater pension in their own right than the pension they would receive on their husband's contribution record. The arrangements for married women to pay reduced rate contributions have been gradually phased out since the 1975 Social Security Pensions Act; only those married women already paying reduced rate contributions were allowed to continue doing so, so long



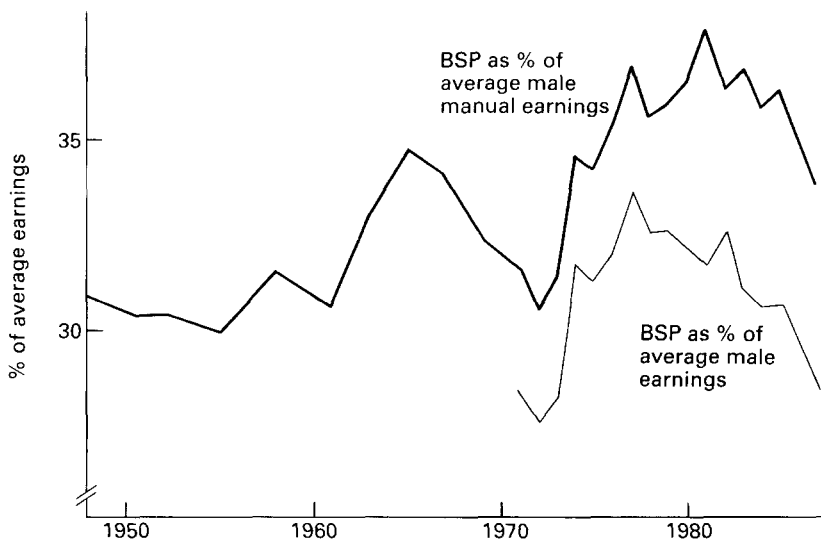
as they continued in full-time employment. The numbers paying reduced rate contributions have fallen sharply, from 4.5 million in 1976 to 1.3 million in 1987.

Since April 1978 the position of women and other 'carers' has also been helped by the home responsibility protection provisions of the 1975 legislation, which safeguards the contributions record of those unable to earn because of domestic responsibilities. In the long term this should enable more women to claim a full basic state pension in their own right, rather than a dependant's pension on their husband's insurance (Joshi and Owen, 1983).

It should be stressed that 60 and 65 are not compulsory retirement ages. They are simply the ages at which women and men, respectively, become eligible for a state pension. It is possible to defer retirement and the state pension, and individuals choosing to do this receive increments (at the rate of an extra 1 per cent of the basic state pension for every seven weeks of deferment) to their basic state pension when they do retire. People are also free to continue working after they have reached minimum pension age even if they are also claiming their state pension, although until last year their benefit was then subject to the 'earnings rule'. This involved a reduction in benefit paid if weekly earnings exceeded a specified ceiling. At 'official' retirement age (65 for women, 70 for men) an individual was regarded by the state as having retired even if he/she was still working, and the retirement test and associated earnings rule ceased to apply (Hemming, 1984; Whitehouse, 1990).

Since its inception in 1948, the basic state pension has followed the supplementary benefit level very closely. It has also remained fairly stable in relation to average earnings, the standard single person's pension fluctuating around one-fifth of average male earnings. There was a limited rise in the basic state pension relative to average earnings during the 1970s, but this rise ceased in the 1980s (Figure 4.1). In relation to the RPI, however, the basic state pension has unambiguously risen, although this rise too ceased during the 1980s, when the annual uprating of state pensions levels began to reflect only the rate of growth of retail prices, not of wages. The change in the basis of indexation has exerted significant downward pressure on pensioner living standards relative to the bulk of the working population during the 1980s. There is, moreover, much evidence to suggest that pensioner households experience a higher rate of price inflation than that recorded by the RPI and so it is not clear that indexing the basic state pension to the RPI really does adequately defend the real value of the state pension (Fry and Pashardes, 1986).

**FIGURE 4.1**  
The Basic State Pension in relation to earnings



'for a married couple, on husband's insurance

Source: DHSS Social Security Statistics, 1987

(ii) *The state earnings-related pension (SERPS)*

The precursor of the comprehensive state earnings-related pensions scheme was a 'graduated pensions scheme', which operated from 1961 to 1975. Individuals who paid contributions into this scheme are still entitled to pensions based on those contributions. The amounts to which individuals are entitled depend on the value of contributions paid (uprated in line with prices); the contributions, in turn, depended on their earnings during the period the scheme operated. Some 6.7 million pensioners (68 per cent of all pensioners) were receiving graduated pension in 1987, but the average amounts were small (£1.29 per recipient per week), and only 2 per cent received more than £4 per week from this source.

The State Earnings-Related Pensions Scheme (SERPS), introduced under the 1975 'Castle' legislation, has already begun to have a more substantial impact on pensioner incomes than entitlements accumulated under the graduated pensions scheme, and over the remainder of the century the SERPS entitlements of those reaching retirement age are likely to continue to show steady growth.

Under the 1975 legislation an individual's pension entitlement under SERPS is calculated by multiplying the average of a member's best 20 years pensionable earnings, revalued for earnings growth, by the product of the scheme accrual rate (1/80) and years in the scheme. This product — the 'pension fraction' — could rise to a maximum of 25 per cent after 20 years membership of the scheme, before the Fowler reforms. Pensionable, or qualifying, earnings are all earnings above a lower earnings limit (the NI floor equal to the level of basic state pension) and below an upper earnings limit (the NI ceiling or approximately  $7\frac{1}{2}$  times basic state pension level).

Unlike the basic state pension, the coverage of SERPS is not universal. Since its introduction, employers have had the choice of either staying in SERPS and of paying, along with their employees, NICs at the full rate, or of 'contracting out' of SERPS and in return for a lower rate of national insurance contributions providing an occupational pension equivalent to the so-called guaranteed minimum pension (GMP). The state remains responsible for paying the difference between this sum and what the employee would have got under SERPS and for the indexation of the GMP element of an occupational pension in payment.

SERPS was (and will be until 2000) a generous scheme in two major ways. Firstly, the best twenty years rule constitutes a far more generous way of assessing qualifying earnings than in most occupational pension schemes — especially as past earnings are revalued according to an index of earnings growth in a way they rarely are, or were until recently, in occupational pension schemes. Moreover, any year of employment could be included as one of the 'best twenty' and this means those with interrupted labour market histories (such as women) are not at a such a disadvantage as regards the accumulation of pension rights, relative to those with a history of continuous participation. Secondly, widows were to be allowed to inherit their entire husband's SERP *and* receive, in addition, their 'own right' SERPS (subject to an upper limit on their total SERP equal to the maximum pension a single person could earn under the rules of the scheme). By comparison, widow's benefits in most occupational schemes tend to be only 50 per cent of the pension. Through these measures SERPS achieved a certain reorientation of the system towards the needs of women, who have in the past been most poorly served by the pensions system.

In one respect, however, SERPS could be seen as ungenerous. Only post-1978 earnings were allowed to count as qualifying earnings. There will thus be a lengthy time lag between the introduction of

SERPS and the moment when it begins to significantly erode the problems of low income and dependency it was designed to alleviate. As Ermisch has written: 'the first twenty years of the new scheme are not ... likely to transform the economic position of the elderly because of the preponderance of pensioners with no or very limited entitlements under it' (Ermisch, 1981).

The full impact of SERPS, both on pensioner incomes and on public expenditure, would not have been felt until the next century (Hemming and Kay, 1982). Concern over the long term budgetary implications of the scheme prompted the 1988 Fowler reforms, which have significantly restructured the British pensions system, SERPS included.

The major components of the Fowler reforms are discussed by Creedy and Disney (1988). SERPS entitlements are to be based on an individual's average lifetime earnings rather than the best twenty years. After the turn of the century maximum benefit payable is to be limited to 20 per cent rather than 25 per cent of pensionable earnings, and the amount that a widow or widower can inherit of their spouse's pension is to be restricted to 50 per cent. Changes were also made to the contracting out conditions, widening the range of pension schemes which were eligible for contracting out, and providing, for a period, a fiscal incentive to encourage greater contracting out.

Nevertheless, the impact of these changes on the pension levels of those reaching retirement, like the impact of SERPS, is subject to a time lag. And for those retired or retiring in the relatively near future (the next decade or so) it is the pre-Fowler pensions system which remains most relevant.

### *(iii) Occupational and private pensions*

An occupational pension scheme is an arrangement, organised by an employer, to provide benefits for employees on their retirement and for their dependants on their death. The early post-war period, as Table 4.3 shows, saw a surge in the coverage of such schemes amongst the working population.

A number of factors help explain this. One explanation focuses on the benefits to the employer of occupational pension schemes as an anti-turnover device. Employers have an interest in minimising labour turnover, at least among certain more skilled sections of the labour force, because of the search, screening, and training costs associated with rapid turnover. The rules of occupational pension

TABLE 4.3

**Employees in Occupational Pension Schemes 1953-83***UK millions*

Year	Private sector		Public sector		Total members	Total employed	Members as % of employees
	men	women	men	women			
1953	2.5	0.6	2.4	0.7	6.2	21.9	28
1956	3.5	0.8	2.9	0.8	8.0	22.7	35
1963	6.4	0.8	3.0	0.9	11.1	22.9	48
1967	6.8	1.3	3.1	1.0	12.2	23.2	53
1971	5.5	1.3	3.2	1.1	11.1	22.5	49
1975	4.9	1.1	3.7	1.7	11.4	23.1	49
1979	4.6	1.5	3.7	1.8	11.6	23.4	50
1983	4.4	1.4	3.4	1.9	11.1	21.1	52

Source: 7th Government Actuary's Report, 1986

schemes have often tended to encourage 'loyalty' to a given employer, and discourage mobility between employers, so reducing turnover. In the relatively tight labour markets of the post-war boom the need to develop devices to hold on to skilled workers is likely to have been particularly acute (Townsend, 1979).

But why should workers be interested in occupational pension schemes? One obvious reason of course lies in the inadequacy of the basic state pension as a sole source of retirement income — and in particular, perhaps, the relatively low replacement ratios it provided, and still provides, for higher earners. But an important second reason, from the point of view of both employers and employees, concerns the various tax advantages enjoyed by occupational pension schemes. These include:

- (i) employers' contributions are not treated as a taxable benefit to the employed (indeed they attract expense relief)
- (ii) the tax deductibility of employee contributions
- (iii) tax relief on scheme investments
- (iv) while the pensions themselves are treated and taxed as earned income, that portion of the pension which may be commuted into a lump sum on retirement (up to 25 per cent of the relevant employee's total pension) is tax free.

These tax advantages combine to make occupational pensions a very attractive, tax privileged, method of individual saving (see Hills,

1984). The cost of all this tax relief to the Exchequer (some £10 bn according to the 1990 Public Expenditure White Paper) and the fact that it tends to be the better-off who benefit most from it, are matters of continuing controversy (Fry, Hammond and Kay, 1985).

Occupational pension schemes are financed in a number of ways. In the private sector, schemes are typically run on a funded basis. Employers and, often, employees pay contributions into a pension fund which accumulates and provides the income from which, on retirement, benefits are paid. Contributions are set on the basis of an actuarial estimate (made according to official rules) of what is needed to maintain the solvency of the fund given the rate of return on investments and estimated future liabilities implied by declared pension entitlements. Pension fund assets are formally separated from corporate assets by a deed of trust.<sup>2</sup> This is designed to secure employees' pension rights from such contingencies as bankruptcy and the demands of their employer's creditors. In the public sector, some schemes, notably those of the nationalised industries, are funded in a similar way to most private sector schemes. Others, however, such as those of the Civil Service, the emergency services and the Forces, are run on a 'Pay as You Go' (PAYG) basis, where those currently contributing to the scheme pay for the benefits of those currently claiming from it.

