Living with the State: The Incomes and Work Incentives of Tenants in the Social Rented Sector

Christopher Giles
Paul Johnson
Julian McCrae
Jayne Taylor

The Institute for Fiscal Studies
7 Ridgmount Street
London WC1E 7AE

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7 Ridgmount Street
London WC1E 7AE
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email: mailbox@ifs.org.uk
internet: http://www1.ifs.org.uk

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Preface

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Christopher Giles is a Senior Research Officer at IFS.

Paul Johnson is a Programme Director at IFS.

Julian McCrae is a Research Officer at IFS.

Jayne Taylor is a Research Officer at IFS.

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CHAPTER 1
Introduction

Health, education and social security are often considered to be the three main pillars of the welfare state in the UK. Much discussion of the welfare state centres around these three issues. The changes to the financial arrangements for the National Health Service, problems in funding education and attempts to rein in social security spending have all been at the top of the political and public agendas in the 1980s and 1990s. But for the better part of a century, subsidised housing has played its own separate and central role; and arguably it is in the financing and provision of social housing, and in particular in the numbers and sorts of people dependent on it, that the biggest revolution has occurred over the past 20 years or so.

While the other parts of the welfare state have grown in real terms, even through 17 years of a Conservative government determined to peg back expenditure, the social housing sector has shrunk. Over a third of families lived in council accommodation in the late 1970s. Fewer than a quarter live in council or Housing Association homes in the mid-1990s. The reduction in new building of houses in these sectors is even more dramatic. In 1970, 177,000 homes were completed for local housing authorities. This fell to just 3,000 in 1993. The increase in construction by Housing Associations from 11,000 to 34,000 mitigated only a small portion of this fall in building. Put this together with the effects of the government's 'right-to-buy' programme and the result has been a drop in the number of local authority dwellings from 6.5 million in 1981 to 4.7 million in 1993.

Given a desire to roll back the frontiers of the welfare state, this appears to be a rare success story. But the story is far more complex than a straightforward withdrawal of

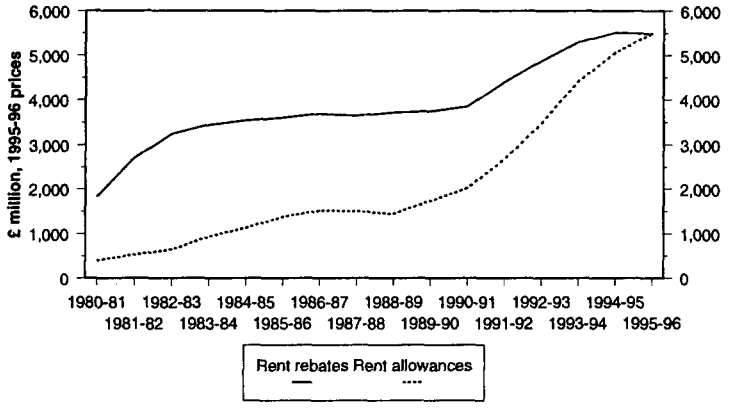
government provisions. The nature of the social rental sector has changed fundamentally since the end of the 1970s. 'Right-to-buy' policies have seen better-off social renters leave the sector altogether and a limit on the numbers of properties available to new tenants which has meant only the most needy have been able to enter the sector. Being a council or Housing Association tenant is now one of the best available indicators of being poor: tenants in the social sector are overwhelmingly to be found at the bottom of the income distribution in a way that just was not the case prior to the 1980s. Chapter 2 charts this relative position of the 'social renter' in some detail.

The drop in the number of council tenants and the low incomes of those remaining have been accompanied by a large cut in direct government subsidy to the sector in the form of subsidised rents. Indeed, from 1994–95, the council sector as a whole has actually been in surplus in the sense that basic cash housing subsidies designed to keep rents below market levels at 'guideline' levels are negative in total. The position of overall surplus has been reached as a result of two separate factors. The first is just that, with little new building since the late 1970s, historic debts are falling, and so interest costs are gradually falling. The second is that 'guideline' rents have been raised quite substantially.

If what has been said so far paints a picture of a government genuinely withdrawing from subsidising housing, though, it is because we have only revealed part of the picture. While public sector building programmes have been all but ended, and rent subsidies have even become negative, the combination of the consequent rise in rents and the increasingly low incomes experienced by tenants has resulted in a burgeoning of housing benefit payments. Indeed, now that public spending has been siphoned in this direction, ministers and pundits have begun to concentrate on housing benefit spending as a matter of urgent concern.

FIGURE 1.1

Real growth in housing benefit expenditure



Note: 1994–95 figures are estimated out-turns. 1995–96 figures are plans.
Sources: Department of Social Security, 1993; Wilcox, 1995.

The reasons for this concern are evident from Figure 1.1, which shows real spending on rent rebates (for council tenants) and rent allowances (for private and Housing Association tenants) each year since 1980. The increases, especially since 1988, have been very substantial indeed. Spending on rent rebates alone is set to exceed £5½ billion in 1996–97. Unlike almost any other social security benefit where expenditure has risen substantially, this does *not* reflect an increase in the numbers entitled. Since 1988, there have been very close to three million rent rebate recipients in each year. Rather, the increase is entirely down to an increase in the amount of rebate paid to each recipient. This is, in turn, a direct consequence of the rising rent levels in the council sector — rising rents which themselves result from reductions in the housing element of central government subsidy to local authorities.