Employees are frequently required to satisfy certain conditions before being eligible for membership of an occupational pension scheme; these can restrict membership of schemes to employees who are above a certain age, or, in some cases, who have completed a certain period of service. However, pre-Fowler, once the necessary eligibility conditions had been met, membership was usually compulsory. (Since the Fowler reforms membership can no longer be made compulsory).

Once enrolled in an occupational pension scheme, an employee's contributions, if any, are typically related to salary. In 1983, average rates of contribution were 4.75 per cent of salary in the private sector and 5.2 per cent in the public sector (7th Report of the Government Actuary, 1986).

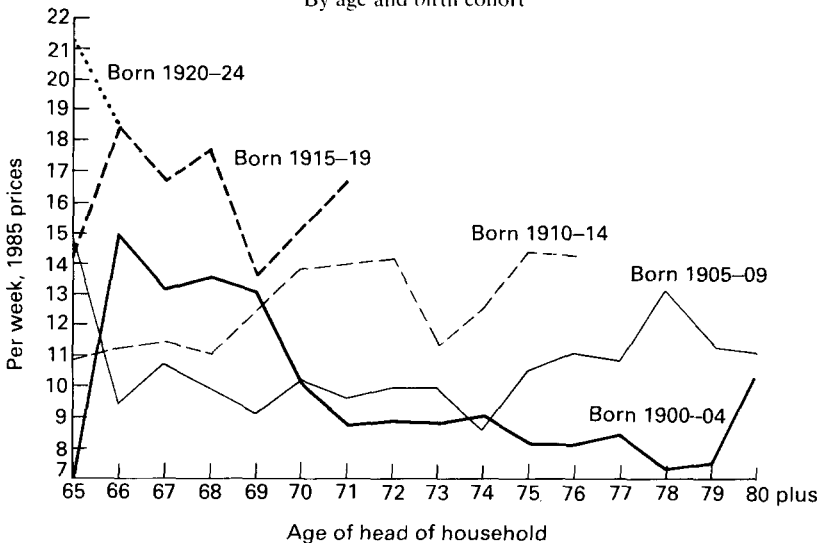
The majority of occupational pension schemes are 'contracted out' schemes. That is, in return for a NIC rebate the employer guarantees a full occupational pension not less than 25 per cent of the average of the relevant employee's pensionable earnings, revalued for earnings growth, over the employee's whole period of employment ('pensionable earnings' here refers to all earnings above and below

the lower and upper NI limits, respectively). This is the so-called 'guaranteed minimum pension' or GMP.

Pension entitlements in occupational schemes are typically calculated by multiplying some fraction of pensionable earnings by length of service. Pensionable earnings are usually calculated on a final salary basis, although in a small number of schemes they are calculated on an average earnings basis, and may also be on a flat rate basis or a money purchase basis. A money purchase scheme is one in which individual contributions accumulate in a personal fund; on retirement the employee is obliged to use most (at least 75 per cent) of the proceeds to purchase an annuity; the rest may be taken as a tax free lump sum. Final salary schemes, however, predominate in the private sector, and are almost universal in the public sector. In addition to the basic occupational pension widows and dependants are usually eligible to a benefit of some proportion of this pension, and provision is also usually made for a death in service benefit to employees' dependants.

In recent years occupational pensions have formed between one-fifth and one-quarter of the total income of pensioner households. Figure 4.2 shows the average level of occupational pension received, by age, for pensioners grouped according to five-year birth cohorts. The data reveals a small tendency for occupational pensions, at any given age,

**FIGURE 4.2**  
Real Occupational Pensions Levels  
By age and birth cohort



to be higher amongst those born in 1910–14 than amongst those in the two older cohorts born between 1900 and 1909. There is, however, a sharp increase in the average level of occupational pension receipt amongst the youngest birth cohorts — those born in 1915–19 and 1920–24. Evidently, the income consequences of the rapid rise in occupational pensions scheme coverage in the late 1950s and early 1960s have been far more significant for those who have retired since about 1980 than for those who retired earlier. Unfortunately, given the years covered by our data set, we still have comparatively few observations on the post-retirement incomes of this group.

In considering the likely contribution of occupational pensions to the incomes of those retiring over the next decade, and how this is likely to differ from the occupational pensions of those currently retired, it is necessary to consider both the coverage of schemes amongst those in employment, and the average occupational pension entitlement that new pensioners are likely to have.

The coverage of occupational schemes has grown little over the past two decades, and remains far from universal. The pattern of occupational pension scheme membership amongst those in employment is heavily skewed towards those in non-manual and skilled occupations and away from employees in manual and unskilled jobs. A higher proportion of male employees is covered by occupational pensions than of female employees (Table 4.4). Coverage is much higher amongst employees in large firms. Those on the ‘periphery’ of long term, stable, employment relationships, who suffer some combination of low pay, low skill, part-time status and female sex, have been and are the least likely to be covered, and as a consequence face a greater risk of poverty in old age.

Moreover, for those in occupational pension schemes, the kind of coverage they provide can be far from perfect. There are two issues here — firstly, the inadequate indexation of private sector occupational pensions in payment, and, secondly, the way the occupational pension system tends to penalise more mobile workers.

The first problem arises because of the difficulty funded schemes have traditionally had in index linking their assets. If fund managers are unable to index link their assets, the solvency constraint prevents them unreservedly accepting the indexation of liabilities implied by an indexation of pensions in payment. Of the occupational pensions paid out in 1983 two-thirds had been increased in 1983 and one-fifth had had no increase since 1981. The rest had either had increases in



TABLE 4.4

**Coverage of Occupational Pensions Schemes by Sex and Occupational Status  
(1975, 1979, 1983, percentages of full-time employees only)**

	Occupational status							Total
	Profess- ional	Employers and Managers	Intermed. non- manual	Junior non- manual	Skilled manual	Semi- skilled manual and personal services	Un-skilled manual	
<b>Men</b>								
1975	82	75	87	73	56	52	41	63
1979	82	73	88	73	58	57	51	68
1983	84	74	89	72	60	55	51	66
<b>Women</b>								
1975	[27]	57	76	48	24	30	[29]	47
1979	[29]	56	86	60	28	38	[23]	55
1983	[18]	59	79	52	35	37	[13]	55

Source: General Household Survey, 1983

1982 or were to have them in 1984. One-third of pensions were subject to a required regular increase (as a scheme rule), the rest being increased on a discretionary basis. The average rate of increase was just under 4 per cent, or four-fifths of the rate of price inflation over the corresponding period (7th Report of the Government Actuary, 1986).<sup>3</sup>

The specific problem facing mobile workers concerns the preservation and transfer of the pension rights accumulated with a previous employer. Mobile workers may have their pension deferred to collect on retirement. The size of the pension award is assessed on the basis of the employee's leaving salary with the employer running the relevant scheme, and when claimed at a later date it may not have been revalued in line with earnings growth or price inflation. Workers making many job changes may therefore end up acquiring a string of 'frozen' occupational pensions, the real value of which deteriorates as they get older and approach retirement age. In 1983 less than 50 per cent of private sector occupational pensions members were in schemes providing for increases in the preserved pensions of early leavers (price indexation being the norm in the public sector) — although their position had improved since 1979. Only 3 per cent were in schemes which price indexed preserved pensions while 15 per cent were in schemes which gave fixed annual percentage increases

(7th Report of the Government Actuary, 1986). Facilities have, of course, existed for early leavers to transfer their pension from one employer's scheme to another's, but employees may still only get the value of it as a frozen benefit in the new scheme. This obviously discourages workers from changing employers and is the main way in which occupational pension schemes act as an anti-turnover device.

Aspects of the Fowler reforms to the social security and pensions system aimed to address some of these perceived deficiencies of occupational schemes, by tightening up preservation and indexation rules. In addition the reforms sought to widen the range of pensions choices available to individuals by instituting provisions for personal pensions schemes, along the lines of Individual Retirement Accounts in the USA, which would be available to those not covered by occupational schemes, and which could also be chosen by those already in an occupational scheme to replace or supplement their occupational pensions. The range of schemes allowed to contract out was widened to include schemes based on defined contribution levels rather than defined benefit levels, subject to an overall limit of contributions to attract tax relief of 17.5 per cent of earnings.

The wider range of pension instruments available has substantially increased the complexity of the pensions choices facing individuals; whilst it may be optimal for most older employees to stick with SERPS or their occupational pensions scheme, younger workers may (depending on assumptions about the rate of return on defined contribution plans) do better to switch to a personal pension, particularly in the light of the rebate offered on national insurance contributions.<sup>4</sup> The scale of such switches may be large; the Government Actuary assumed that the rebate and the wider choice of scheme would lead to an extra million individuals contracting out of SERPS by 1993. However, this is not likely to have any substantial impact on the incomes of the retired for many years.

*(iv) Investment incomes*

About 70 per cent of pensioners recorded some level of investment income in 1984–86, but the average amount was small in relation to pension income — less than £10 per week. Given the tax advantages of pensions schemes, non-pension saving is for most people a rather inefficient method of providing for retirement. There is, however, an important issue about whether individuals regard pension and non-pension wealth as fully substitutable for one another, such that an increase in either state or occupational pension entitlements would

lead individuals to make a corresponding reduction in non-pension savings. To the extent that pensions wealth and non-pensions saving are regarded as substitutable we would expect the expansion of occupational pension coverage and entitlements and the introduction of the state earnings related pensions scheme to have been reflected in offsetting reductions in non-pension wealth (at any given level of lifetime income) amongst the most recent generations of pensioners, and still more, amongst those due to retire in the future.<sup>5</sup>

Following Feldstein's (1974) study, which concluded that in the USA growing entitlements to social security pensions had reduced private saving, a substantial literature has developed on the relationship between pension wealth and non-pension saving. For the UK, there appears to have been little evidence of any effect of state pension entitlements on individual saving (see Browning, 1982), and the evidence that occupational pension entitlements affect private saving is inconclusive. Indeed, members of occupational pension schemes seem, if anything, to save more than other people (Green, 1981), though, as Hemming and Harvey (1983) argue, this does not necessarily imply anything about the relationship between growing occupational pensions entitlements among the elderly and private saving. Instead, the observed correlation between occupational scheme membership and private saving may reflect individual differences in preferences, which mean that those who are concerned most for post retirement security seek out jobs with pensions and, at the same time, save more for retirement in non-pension forms.

#### *(v) Earnings from employment*

The proportion of the income of pensioner households which is derived from earnings has fallen steadily over the 1970s and 1980s. This has reflected a steady trend to less labour force participation by the elderly over this period; the proportion of pensioner households recording any earned income has almost halved between 1969-71 and 1984-86. Much of this probably reflects the general weakness of the labour market since the mid-1970s, reflecting the growth of unemployment, and the rapid decline of many traditional manufacturing industries over 1978-82, which left many older workers with obsolete skills. These factors probably also account for much of the trend to earlier retirement, before the conventional retirement ages of 60 and 65.

Table 4.5 shows the relationship between pensioner age and the probability that earnings will be recorded, for each of the three types of pensioner unit.<sup>6</sup> A substantial proportion of the earned income

TABLE 4.5

Percentages of pensioner units recording earned incomes,<sup>a</sup> by age, 1981-86

	<i>Percentages</i>		
	Single male pensioners	Single female pensioners	Pensioner couples
60 - 64	n.a.	20.2	n.a.
65 - 69	15.8	8.0	24.4
70 - 74	9.5	3.2	16.6
75 - 79	3.1	2.2	8.5
80 - 84	5.1	1.2	5.7
85 and over	0.8	0.6	2.4
All ages	8.5	6.3	17.4

a. Defined as single people over state pension age and married couples where the husband is aged 65 or over.

was recorded by pensioner couples; over the sample as a whole pensioner couples were more than twice as likely to record earned income as either single male or single female pensioners. There are two obvious reasons for this difference. Firstly, pensioner couples tend to be younger than single pensioner units, and therefore more likely to be able-bodied, and in some cases, not yet retired from their main lifetime job. The second reason is that our definition of pensioner couples refers only to the age of the husband; some husbands who are aged over 65 will have wives who are aged under 60, who will, nonetheless be included in the 'pensioner unit'.

The level of labour force participation among the elderly is to some extent of course a function of the value and rules governing the receipt of the basic state pension. Reflecting concern about the burden of ageing, the 1989 Budget abolished the 'earnings rule', which had provided for a withdrawal of state pension once an individual's earnings exceeded a certain amount. However, both survey and econometric evidence suggests that the possible disincentive effects of the rules governing receipt of the basic state pension may have been exaggerated (Whitehouse, 1990). In particular, Parker (1980) noted a considerable ignorance among the elderly concerning the earnings rule, and concluded that it actually entered into the labour supply decisions of only a very small proportion of those affected by it. Zabalza, Pissarides and Barton (1980), using Parker's survey data in an econometric model of the labour supply of the elderly, found that abolition of the earnings rule would not substantially affect the

probability of labour force participation among the elderly, although it would effect a small shift from part-time to full-time employment on the part of those active in the labour force.

*(vi) Social security benefits*

A significant number of pensioners receive means-tested state benefits, principally housing benefit and income support, in addition to any state pension they receive.

Housing benefit was first introduced in 1983, replacing the social security assistance for domestic rents and domestic rates formerly provided through supplementary benefit and local authority rent rebate and rate rebate schemes. Assistance was provided through housing benefit for rent and rates, up to a maximum of 100 per cent, depending on income, household circumstances and the level of housing costs. The scheme was administered by local authorities, and it allowed for local authorities to vary the terms on which benefit was paid, provided that the benefit paid was at least as generous as the national scheme.

Housing benefit was reformed in April 1988 as part of the government's wider reform of social security benefits. Besides a number of changes to the detail of the means-test, the new arrangements involved two substantial changes, firstly a limit on the level of rate rebate to a maximum of 80 per cent of the domestic rates liability, and secondly the institution of a capital means-test, whereby possession of capital assets greater than a certain limit completely eliminates entitlement to benefit.

Income support, and the supplementary benefit scheme it replaced in 1988, provide means-tested financial support to individuals not in full-time work whose financial resources are below a certain level. Broadly, the amount of benefit paid is the amount necessary to bring the claimant's resources up to a specified minimum required level. Neither income support nor supplementary benefit was payable to any individual with savings or other capital assets greater than a certain amount — currently £6000. National insurance pensions are taken into account in full as resources. In calculating the claimant's requirements, account is taken of certain housing costs, including some not covered by housing benefit, such as mortgage interest payments and the accommodation charges of residents of local authority houses.

Given the changes to both benefit schemes in the 1988 reforms, the data on benefit receipts in the Family Expenditure Survey in the

mid-1980s are at best suggestive of the levels of benefit receipt under the current systems. Some of the changes, it should be noted, may have had a substantial effect on pensioners' eligibility to benefit; in particular, the introduction of a capital means-test for housing benefit is likely to have excluded a substantial number of pensioners hitherto entitled.

### **3. Conclusions: Future trends in pensioner incomes**

To what extent can the trends in the level and composition of pensioner incomes discussed in the previous sections be expected to continue into the future? Simple extrapolation of existing trends is clearly inappropriate since, as we have observed, individuals' pension entitlements are accumulated over the course of the individual's working life, and reflect the pensions schemes and economic conditions operating at the time. We therefore need to consider each of the various sources of pensioner incomes separately, and assess how future pensioner cohorts' entitlements may differ from those of current cohorts.

The dominant influence on future levels of pensioner income from the basic state pension will continue to be the official policy towards indexation; for as long as the basic rate pension continues to be indexed to prices rather than to wages (as used to be the practice before the 1980s), the basic pension is likely to decline as a percentage of overall pensioner incomes (assuming positive real wage growth, and that other sources of pensioner incomes reflect wage growth to some extent). On the other hand, as we have seen, an increasing number of women will be retiring with some entitlement to the state pensions in their own right, as a result of the phasing out since the mid-1970s of the reduced rate of national insurance contributions for married women, and the system of home responsibility credits introduced at the same time. Individual entitlements to SERPS will continue to build up over the next decade; those retiring at the turn of the century are likely to be entitled to a SERPS pension worth more than double the SERPS pension of those currently retiring.

Income from occupational pensions may continue to grow, but increasingly, only to the extent that the terms of occupational pension schemes have become more generous (particularly with regard to inflation) since the 1960s, and to the extent that individual lifetime earnings have risen. The rapid expansion of occupational pensions scheme coverage in the 1950s and 1960s, which has been a source of growth in occupational pension entitlements over the past

two decades, is unlikely to be a reason for future growth in pensioner incomes, since most of those retiring in future will have had nearly all of their working careers after this expansion took place. It is unlikely that the expansion of personal pensions in recent years will have any significant effect on pensioner incomes for some years to come.

Of the other sources of income discussed above, the level of earned income is likely to be greatly affected by future labour market conditions, especially any change in unemployment, and any skill shortages resulting from demographic pressures. The abolition of the earnings rule could encourage more of those within five years of official retirement age to continue in employment, but this effect seems likely to be small.

What do these trends in pensioner income imply for the level of public spending on means-tested benefits for the elderly? Future levels of social security benefit income, other than pensions, are a function not of the average level of other sources of pensioner incomes, so much as of their distribution across households. We turn to these issues in the next chapter, which considers the distribution of pensioner incomes, and assesses the relationships between the key parameters of the state pensions system and individual entitlements to means-tested state benefits.

#### NOTES

1. For most of the post-war period, until the 1989 Budget, the basic state pension was paid to men under 70 and women under 65 only if they were retired from regular employment or if their earnings were below a given threshold (the 'earnings rule').
2. Though there has been some concern recently that this formal separation of pension fund and corporate assets does not fully insulate pension fund assets from business considerations.
3. These increases refer only to the element of the occupational pension in excess of the GMP, the GMP component being indexed by the state.
4. Dilnot and Disney (1989) observe that limitations on defined benefit occupational schemes in the 1989 Budget may have further increased the relative attractiveness of money purchase schemes such as personal pensions.
5. Creedy and Disney (1988) discuss the possible impact on private saving of the wider opportunities for contracting out introduced after the 1986 Social Security Act. They cite research by Venti and Wise (1987) on the introduction of Individual Retirement Accounts in the USA which suggests that most saving in such accounts was net new saving.
6. The data in Table 4.5 aggregate six years of the FES, 1981-86, since otherwise sample sizes in some age groups are too small.

## CHAPTER 5

### INEQUALITY IN PENSIONER INCOMES

How widely has the rise in pensioner incomes described in the last chapter been distributed across the pensioner population? In this chapter we present some evidence on the broad distribution of pensioner incomes, and how the incomes of the poorest and richest pensioners have changed relative to the pensioner population as a whole.

Trends in the incomes of the poorest part of the pensioner population are of particular interest, since they are a major factor in determining the need for expenditure on income-related state benefits. In the final section of this chapter we consider the relationship between expenditure on means-tested state benefits and pensioner incomes. Using the IFS tax and benefit model we show the public expenditure and inequality consequences of the switch from wage to price indexation of basic pensions during the 1980s, taking into account the resulting increase in dependence on means-tested benefits.

#### 1. Income sources of poor and rich pensioners

Table 5.1 shows the (equivalised) incomes of the poorest and the richest 20 per cent of pensioner units in 1984–86, compared with the average income of all pensioner households, discussed in Chapter 4. On average the gross income of the poorest quintile (the bottom 20 per cent) of pensioners was £38 per week, 54 per cent of the average, whilst the gross income of the richest quintile was £137 per week, 195 per cent of the average.

Over the whole period from 1971 to 1986 the percentage increase in the gross equivalent incomes of the poorest quintile, the richest quintile, and of all pensioners has been much the same — about 45 per cent in real terms (Figure 5.1). However two distinct subperiods can be observed. During the 1970s there was a clear tendency for the incomes of the poorest quintile to rise more rapidly than the average, and, particularly after 1975, for the average to rise faster than the incomes of the richest quintile. The inequality of pensioner incomes was thus narrowing over this period. Since the start of the 1980s, however, these relationships have been reversed. The incomes of the richest 20 per cent of pensioners have risen sharply, and more rapidly than the average, whilst the incomes of the poorest 20 per cent of pensioners have risen less than the average, and indeed did not



TABLE 5.1

**Composition of incomes of the poorest and richest quintiles,<sup>a</sup> compared to all pensioners, 1984-86**

	1985 prices £ per week, equivalised (shares in brackets)		
	poorest quintile	richest quintile	all pensioner units
State pension	36.14 (95.5)	35.57 (26.0)	36.51 (52.1)
State benefits	0.65 (1.7)	7.25 (5.3)	4.95 (7.1)
Occupational pension	0.34 (0.9)	44.81 (32.7)	14.30 (20.4)
Investment income	0.64 (1.7)	31.60 (23.1)	9.40 (13.4)
Earned income	0.02 (0.1)	17.25 (12.6)	4.72 (6.7)
Other income	0.05 (0.1)	0.58 (0.4)	0.24 (0.3)
Total (excl. imputed income)	37.85 (100.0)	137.07 (100.0)	70.12 (100.0)
Imputed income from owner-occupation	3.81	13.74	7.47
Total (incl. imputed income)	41.70	150.81	77.59
Deductions (tax, NI)	0.09	23.05	6.14
Net income (excl. imputed income)	37.76	114.03	63.98

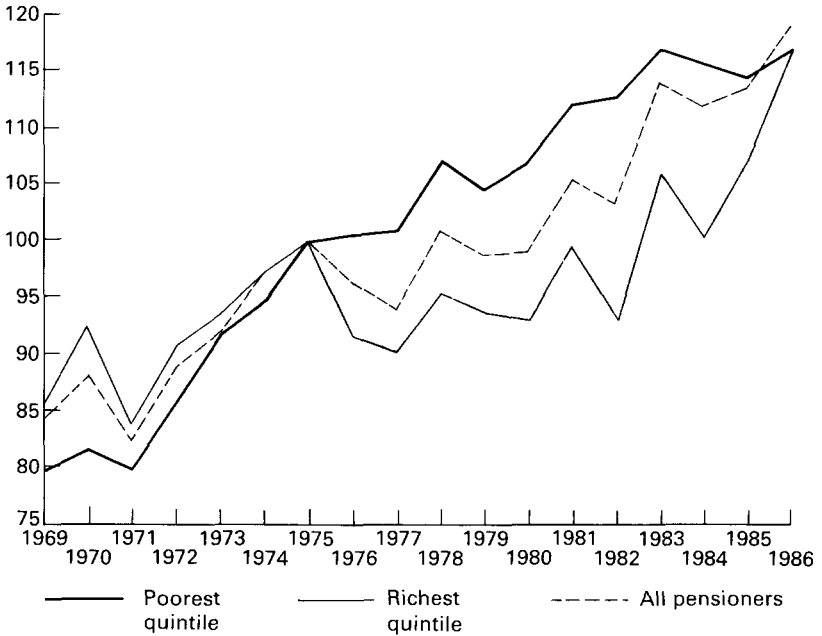
a. Quintiles defined by equivalent income of the pensioner unit; an income of 163 for a pensioner couple is assumed to be equivalent to an income of 100 for a single pensioner.

increase at all in real terms between 1983 and 1986. The inequality of pensioner incomes has thus widened since the start of the 1980s.

The income structure of poor and rich pensioner units is one reason for these divergent growth rates. The poorest pensioner units are almost entirely dependent on income from the state pension; some 95 per cent of their income was from state pensions, compared with about 50 per cent of the income of the average pensioner unit, and only a quarter of the income of the richest quintile. The switch to uprating the state pension in line with price inflation only, rather than in line with wage inflation, is likely to be a major reason for the worsening relative position of the poorest 20 per cent of pensioner households since the start of the 1980s.

The richest 20 per cent of pensioner households, by contrast, derive a substantially greater proportion of their income from occupational

**FIGURE 5.1**  
Trends in Gross Equivalent Income  
1975 = 100



pensions and investments — some 56 per cent of their income, compared with 34 per cent of the income of pensioner households as a whole, and only 3 per cent of the income of the poorest quintile. Trends in the incomes of this group thus are likely to be substantially influenced by trends in the real rate of return on private investments and in the investments of pension funds; between 1976 and 1982 the rates of growth of occupational pension and private investment income were so low that the incomes of the richest quintile only just kept pace with inflation.

## 2. Inequality and the indexation of pensions

Over the past ten years the basic national insurance retirement pension has been indexed to price changes, rather than wage changes as was the case prior to 1979. As Table 3.7 showed, indexation to wages between 1980 and 1990 would have resulted in a pension level approximately 27 per cent higher than current levels, and a return to indexation to wages from 1990 would add a further 21 per cent to its value by 2000 assuming long-run real wage growth of 2 per cent per annum. While of course preserving the real value of pensions, indexation to prices excludes pensioners' incomes from the state from

the effects of economic growth, and hence is likely to increase the inequality of incomes both between pensioners and non-pensioners and among the pensioner population itself.

Table 5.2 shows movements in the value of average per pensioner income from the basic retirement pension relative to average earnings among the working population, simulated using the IFS basic state pension model. It suggests that its relative value fell from 23.3 per cent of average earnings in 1980 to 18.0 per cent in 1990 and a projected decline to 14.8 per cent by 2000.

TABLE 5.2

**The value of the basic retirement pension relative to earnings\***

year	percentage
1980	23.26
1990	17.99
2000	14.81
2010	12.83
2020	11.33
2030	9.63

\* assuming long run real wage growth after 1990 of 2% per annum

Source: IFS Basic State Pension Model

Since, as we have seen in Table 5.1, the retirement pension accounts for a much higher proportion of the incomes of less well-off pensioners than those of better-off pensioners, one would expect, other things being equal, a lower pension level to result in higher income inequality among the retired. However, estimation of the effects must take into account those respects in which other things are not equal, in particular the interaction of pension levels with entitlement to and receipt of means-tested social security benefits.

The income thresholds for entitlement to means-tested income support (income support, formerly supplementary benefit) have historically been close to the rate of retirement pension, so that those pensioners with little or no other income and/or a less than full contribution record for NI (national insurance) benefits have typically been entitled to means-tested benefits. In 1990, even the full retirement pension for a couple on the husband's insurance falls short of the threshold for income support for those aged under 75 by

45 pence, rising to £6.75 for those aged over 80; the shortfall for single people is larger, ranging from £8.70 to £13.95. In addition, those with incomes above but close to income support thresholds are eligible for housing benefit. As a result, it is the case both that a substantial proportion of pensioners are entitled to means-tested benefits and that pensioners make up a considerable proportion of the total entitled. In 1987/88 19 per cent of pensioners were in receipt of supplementary benefit and in 1988/89 16 per cent were receiving its replacement, income support (the drop being attributable to the abolition of housing benefit supplement).

The perpetuation of dependence on means-tested benefits that has resulted from pension indexation to prices hence has important consequences both for its public expenditure implications and for its impact on the level and inequality of pensioner incomes.

The gross costs of indexation to wages are substantial; based on the basic state pension model described in the Appendix, Table 3.7 compared the simulated costs of indexation to wages and prices between 1980 and 1990 and between 1990 and 2000. The additional 27 per cent that indexation to wages would have added to current gross pension costs represents approximately £5 billion at 1989 prices. However, these figures, based on cohort averages, can take into account neither the consequent reduced spending on means-tested benefits nor increased income tax receipts. Based on detailed individual income and characteristics data from the 1984 Family Expenditure Survey and the IFS Tax Benefit Model, Table 5.3 shows estimates of the net cost in 1990 of restoring basic pensions to the level implied by indexation to wages since 1980. Column 1 shows the impact on calculated benefit entitlements, while column 2 takes into account estimates of the impact of less than full take-up of benefits (see Chapter 6). In both cases, the public spending implications of taking account of the impact of pension changes throughout the tax and benefit system are substantial, suggesting that the net cost is at most only about 57 per cent of the gross.

The numbers of benefit claimants would also have been reduced considerably, as indicated by the tables. The number of income support claimants would fall by 30 per cent overall and by almost 80 per cent among pensioners (including non-takeup effects under both indexation arrangements). Apart from the likely preference of pensioners for independence, this would also produce offsetting benefits for government in the form of administrative savings; these are difficult to estimate to the extent that marginal costs per claimant may differ from the average. The average costs are substantial

TABLE 5.3

**The costs of restoring indexation to wages (net changes from current system)**

	Percentage of cost of pension rise reflected in benefit reductions/increased tax payments	
	Entitlement	Receipts
Housing benefit	27.60	26.65
Income support	9.06	7.74
Income tax	8.83	8.83
Net cost as %	54.48	56.75
Reduction in no. on income support	29.81	29.91
Reduction in no. of pensioners on IS	81.23	79.63

Source: IFS Tax Benefit Model

however — the Department of Social Security estimates that in 1987/88 they amounted to £4.20 per week per beneficiary for supplementary benefit (the precursor of income support) and £0.60 per week per beneficiary for housing benefit.

Taking into account changes in takeup behaviour slightly modifies the estimate of the reduction in income support claims, since the takeup rate among pensioners is estimated to increase from 82.6 per cent to 89.8 per cent. While both increased pensions and the associated reduction in benefit would be expected to reduce the proportion of the entitled claiming benefit, this effect is offset by the fact that the pension increase lifts above the income support threshold many of those who currently have relatively small entitlements and among whom take up is lowest. The average income support receipt (excluding housing benefits) is estimated to rise from £10.91 to £35.24.

Table 5.4 shows the income consequences of an approximately revenue-neutral comparison, with the net costs of indexation to wages covered by a 2 point increase in income tax. The gains from indexation to wages/losses from indexation to prices are greatest for pensioners in the lower income deciles, though partially offset for the near-poor by the consequences for means-tested benefit receipt.

TABLE 5.4

**Net income changes following return to the pension level implied by indexation to wages from 1980, taking account of financing**

	Average income change (pounds per week)						
	(% of tax units)						
	lowest decile	2nd decile	2nd quintile	3rd quintile	4th quintile	5th quintile	all
Pensioners: single	7.52 (4.0)	5.73 (33.6)	3.07 (46.0)	5.65 (9.4)	5.38 (4.1)	0.85 (2.9)	4.41 (100.0)
Pensioners: couples	-* -*	-* -*	11.03 (27.7)	11.12 (39.8)	11.95 (20.3)	6.29 (12.1)	10.69 (100.0)
All tax units	0.46	2.73	2.18	1.57	-0.67	-4.75	-0.03

Cells marked with an asterisk have samples insufficiently large for reliable estimates.

Overall the figures are broadly consistent with the expectation that indexation to prices has increased inequality among the pensioner population. Moreover, net income changes among the sample including non-pensioners following a return to indexation to wages also suggest that indexation to prices has increased inequality overall, with losses on average for those in the lowest three quintiles; the low gains among the lowest decile reflect the fact that this group is now largely composed of the single unemployed who would be largely unaffected by the changes.

The simple and in many ways minor sounding switch from wage to price indexation of state pensions has had far-reaching consequences for public spending and for the level and distribution of pensioner incomes. The magnitude of these consequences has probably been greater than that of the major structural reforms to the benefit system during the 1980s. While the gross cost of indexation to wages is large, an assessment of its feasibility and desirability should take into account its repercussions throughout the benefit system.

## CHAPTER 6

### THE SCOPE FOR GREATER MEANS-TESTING

#### 1. Targeting and Pensions

The very high proportion of elderly people with inadequate private incomes has meant that expenditure on the basic state pension has hitherto been regarded as relatively well-targeted among universal benefits, with relatively little leakage in terms of payments to the non-poor. However, in the context of deep concern within government over the public spending consequences of population ageing, the perceived greater prosperity of today's pensioners has for some raised a question mark over the continued appropriateness of universal state pension provision.

The basis of arguments concerning 'targeting' is the idea that benefit expenditure should be concentrated as far as possible on raising the living standards of those with the lowest pre-benefit incomes. More narrowly, 'target efficiency' is often interpreted in terms of the degree of poverty alleviation achieved for a given benefit expenditure, attaching no usefulness to expenditure which raises incomes among the target group above a given poverty threshold or which is received by the pre-benefit non-poor. When poverty is interpreted simply in terms of the 'poverty gap' (the income shortfall of the pre-benefit poor from the poverty threshold), a measure of such 'efficiency' on average is the proportion of benefit expenditure devoted to raising the incomes of the pre-benefit poor to(wards) that threshold.

The post-war national insurance system (NI) of which the basic state pension formed a major part was based on two distinct but related notions — those of 'contingency targeting' and the contributory principle. The aim was to identify contingencies which carry a high probability of poverty and to pay cash benefits in the event of those contingencies, subject to an adequate record of NI contributions.

The contributory character of the system has always been controversial. The link between contributions and benefits was weak from the outset and to the extent that it has operated it has put those with limited opportunities for adequately paid employment (notably women) at a severe disadvantage relative to their position under a universal pension. The contributory principle was never applied enough to give credence to the notion of 'national insurance' but was sufficient to impair the universalistic character of the system.

Nevertheless, the perception that entitlement to benefit had been 'earned' through contributions undoubtedly increased the acceptability of the system to both the poor and the non-poor.

The targeting of such a system is of course related to the degree of poverty associated with the relevant contingencies. It is the effectiveness of benefits in achieving poverty alleviation at the margin, rather than on average, that is important in making judgements about target efficiency. Minimisation of poverty for a given benefit expenditure entails setting benefit levels so as to equate the marginal poverty reduction achieved by each contingent benefit. For instance, the maximum reduction of the poverty gap entails equalisation of the poverty 'head count' across the contingent groups (Kanbur, 1987). However, inevitably the relationship of particular contingencies with poverty changes over time. Social change throws up new contingencies associated with poverty, while at the same time some existing ones may be becoming less and less associated with low income. Retirement and old age may be one such case in which trends such as the growth in home ownership and occupational pensions mean that low income is becoming less of a general problem, so affecting the targeting of pensions at the margin.

In this context it might be — and has been — asked whether the system of benefits for the retired should be re-targeted by extending the role of 'targeting by income' or means-testing. This, it might be argued, would allow more benefit expenditure to go to those who are in greatest need of support and/or allow benefit expenditure to be reined back in order to counteract the upward pressures on public spending exerted by demographic changes and scheme maturation.

The extent of scope for such changes is the main focus of the analysis of Section 4 below, in which possible developments are examined within the confines of 'targeting' criteria. This focus is not intended to suggest that considerations of targeting are the only important ones in such a context, nor that they are entirely independent of others. For instance, it may be that departures from the contributory principle lower the acceptability of benefits to the target group and hence worsen targeting by lowering benefit take-up; issues related to the take up problem are the subject of Section 3.

Explicit abandonment of the contributory principle by relating benefit entitlements solely to current income and breaking any notional link between entitlement and past NI/tax contributions would have far reaching consequences and undoubtedly meet with considerable resistance. SERPS, in which the size as well as the



number of contributions affect entitlement, and for which there are complex arrangements for contracting out of both contribution and benefit, would clearly be incompatible with such a move.

Equity precludes sudden change to the expected benefit levels of the near or already retired, whose lifetime saving and retirement plans have been made within the context of the existing system. Moreover, within the context of a contributory system, future entitlements based on contributions already made should not be disturbed. Hence, as with the 1988 alterations to SERPS, in practice there would be a considerable time lag between the introduction of any reform and the maturity of its effects on income levels and public spending.

Some may also wish to broaden the narrow 'poverty alleviation' focus of debate concerning targeting to include a broader concept of social welfare in which some account is taken of benefits to the non-(including near-)poor and inequality considerations generally. Other important questions include: the effects of means-testing on saving incentives; the extent to which pay-as-you-go pension schemes represent intra- or intergenerational transfers and how this would be affected by means-testing; the public choice consequences for the strength of the coalition in favour of generous benefits for the elderly — to what extent might those on low incomes become further marginalised and with what consequences for the actual extent of both intra- and intergenerational transfers determined by the political process.

Our focus on targeting issues is in no way intended to suggest that these issues should not form an important part of an overall assessment of the role of means-testing.

## **2. Targeting and income growth during the 1980s**

The demographic pressures and income trends which underlie renewed suggestions for the extension of means-testing were examined in detail in Chapters 3 and 4. There it was argued that the combined effects of growth in both the numbers and the amounts of individual entitlements to the basic state pension would raise public spending on the system by about 50 per cent in real terms over the next 40 years. The acceptability of this depends on the course of future economic growth and on other pressures on public spending. However, in a range of plausible macroeconomic scenarios the implied average tax rate on earnings would not fall outside the range experienced over the last 10 years (see Table 3.8).

The analysis of trends in pensioner incomes undertaken in Chapter 4 confirms that over the past two decades there have indeed been substantial shifts in both their level and composition. A feature of those trends, though, was that much of the rise in incomes has been attributable to increases in entitlement to state pensions themselves, while growth in private incomes from occupational pensions and investment have been offset by decline in earned income among those over retirement age. Whether the latter has been a response to growth and the improved provision of occupational pensions or the result of labour market restrictions which in future may be relaxed is a question that at this stage it is not possible to answer definitively. Moreover Chapter 5 suggests that low private income remains a feature of a substantial portion of the income distribution among pensioners.

Table 6.1 gives some indication of the average target efficiency of the state pension in 1981, in the middle of the period examined in Chapters 4 and 5. It shows that only 26 per cent of pension expenditure was received by the non-poor (as defined by the supplementary benefit (SB) level of the day), while a further 15 per cent went to raising the incomes of the pre-benefit poor above the SB level. Not only does this indicate that the state pension at that stage was substantially more closely targeted than other non-means-tested benefits (the percentage of expenditure received by the non-poor was 46 per cent in the case of other NI benefits and 76 per cent in that of child benefit) but that it was in fact more tightly targeted than some other means-tested benefits (the proportion for family income support (FIS) and rent and rate rebates was 42 per cent). While these figures are based on a particular interpretation of targeting, and are

TABLE 6.1

**Proportion of pension needed to bring incomes to the Supplementary Benefit level in 1981**

Received by 'post-benefit poor'	14.9
Necessary to bring 'pre-benefit poor' to SB level	43.9
Extra received by 'pre-benefit poor'	15.0
Received by 'non-poor'	26.2

Source: Dilnot, Kay and Morris (1984)

to some extent obvious from the structure of the benefits concerned, they suggest caution is appropriate in assuming either that income growth has undermined the targeting of pensions or that greater reliance on means-testing necessarily achieves tighter targeting.

Subsequent reforms during the 1980s affected the role of means-testing in income provision for the elderly in two main ways. The indexation of the basic state pension to prices rather than wages meant that pensioner dependence on means-tested benefits did not decline to the extent it would have otherwise with economic growth (see Chapter 5). Secondly, the 1983 and 1988 social security reforms represented a significant re-targeting of existing means-tested benefits.

The 1983 integration of rent and rate rebates into standard housing benefit increased the upper taper (the rate at which benefit was withdrawn as incomes rose above 'needs') and for pensioners substantially increased the lower taper (the rate at which benefit increased as income fell below 'needs' until all rent and rates were met). The targeting of the benefit was hence tightened — increasing benefit levels for poorer pensioners and reducing them for the 'near poor' among all groups.

The more far-reaching social security reform introduced in April 1988 in contrast represented a re-targeting of means-tested benefits between groups. Using essentially a 'contingency-targeting' argument, the 1985 Green Paper noted that between 1971 and 1982 the proportion of pensioners in the poorest quintile had fallen from 35 per cent to 19 per cent while the proportion of families with children (both in and out of work) had risen from 48 per cent to 58 per cent. The subsequent reforms, in addition to rationalisation and simplification of the system, embodied this concern, increasing the generosity of means-tested benefits for those with children. Low income pensioners were the main losers from the re-structuring of housing benefit; additions for special needs such as heating and laundry under supplementary benefit were replaced by age premiums under income support, with widely-varying consequences depending on pensioners' particular circumstances.

### **3. Takeup Behaviour**

While non-means-tested benefits are costly to the extent they are paid to the non-poor, there are also well-known costs associated with means-testing; costs to the government in the form of the substantial administrative costs of the claims procedure and to the claimant in

the form of both perceived stigma problems and the actual costs and obstacles presented by travel to benefit offices, lengthy form-filling, etc. Such costs diminish the net value of benefits to claimants and, where they exceed those benefits, deter claims, resulting in non-takeup. Misconceptions about the benefits available and the costs of investigating entitlement may also contribute to non-takeup. Concern about takeup is therefore twofold. Irrespective of the reasons for non-takeup, those who do not receive the assistance for which their low incomes/high needs are deemed to qualify them are a signal of the partial failure of means-tested benefits to provide the income safety-net intended. Moreover, the existence of non-takeup suggests that there are costs associated with claiming which also partly offset the value of benefits to those that do claim.

Recent evidence on takeup behaviour (Blundell, Fry and Walker (1988), Fry and Stark (1987)) analyses the relationship between takeup and the level of entitlement, accounting for the socio-economic characteristics of both recipients and non-recipients among the entitled population. Such evidence cannot directly address the question of whether non-takeup is attributable to ignorance/misconception or costs/stigma associated with claiming, since the data does not record individual attitudes to and information about the benefit system. However, since the real costs and stigma of claiming are more likely to outweigh the benefit if entitlement is low, evidence of a positive relationship between takeup and entitlement provides support for the view that there are positive fixed costs to claiming benefits.

For both housing benefit and supplementary benefit (using data for 1984) this appears to be the case, with the probability of an entitled tax unit taking up benefit depending positively on entitlement level and negatively on the level of other income. Table 6.2 gives some illustrations for the case of supplementary benefit.

The significance of takeup behaviour for analysis of the scope for greater means-testing is therefore twofold. Firstly, taking into account takeup costs is central to the assessment of the welfare consequences of proposed changes, for both recipients and non-recipients among the entitled population. Secondly, because takeup probabilities are dependent on entitlement and income, including that from non means-tested benefits, methods of calculating the cost of reforms to either type of benefit which assume a constant takeup rate may be subject to serious error.

TABLE 6.2

**Effects of entitlement and income on the takeup of Supplementary Benefit among pensioners**

	Predicted takeup probability		
	mean income and entitlement	Additional £5 SB	Additional £5 income
Couple, early retired, aged 60, private tenants	.844	.875	.837
Couple, pensioners, aged 70, private tenants	.851	.910	.846

Source: Fry and Stark (1987)

#### 4. Simulating the effects of greater means-testing

The question of the scope for expenditure saving from the extension of means-testing can be seen as the inverse of the question of the target efficiency of universal pensions. Clearly the better the contingency is at identifying poverty the less scope exists for re-targeting via means-testing; however, if the aim of targeting benefits is to achieve the maximum degree of poverty alleviation for a given budget, it is the marginal rather than the average 'target efficiency' of each benefit that is important; it is not only the proportion of all existing pension expenditure reaching the poor but the proportion of expenditure on marginal increases/decreases that matters.

The broad structure of interactions at the margin between non-means-tested pensions and means-tested benefit entitlements is relatively straightforward in theory (though in practice its detail is complex); a fall in the level of universal pensions increases the amount and number of entitlements to income support (IS). Many of those brought into the scope of IS will previously have been entitled to (relative large) amounts of housing benefit (HB) but for those remaining within the scope of HB, entitlement will rise; in addition some people previously not entitled to any means-tested benefit will now be able to claim HB. The net effect on both numbers and average entitlement to HB will depend on the income distribution. Incorporating takeup behaviour requires taking account of the predicted effects of both income and entitlement changes on takeup probabilities; again the aggregate outcome will be sensitive to the distribution of income and hence entitlement.

TABLE 6.3

**The effects of decline in the value of pensions on benefit entitlements**

	Percentage of cut in pension expenditure reflected in increased benefit entitlements/decreased income tax		
	1	10	100
% pension cut			
Housing benefits*	20.48	17.07	7.48
Income support	30.00	36.95	63.37
Income tax	7.38	7.02	5.01
Net saving	42.10	38.91	24.06
% increase in no. on income support	1.92	13.83	45.19
% increase in pensioners on income support	5.14	37.53	121.34

\* includes housing benefits to those on income support

Source: IFS Tax Benefit Model simulations

The simulation results presented in Tables 6.3, 6.4 and 6.5 are derived from the IFS Tax Benefit model, augmented in the case of receipts by simulation of the take-up effects based on the results in Fry and Stark (1987) and Blundell, Fry and Walker (1988) (see Stark (1990) for details of the simulation methodology). The model is based on the tax and benefit system in 1990 and the distribution of income and characteristics in the 1984 Family Expenditure Survey.

A number of features of the results deserve comment. Firstly, comparison of Table 6.3 with Table 6.1 does not indicate a decline in the level of average target efficiency for the state pension. Column 3, showing the situation in the absence of state pensions suggests that only 24 per cent of pension expenditure raises incomes beyond means-tested benefit levels. The two tables are not directly comparable since they address slightly different questions; moreover, since the simulations of Table 6.3 use real income data for 1984, differences reflect the impact of benefit reforms over the 1980s to a greater extent than the effects of income movements. Nevertheless, they indicate a situation in which pension expenditure remains relatively well-targeted overall and in which in its absence over twice as many pensioners would be entitled to income support.

Secondly, comparison of columns 1-3 in Table 6.3 highlights the importance of distinguishing between the marginal and average impact of pensions on poverty alleviation and public expenditure. At

the margin, 30 per cent of a cut in the real value of pensions would reduce pre-benefit pensioner incomes below income support thresholds and a further 20 per cent would be reflected in increased entitlement to housing benefits (including benefits to those on income support). As the real value of pensions falls, the proportion with

TABLE 6.4

The effects of decline in the value of pensions on benefit receipts

	Percentage of cut in pension expenditure reflected in increased benefit receipts/decreased income tax		
% pension cut	1	10	100
Housing benefits*	21.12	18.98	8.42
Income support	26.81	34.16	62.52
Income tax	7.38	7.02	5.01
Net Saving	44.66	39.80	24.00
% increase in no. on income support	1.97	17.38	60.64
% increase in pensioners on income support	5.13	46.19	159.72
Income support take-up rate	82.6	87.9	96.9

\* includes housing benefits to those on income support

Source: IFS Tax Benefit Model

TABLE 6.5

The effects of a switch of expenditure\* from pensions to Income Support

	Average income change, in pounds per week (% of tax units)						
income group	lowest decile	2nd decile	2nd quintile	3rd quintile	4th quintile	5th quintile	all
Pensioners : single	3.29 (4.0)	2.82 (33.6)	2.00 (46.0)	-0.43 (9.4)	-1.80 (4.1)	-0.74 (2.9)	1.87 (100.0)
Pensioners : couples	-) (-)	- (-)	2.61 (27.7)	-1.53 (39.8)	-4.42 (20.3)	-3.62 (12.1)	-1.23 (100.0)
All groups	0.19	1.39	1.11	-0.28	-0.53	-0.24	0.17

\* 10% fall in the real value of pensions, 30% increase in income support age premiums

Source: IFS Tax Benefit Model

respect to income support rises, to 63 per cent overall, and to a lesser extent that on housing benefits falls, to 7.5 per cent overall.

Thirdly, comparison of Tables 6.3 and 6.4 shows the impact of taking into account the consequences for takeup behaviour. A 1 per cent fall in pension values is too small to have any significant impact on takeup rates, but the lower figure for increased expenditure on income support reflects its non-takeup by those with small entitlements (both before and after the change). Moving to a 10 per cent cut, taking account of takeup reveals a much more substantial increase in the percentage of expenditure devoted to increased income support and housing benefit receipts than is apparent from just looking at entitlements. This reflects an increase in income support takeup from 83 per cent to 88 per cent of entitled pensioners in response to the combined effects of lower income (and hence greater need) and consequent higher entitlement.<sup>1</sup>) An overall assessment would also need to take into account the administrative costs of the greater percentage increase in the number of income support claimants; average administrative costs for supplementary benefit before its replacement were estimated at £4.20 per week per claimant or 13.9% of benefit expenditure.

Table 6.5 shows the average net income gains and losses from an approximately revenue neutral 10 per cent cut in real pension values combined with a 30 per cent increase in the age premiums for income support. The table shows gains for the lowest 40 per cent of the income distribution (though to only a small extent for those in the lowest ten per cent, which in fact contains few pensioners), and losses for the remaining 60 per cent. Underlying this switch is a 70 per cent increase in the number of pensioners claiming income support.

The state pension remains well-targeted towards poverty alleviation on average, though it is less so at the margin. Nevertheless, even at the margin over half of the public spending reduction following a real pension decrease would be required for increased means-tested benefit payments. Whether the net income changes achievable from a re-targeting of benefits, away from universal pensions and towards a greater reliance on means-testing, improve the overall effectiveness of benefit targeting is a judgement which will ultimately depend on the weight given to the welfare costs of means-testing itself.

#### NOTES

1. It is interesting to note that, comparing Tables 6.3 and 5.3, both an increase and a decrease in pensions from current levels would for different reasons increase income support takeup among pensioners.



## CHAPTER 7

### THE BALANCE BETWEEN PUBLIC AND PRIVATE PROVISION

The projected medium-term growth in the costs of state pensions and public services for the elderly has focused attention on issues of 'value for money' and efficiency in this substantial area of public spending. In the last chapter we discussed one route the debate has taken, namely the scope for more extensive use of means-testing of public provision, so as to target public support more closely on those of the elderly with low incomes and/or wealth. A second aspect of the policy debate has been a reappraisal of the balance between the public sector's role and private provision for the elderly. 'Privatisation' of provision for the elderly might be envisaged at three levels, and we consider each in turn in this chapter.

Firstly, policy might seek to encourage individuals to make greater provision for their own future needs as pensioners, through private saving, private pensions, and, possibly, long-term contracts with private suppliers for the provision of health-care and other services. At the same time the commitments of the state to provide these services in future could be reduced, and, as the current population of working age began to retire, the reliance of the pensioner population on state services would gradually diminish.

Secondly, there is the possibility that the present generation of pensioners could be encouraged to make greater use of private services. The scope for this to be achieved simply by withdrawing certain parts of current state support is limited, since the present generation of pensioners will have provided for their retirement on the basis of expectations about levels of state provision. Simply to withdraw provision that had previously been expected to continue would clearly impose cuts in the standard of living of present pensioners. However, whilst the *level* of public provision to the present elderly may be difficult to change, there is greater scope for changing the *form* in which such assistance is provided. Much public support for the elderly takes the form of the provision of services (health and personal social services, especially), rather than additional income. Providing assistance as cash or service 'vouchers' rather than in kind would encourage greater use of private sector services, even if it did little to change the level of public resources required.

Thirdly, even if the form of public sector provision remains

unchanged, there is scope for greater use of private contractors to deliver public services to the elderly. A change of this sort is indeed already envisaged in the proposals in the 1989 White Paper on community care, according to which local authorities will have a central role in co-ordinating community care services for the elderly and other groups, but would be encouraged to arrange with private contractors to undertake the actual delivery of services.

In this chapter we discuss the possibilities for changing the balance between public and private provision for the elderly in each of these ways, considering in particular whether changes of this sort would be likely to affect the efficiency and effectiveness of public policy towards the elderly.

### 1. Individual needs

A key issue common to all these 'levels' of possible privatisation is the wide variation in individual needs for support in old age. Differences in income are widely recognised as calling for differences in the level of public support — although, as the previous chapter has shown, the circumstances under which income means-testing of public support will in practice be most efficient are complex, and depend on the balance between a number of factors. However, differences in the need for public support also exist across the pensioner population. Such differences arise from two principal sources: differences in

TABLE 7.1

**Dependency indices for elderly people in the community and in residential care**

Dependency index	<i>percentages</i>	
	Elderly in the community (1980)	Elderly in residential care (1981)
0	79	16
1 - 2	14	46
3 - 4	4	14
5 - 6	1	10
7 - 10	1	15
All	100	100

Note: The index of incapacity is based on a score of 1 for each task which causes difficulty and 2 for each task which requires assistance, taken from the following list: getting to the lavatory, getting in and out of bed, feeding, taking a bath or shower, washing face and hands.

Source: Tinker (1984), Figure 5.9

health and physical capacity, and differences in the availability of family and other sources of informal support.

The health status, and consequent use of health services by the elderly, varies widely. Similarly, the extent to which elderly people experience difficulty with the normal activities of everyday life has considerable variation; severe incapacity in a range of everyday tasks is concentrated amongst a very limited section of the elderly, whilst many elderly people experience no significant incapacity at all (Table 7.1).

The resources on which elderly people can draw to cope with the problems of incapacity include not only financial resources, but also the willingness of relatives, neighbours and friends to provide support and assistance. The need for public intervention to assist particular individuals will be a function of, on the one hand, their degree of incapacity, and, on the other, the financial and non-financial resources available to them. In other words, an assessment of individual needs for public support will require both 'physical' information about the medical condition and physical and mental capacity of the individual, and also 'resource' information about the availability of sources of informal care by family members and others. The ability of an elderly person with a given degree of physical incapacity to cope without state assistance will vary depending on their household circumstances (whether they are living with an able-bodied spouse or other able-bodied individuals) and on the existence and willingness of relatives and neighbours to provide assistance.

As a result of these differences between individuals in 'needs' during old age, the provision that individuals would have to make if they were to take over from the state full responsibility for providing for their own old age would have to take the form of insurance as much as of investment. Many of the familiar problems of private insurance markets would therefore arise (Arrow, 1963).

Some aspects of the uncertainty arising from the variance of needs for care during old age might in principle be insurable at the individual level. Thus it would be possible to envisage that individuals could over their lifetime purchase insurance against old-age health costs and certain forms of physical incapacity in old age. However, in practice, insurance of this sort is rarely observed; even the limited number of pensioners covered by private medical insurance are mainly covered on an annual basis, severely restricting the extent to which the insurance covers expensive chronic conditions. Indeed,

there are good reasons for believing that substantial reliance on individual private insurance to protect against the risks of old age would be impracticable; the individual's probability of future needs for care may be partly predictable from a comparatively young age, and it may also be difficult to devise adequate objective indicators of all aspects of the need for care. The latter point is also important in considering the appropriate form of the state's intervention.

There are two main reasons why, in the face of the substantial individual differences in the need for public assistance, it may be inefficient to provide the assistance in the form of cash transfers or tradeable vouchers, rather than in kind or as non-transferable vouchers.

The first reason for provision in kind rather than cash would be if the *process* of provision in kind itself provided the information needed for differentiation between individuals. The provision of cash assistance may then involve wasteful duplication; a separate assessment process may be necessary to determine the appropriate cash payments, whilst the necessary information might be thrown up as a less costly by-product of provision in kind.

A second informational reason for preferring provision in kind is that it may reduce the risk that potential recipients may misrepresent their needs for assistance in order to increase the cash transfers they receive. As Blackorby and Donaldson (1988) argue, provision in kind may ensure a form of self-selection of those in need. The argument rests on the existence of differences in individual need which are difficult or impossible for the state to observe; because of this, the state would be unable to verify whether individual claims for financial assistance were in fact justified. Where, however, the help provided by the state is in kind rather than as cash, the incentive to claim help when not in need may be reduced, if the services provided in kind are of less value to those not in need than to those in need. Through this mechanism the state is able to target help on those who are in fact in need of help, without being able to observe directly all aspects of individual need.

Do either of these arguments for provision in kind rather than as cash apply in the case of the services provided to the elderly? In the case of both health services and personal social services it would seem that there are indeed important informational considerations relating to the form of provision.

The reasons why it may be more efficient for the state to provide health services in kind rather than as cash or vouchers would appear

to rest principally on the information obtained through the process of provision in kind. Individual needs for medical care and treatment are assessed gradually, often as part of a process or sequence of treatment. Separating the processes involved into an 'assessment' phase, which would obtain the information needed to assess the costs of necessary treatment, and a subsequent treatment phase in which the patient would purchase medical care with the resources provided on the basis of the initial assessment, would in many cases involve substantial duplication of costs, as well as delays in treatment. There may be some kinds of medical condition where the separation might be reasonably practicable, but for many conditions the assessment of needs for treatment arises during the process of treatment, and is subject to continual modification as particular therapies and drugs are found to be more or less effective.

The arguments for provision of social services in kind are rather different. Typically social services for the elderly involve the repetition of comparatively routine and standardised services, and the amount of information about needs that may be obtained as a by-product of service provision may be much less than in medical care. It would be possible to envisage a system of provision where each individual's needs for services were assessed at occasional intervals, on the basis of information about their physical and mental capacity, and where the individual was then provided with cash or vouchers to purchase the relevant services. There may still, however, be certain differences in individual need, particularly relating to the willingness of potential informal carers (friends, neighbours and relatives) to provide help, which would be difficult to evaluate fully in such an assessment, and which would therefore constitute a potential source of efficiency loss in moving towards a 'privatised' system based on cash transfers rather than provision in kind.

Similar issues arise in the specification of contracts for certain forms of public sector subcontracting to private suppliers. Both the 1988 Griffiths Report on community care and the White Paper that followed it (HM Government, 1989) proposed a substantial expansion in the role of private sector suppliers of services for the elderly and other groups. Local authorities, the Griffiths report recommended, should be responsible for planning personal social services, and for identifying and assessing the needs of individuals. They should then be responsible for arranging the 'delivery of packages of care to individuals, building first on the available contribution of informal carers and neighbourhood support, then the provision of domiciliary and day services or, if appropriate,

residential care'. However, in this role they should act as the 'designers, organisers and purchasers of ... services, and not primarily as direct providers'.

Such arrangements would tend to require the separation of needs assessment from provision, and would thus forgo any efficiencies that arise from combining the two operations. Moreover, where needs are only partially assessed, and the contractor is then made responsible for identifying and providing 'appropriate' services to a group of individuals, severe problems of performance monitoring and control should be expected. By contrast, subcontracting would be likely to be more satisfactory where the tasks to be undertaken by the private company or agency can be specified precisely, and objective indicators of performance can be devised.

## **2. Privatisation and efficiency**

A second major issue in considering any of the three 'levels' of privatisation outlined at the start of this chapter is the extent to which privatisation would be expected to promote greater efficiency in the production of services for the elderly. Where it can, privatisation then offers the possibility that public sector objectives might be met with a lower overall public expenditure requirement.

Production efficiency may be promoted by a competitive market if the withdrawal of custom is either effective at inducing inefficient producers to become more efficient, or has the result of driving inefficient producers out of the market altogether. In the terminology of Hirschman (1970), a market-based approach to the provision of services for the elderly gives recipients the option of 'exit' (withdrawing custom from a particular provider) as well as 'voice' (demanding changes, whilst remaining with a particular provider) as means for improving the standard of service received. The wider range of possible ways of exerting pressure on service providers would normally be expected to improve the average standard of service, by increasing the pressure that service recipients can bring to bear on inefficient providers.

However, the benefits of allowing service recipients the 'exit' option may be unevenly distributed. If only some recipients are in practice able to exercise the option of exit, then those that remain as 'captives' of the inefficient provider may actually experience a deterioration in the service received. This may be particularly likely where those able to exercise the option of exit are also those who would be most effective in demanding changes through the various forms of complaint and pressure which comprise customer 'voice'.

In the case of services for the elderly there are good reasons for believing that individual capacity to exert pressure through customer 'voice' may be positively correlated with the ability to make use of exit. Elderly people differ widely in their capacity to function as effective and articulate consumers of services, reflecting differences in mental faculties and energy, and in the availability of friends and relatives able to help in making decisions and exerting pressure on service providers. Those who are least able to make independent decisions and exercise any sort of pressure for service improvement — who include many of those most in need of the assistance provided by personal social services — are most at risk of losing out, even if a more market-based approach to services for the elderly widens choice and improves service quality for the majority.

In the case of the first form of privatisation, where individuals would be encouraged to provide for their own future retirement needs through long-term investment and insurance contracts, these problems constitute a substantial obstacle, owing the very limited scope for 'exit' where an insurer underperforms. Generally, by the time an individual has cause to call on their insurance policy, it is too late to switch insurers, since too much has become known about the risks which are being insured. Typically, those requiring health care or other services early in their retirement will tend to have above-average needs thereafter, and will be unable to find an alternative insurer willing to offer insurance at the original terms. Once-only purchases of insurance such as the policies that would be necessary to cover the risks of old age are thus very different to repeated purchases of insurance, such as motor vehicles insurance, where the customer can accumulate experience about the performance of the insurer, and the insurer has an incentive to perform well, to encourage repeated purchases.

There would thus appear to be major problems in encouraging individuals to take on greater responsibility for providing for the risks of their own old age, through private investment-and-insurance contracts. It is more difficult to ensure satisfactory performance in this area than in more familiar forms of individual provision for retirement such as private pension provision.<sup>1</sup>

In the case of the most limited form of privatisation set out at the start of this chapter, based on subcontracting of the provision of public services, the achievement of efficiency requires that considerable attention would need to be given to the establishment of appropriate monitoring arrangements, for two reasons.

Firstly, the involvement of profit-oriented service providers will always give rise to the risk of deliberate underperformance where supervision is weak. There may be special difficulties in ensuring adequate performance in certain situations, for example after a decision has been taken not to renew a particular supplier's contract.

The second reason for the importance of monitoring arrangements is that, as the White Paper observes, the clients of these services include some of the most vulnerable individuals in society, who may be poorly equipped to take action to prevent service deterioration. Greater diversity in provision will increase the ability of individuals to 'exit'. At present the option of walking out on a poor quality service is available only to those able to pay for the private sector alternative, but in future the use of a range of private sector contractors by local authorities may also enable clients with sufficient energy and ability to persuade the local authority to allow them to switch to an alternative contractor. This has obvious benefits for those who exit, but may harm the interests of those who are unable to follow, by depriving them of those users who might be the most effective advocates of their interests. The way that some opportunity for exit may in general defuse customer 'voice' has been noted by Hirschman; the problem should be taken all the more seriously in the case of services for the elderly, amongst whom the physical and mental capacity to agitate for service improvement will have such wide variance.

## **Conclusions**

This chapter has highlighted some of the difficulties in making a major shift in the balance between the public and private sectors in provision for the needs of old age. Such 'privatisation' could be envisaged at three levels — encouraging the present working-age population to make private provision for the costs and risks of old age, providing current pensioners with cash or service vouchers instead of the direct provision of services in kind, and increasing the role for private sector subcontractors in the provision of public services.

The first option faces major difficulties in covering the risks, as opposed to the predictable costs, of old age. There would be considerable practical problems in adequately specifying the risks to be covered, and identifying criteria for monitoring performance. These problems are compounded by the one-off nature of the relationship between the customer and insurer, and the inability of many customers to take action if their insurer underperforms.



The second option, of providing cash or vouchers rather than services, is unlikely to be appropriate in health care, where individual needs vary widely, and much information about needs emerges as part of the process of provision. Some of the social services for the elderly would appear more promising candidates for this form of privatisation — in the form of ‘home-help vouchers’, for example.<sup>2</sup> However it should be recognised that although a more market-based approach of this sort may improve choice for some pensioners, and stimulate efficiency through competitive pressures, it also brings the risk that some of the most vulnerable elderly, who no longer have the mental capacity or energy to function as effective and discriminating consumers, could experience deteriorating standards from inefficient suppliers who had already been abandoned by all those who would have had the capacity to agitate for service improvement.

Considerable steps in the direction of privatisation of the third sort are likely to result from the 1989 White Paper on community care. In contrast to the more radical privatisation options, the public sector would be the primary ‘customer’ of the private supplier. The most important issues concern the extent to which effective monitoring arrangements can be established, so that the state can ensure adequate performance from the private contractors.

#### NOTES

1. Even in the case of private pensions, of course, some of the problems discussed here to have to be addressed — for example through tight regulation of the permitted terms of contracts, supply of information, and pension fund investment and accounting practices.
2. There are, of course, a number of difficult questions concerning the value of the vouchers, rules for eligibility, the scope for ‘topping up’ the voucher from private income, and so on, that would need to be resolved before introducing such a scheme.

## CHAPTER 8

### CONCLUSIONS

A number of significant developments are prompting a reassessment of the scale and pattern of public expenditure on incomes and services for the elderly.

Over the next 50 years the size of the elderly population will increase both in absolute terms and relative to the population as a whole. Associated with this process of population ageing is a significant increase in the 'dependency ratio' and, potentially therefore, in the support burden the elderly will place on the population of working age. There will in particular be significant growth in the elderly population aged over 75. This has very important implications for policy, given the much greater demands placed by this age group on health and personal social services.

Secondly, there has been a significant improvement in the average resource position of the elderly in recent years, one of the main sources of which has been growth in state pension entitlements. Substantial growth has also occurred over the past decade in the living standards of a large section of the population of working age, who will approach retirement with greater lifetime incomes and assets than those of earlier generations.

In this report we have tried to assess the implications of these developments for future policy towards public support for the elderly. We considered the sustainability of the current level of public provision in the light of demographic trends, and whether rising pensioner incomes are reducing the need for pensioners to rely on state provision. In particular, in Chapters 6 and 7 we have examined the effects of greater means-testing of public support for the elderly and of 'privatising' some of the services currently supplied by the state.

In fact the purely demographic pressures on UK public spending between now and the end of the century are modest and arise mainly from the consequences of the rise in the number of over-75s for spending on health and social services. The dependency ratio rises much more sharply during the first three decades of the next century. Nevertheless, the implications for the sustainability of current policies depend largely on the rate of economic growth over the next 40 years and, in the case of non-transfer expenditures, the rate of productivity growth in public sector services compared with the rest of the economy. In the case of pensions, even under very modest

assumptions about future growth, demographic pressures alone are unlikely to require increases in tax rates on earnings above those experienced during the 1980s. However, in the case of public services, since labour costs tend to rise in line with GDP, the sustainability of current service levels will depend critically on the achievement of public service productivity growth.

The extent to which trends in the level and composition of pensioner incomes will continue in the future requires assessment of the ways in which entitlement to each income component will differ between current and future pensioner cohorts. Entitlements to state pensions are likely to continue to be the dominant factor, with upward pressures as SERPS matures and as more and more women retire with pensions in their own right. Private pension growth is likely to have a smaller role, since the effects of the rapid expansion of occupational scheme coverage in the 1950s and 1960s are already being felt, while the recent expansion of personal pensions will not have significant effects for some years.

Over the last 15 years, the overall rate of growth in the incomes of the lowest and highest income quintiles has been similar. However, while during the 1970s income differences were narrowing, since 1980 this trend has reversed and a major reason for this has been the indexation of state pensions to prices instead of wages. This has perpetuated dependence on means-tested benefits among pensioners, with far-reaching consequences both for public spending and for the level and distribution of pensioner incomes. Taking into account the additional costs of these benefits reduces by 43 per cent the net cost of restoring the pension to the level implied by indexation to wages since 1980. The number of pensioners dependent on income support would have been reduced by indexation to wages by almost 80 per cent.

These trends in both the level and the distribution of income among pensioners are central to the question of whether a re-targeting of benefits, away from universal pensions and towards a greater reliance on means-testing would improve the overall effectiveness of benefit targeting. While the state pension remains well-targeted towards poverty on average, with only an estimated 24 per cent of expenditure raising incomes above means-tested benefit levels, it is less so at the margin. Nevertheless, even at the margin only 45 per cent of savings from pensions would be available for extending income-related benefits and there would be significant administrative and welfare costs to the consequent increased dependence on means-testing.

The scope for a major shift in the balance from public to private provision for the needs of the elderly is also limited in several respects. 'Privatisation', in the form of encouraging the present working population to make their own private provision, would be inappropriate for covering the risks, as opposed to the predictable costs of old age. Provision of vouchers is more feasible in areas where needs do not vary widely — home-helps, for instance, rather than health care — though it may still be problematic for the most vulnerable. Privatisation in the form of subcontracting of service provision is likely to continue to increase in extent; its effectiveness will depend on the attention paid to arrangements for monitoring performance.

## APPENDIX

The projections of state pensions costs and levels in this report are based on models of the basic state pension (BSP) and state earnings-related pension (SERPS). These models take as a starting point an earlier IFS model of the state pensions scheme (described in Hammond and Morris, 1985).

The models share a common basic structure. This consists of a central demographic scenario, a variable policy scenario and a partially variable macroeconomic scenario. On the basis of the selected scenario the cost of the relevant welfare programme is then estimated for the years 1980 – 2030 (years prior to 1990 are included to test how well the models' simulated expenditures compare with actual expenditures). 'Cost' is estimated in terms of: total real expenditures (in 1988 prices), notional tax rates (assuming a fully employed working-age population), and actual tax rates (assuming less than full participation and some positive trend of unemployment amongst the working-age population).

Each model consists of a single, but complex, repeated operation (or 'loop'). Starting with some base-year population figures<sup>1</sup> each time we move through this loop (i.e. each 'year') the population figures are adjusted for mortality, the relevant mortality rates (sex and age specific) themselves being 'annually' adjusted by mortality rate improvement factors. The resulting population simulation constitutes the central, non-variable, demographic scenario. Each 'year' the resulting population figures (over the relevant age-ranges) are then combined with estimated entitlements which vary according to the selected policy scenario (but which also vary systematically according to sex, age and the birth year of the relevant cohort) to give a figure for total real expenditure for the welfare program in question. The notional and actual tax rates implied by the estimated level of real expenditure are then calculated by deflating this figure by the estimated total wage bill. This is estimated by combining the simulated population figures for the working-age population with sex specific cross-sectional age-earnings profiles.<sup>2</sup> The estimated total wage bill will also be affected by the macroeconomic scenario which is selected, in particular by the selected real wage growth scenario. In estimating the actual tax rate the wage bill is also influenced by the selected unemployment scenario and by the central, non-variable, participation scenario.<sup>3</sup> (The overall macroeconomic scenario is a combination of particular real wage growth and unemployment scenarios with the central participation scenario).

In the case of the BSP model the following elements in the policy regime can be varied:

*indexation arrangements* — the BSP can be indexed either to prices or wages and the choice between them can be separated between the 1980–89 and 1990–2030 sub-periods.

*minimum pension ages* — it is possible to vary these for both men and women and to do so for each of them separately.

*age addition* — it is possible to alter both the size of the age addition and the age at which it is paid out.

*citizen's pension* — it is possible to simulate the replacement of the current NI system with a guaranteed minimum income (of some specifically size) for all those at/above minimum pension age.

In the SERPS model the following elements are variable:

*indexation arrangements* — the NI floor/ceiling indexable to prices or wages with, again, the ability to make a separate choice between the two for the 1980–89 and 1990–2030 sub-periods.

*minimum pension ages* - variable as in the BSP model.

*The pension fraction B20Y vs. ALTE* — a choice between the use of 'best twenty years' or 'average life-time earnings' in the estimation of a given cohort's pensionable earnings.

*Inheritance rules* — making the proportion of a deceased spouse's earnings - related pension inherited by his/her partner variable.

*The proportion of the labour force contracted in and contracted out on retirement* — differentiated by sex, occupation and retirement cohort.

#### NOTES

1. All raw demographic data (initial population figures, initial mortality rates and annual mortality rate improvement factors) used as input in the models was derived from published OPCS estimates and projections. The initial population figures include not only estimates of the 1979 population but also estimates/projections of those born subsequently.
2. Derived from a tabulation of FES data.

3. a) real wage growth scenario — pre-1989 actual price and wage movements used, post-1988 by assumption; pre-1989 figures from 'Economic Trends';  
b) unemployment scenario — ditto; pre-1989 figures from 'Employment Gazette' (DOE);  
c) participation scenario — constructed from a variety of sources (Women and Employment Survey, FES, published DOE estimates/projections in 'Employment Gazette').

## REFERENCES

- Abrams, M. (1984), 'Changes in the life-styles of the elderly, 1959-82', *Social Trends*, pp. 11-16.
- Arrow, K.J. (1963), 'Uncertainty and the welfare economics of medical care' *American Economic Review*, vol. 53, pp. 941-73.
- Blackorby, C. and D. Donaldson (1988), 'Cash versus kind, self-selection, and efficient transfers', *American Economic Review*, vol. 78 no. 4, pp. 691-700.
- Blundell, R., V. Fry, and I. Walker, (1988), 'Modelling the take-up of means-tested benefits: the case of housing benefits in the United Kingdom', *Economic Journal*, vol. 98, Supplement, pp. 58-74.
- Bös, D. and R. K. von Weizsäcker (1988), 'Economic consequences of an aging population', *European Economic Review*, vol. 33, pp. 345-354.
- Browning, M. J. (1982), 'Pensions and saving: Some UK evidence', *The Economic Journal*, vol. 92.
- Clark, R. L. and J. J. Spengler (1980), *The Economics of Individual and Population Ageing*, Cambridge: Cambridge University Press.
- Creedy, J. (1982), 'State pensions in Britain', National Institute of Economic and Social Research, Occasional Paper XXXIII, Cambridge: Cambridge University Press.
- Creedy, J. and R. Disney (1988), 'The new pension scheme in Britain', *Fiscal Studies*, vol. 9, no. 2, pp. 57-71.
- Davis, E., A. W. Dilnot, E. M. Hammond, J. A. Kay and C. N. Morris (1985), *1985 Benefit Reviews: the Effects of the Proposals*, IFS Report Series no. 17, London: The Institute for Fiscal Studies.
- Dawson, A. and G. Evans (1987), 'Pensioners' incomes and expenditure 1970-85', *Employment Gazette*, vol. 95, no. 5, pp. 243-252.
- De Cooman, E., J. Ermisch and H. Joshi (1987), 'The next birth and the labour market: a dynamic model of births in England and Wales', *Population Studies*, vol. 41, pp. 237-268.
- Department of Employment (1988), 'New entrants to the labour market in the 1990s', *Employment Gazette*, vol. 96, no. 5, pp. 267-274.



Department of Health and Social Security (1986), *Hospital In-patient Enquiry 1984, Summary Tables*, OPCS Series MB4, no. 24, London: HMSO.

Dilnot, A., J. Kay, and N. Morris, (1984), *The Reform of Social Security*, Oxford: Clarendon.

Dilnot, Andrew, and S. Webb, (1988), 'National Insurance contributions', *Fiscal Studies*, vol. 9 no. 4, pp.1-24.

Dilnot, A, and R. Disney (1989), 'Pensions schemes after the 1989 Budget', *Fiscal Studies*, vol. 10, no. 3, pp. 34-49.

Ermisch, J. (1981), 'Paying the piper: demographic changes and pension contributions', *Policy Studies*, 1.

Evandrou, M. and D. Winter (1988), 'The distribution of domiciliary and primary health care in Britain: preliminary results on modelling resource allocation in the welfare state', STICERD Welfare State Programme Discussion Paper WSP/26, London: London School of Economics.

Falkingham, J. and P. Johnson (1988), 'Intergenerational transfers and public expenditure on the elderly in modern Britain', CEPR Discussion Paper 254, London: Centre for Economic Policy Research.

Feldstein, M. S. (1974), 'Social security, induced retirement and aggregate capital accumulation', *Journal of Political Economy*, vol. 82.

Fiegehen, G. C., (1986) 'Income after retirement', *Social Trends*, pp. 13-18.

Fry, V. C., E. M. Hammond, and J. A. Kay, (1985), *Taxing Pensions*, IFS Report Series no. 14, London: Institute for Fiscal Studies.

Fry, V. C. and P. Pashardes (1986), *The RPI and the Cost of Living*, IFS Report Series no. 22, London: Institute for Fiscal Studies.

Fry, V. C. and G. Stark (1987), "The take-up of supplementary benefit: gaps in the 'safety net' ", *Fiscal Studies*, vol. 8, no. 4, pp. 1-14.

Government Actuary (1986), *Occupational Pensions Schemes, 1983*, Seventh Survey, London: HMSO.

Green, G. F. (1981), 'The effect of occupational pensions schemes on saving in the United Kingdom: a test of the life-cycle hypothesis', *The Economic Journal*. vol. 91.

Hammond, E. M. and C. N. Morris (1985), 'A simulation model of the State Earnings Related Pensions Scheme', IFS Working Paper 66.

Hemming, R. (1984) *Poverty and Incentives: The Economics of Social Security*, Oxford: Oxford University Press.

Hemming, R. and J. A. Kay (1982), 'The costs of the State Earnings Related Pensions Scheme', *The Economic Journal*, vol. 92.

Hemming, R. and R. Harvey (1983), 'Occupational pension scheme membership and retirement saving' *The Economic Journal*, vol. 93.

Hills, J. (1984), *Savings and Fiscal Privilege*, IFS Report Series no. 9, London: Institute for Fiscal Studies.

Hirschman, A. O. (1970), *Exit, Voice and Loyalty*, Cambridge, Mass.: Harvard University Press.

HM Government (1989), *Caring for People: Community Care in the Next Decade and Beyond*, (White Paper), Cm 849, London: HMSO.

HM Treasury (1989), *The Government's Expenditure Plans, 1989-90 to 1991-92, Chapter 14*, Cm 614, London: HMSO.

HM Treasury (1990), *The Government's Expenditure Plans, 1990-91 to 1992-93, Chapter 14*, Cm 1014, London: HMSO.

Joshi, Heather, and Susan Owen (1983), 'How many pensionable years? The lifetime earning history of men and women', Economic Advisers' Office, Department of Health and Social Security, Government Economic Service Working Paper no. 65.

Kanbur, R., (1987), 'Transfers, Targeting and Poverty', *Economic Policy*.

OECD (1988a), *Ageing Populations: The Social Policy Implications*, Paris: Organisation for Economic Co-operation and Development.

OECD (1988b), *Reforming Public Pensions*, Social Policy Studies, no 5. Paris: Organisation for Economic Co-operation and Development.

Parker, S. (1980), *Older Workers and Retirement*, London: HMSO.

Parker, G. (1985), 'With due care and attention: a review of research on informal care', Family Policy Studies Centre, Occasional Paper no. 2, London.

Pearson, M. S. Smith and S. White (1989), 'Demographic influences on public spending', *Fiscal Studies*, vol. 10, no. 2.

Stark, G., (1990), 'Take-up simulation in the IFS Tax Benefit Model', mimeo, London: IFS.

Townsend, P. (1979), *Poverty in the United Kingdom*, Harmondsworth: Penguin Books.

Venti, S. F. and D. A. Wise (1987), 'IRAs and saving' in M. S. Feldstein (ed.), *Taxes and Capital Formation*, Chicago: Chicago University Press.

Weitzman, M. L. (1977), 'Is the price system or rationing more effective at getting a commodity to those who need it most?' *Bell Journal of Economics*, Autumn, pp. 517-524.

Whitehouse, E. (1990), 'The abolition of the earnings rule', University of Kent Discussion Paper, forthcoming.

Zabalza, A., C. Pissarides and M. Barton (1980), 'Social Security and the choice between full-time work, part-time work and retirement', *Journal of Public Economics*, vol. 14, pp. 245-276.