This effective move from a blanket 'bricks-and-mortar' subsidy to means-tested housing benefit explains the concerns of Chapter 3, which looks at the consequences for the work incentives of council and Housing Association tenants of the combination of low incomes,

(relatively) high rents and housing benefit. Many authors (notably Wilcox (1995)) have drawn attention to the potential work incentive problems created by this combination of factors. We try to take the story some distance further on by looking at the replacement rates and average tax rates faced by a sample of the actual population of social renters and by looking at the overall impact of a variety of possible policy responses.

1.1 The Policy Context

This is a study of a group we refer to as 'social renters', i.e. council and Housing Association tenants. We concentrate on two important features of this group — their incomes and the impact of the housing benefit system on them — which are of importance and interest from the policy point of view. But for an understanding both of the results presented and of their policy consequences, some more general appreciation of housing policy over the past couple of decades is required.

The UK has historically been rather unlike many other European countries in the way its housing policy has been run and in the mix of tenures occupied by its citizens. Most well known is the relatively high preponderance of owner-occupiers in the UK. But in the subsidised sector, the role of local government is unusual. Local authorities have had the powers to provide and manage housing since 1890, though it was not until after the First World War that large-scale building programmes got off the ground. In 1930, the 'Greenwood Act' introduced an obligation to charge 'reasonable' rents and empowered local authorities to grant rent rebates to those in need. By 1939, there were one million council homes — 10 per cent of the total stock.

The Housing Act of 1949 removed the obligation to provide housing for the 'working classes' alone such that 'balanced communities' of council tenants could be created. Large building programmes continued into the

1970s, by the end of which decade around a third of households were in the local authority sector. The 1980s, in which policies were specifically designed to reduce the role of councils and to reduce direct subsidies to council rents, saw a sharp reversal of the policies followed throughout the first 30 years after the Second World War, and it is really with two of the consequences of these sharp reversals of policy that this report is concerned — namely, the changed composition of social tenants and the impact of higher rents on their work incentives.

One consequence of the reduced role of local authorities has been an increased role for Housing Associations (HAs), which are now the main providers of new social housing. Various sorts of HA — essentially non-profit-making charitable organisations founded with the purpose of providing cheap rented housing — have been in existence for centuries. But the landmark change in their status only occurred with the Housing Act of 1988, which effectively changed their role from complementing the work of local authorities (LAs) to becoming the main providers of new social housing. From the point of view of the analyses that follow, the shift from LA to HA responsibility has been important only indirectly as a result of the higher rents charged by HAs, themselves a reflection of the increasing role of private sector loans in financing HA building.

Much more important from our point of view has been the movement out of housing provision by local authorities because of right-to-buy (RTB) policies. More than 1.6 million properties have been bought under RTB policies. Take-up of the option was especially high in the early years of the policy, with 200,000 properties being sold in 1982 alone. This rate has inevitably dropped off, reaching 60,000–70,000 per year in 1992, 1993 and 1994. As we discuss in the next chapter, one of the main effects of this policy has been to remove better-off individuals from the council sector. This confirms results from previous studies

(e.g. Kerr, 1988) that those taking advantage of RTB schemes tended to be middle-aged and better off than other tenants. Kerr found that their incomes were around double those of other tenants — though still less than those of other purchasers in the private sector. We provide further details of the difference between this group of leavers and the stayers in Chapter 2.

A further point to bear in mind, though, is that those properties most likely to be bought through RTB schemes, and therefore lost to the social sector, were houses in suburban and rural areas and in areas of mixed tenure. This will have exacerbated the effects of the trends in incomes that we record — not only have tenants become more universally poor as a group, but they have become more locally concentrated. This is a particular reason for being concerned about the concentration of low-income individuals in social housing.

The other important trend that has been clear over the past 20 years has been the change in the types of people moving into social housing. As less has become available, so only those in the most serious need have been allowed through the net. In many cases, this has meant that most of those allocated housing have been classified as 'statutorily homeless'. Again, using the Survey of English Housing, we have looked at the incomes and characteristics of these newer social tenants and compared them with the longer-serving groups.

The most detailed statistics about new tenants actually refer to new Housing Association tenants and are based on information collected by the HAs themselves (National Federation of Housing Associations, 1995). They show, for example, that among the 123,000 lettings made in 1994–95, only a fifth were to families in which the household head was in full-time work. Nearly a quarter of all the new lettings were to lone parents. More than 80 per cent of new tenants were entitled to housing benefit. These very low levels of income and low economic activity rates

were accompanied by very low savings levels. The statistics indicate that nearly nine in ten of the new tenants had no savings at all. Almost none of the non-pensioners had £3,000 in savings.

The fact that, in many areas, it has become difficult for people other than those defined as 'statutorily homeless' to gain access to the social sector has itself been an important driving force behind the government's proposals, set out in the 1995 White Paper on housing (Department of the Environment, 1995a), to change the allocation priorities for social housing. Nationally, around 40 per cent of new local authority tenancies are allocated to families defined as 'statutorily homeless' under the legislation, though this proportion varies by region and is much higher in some areas, particularly in London. The case for changing this system of allocation is essentially that there is a rigid differentiation such that permanent social accommodation is offered to a certain group of people, on the basis of just temporary characteristics, in preference to others. It is intended that the duty of councils becomes one of securing temporary accommodation (for a period of 12 months) for unintentionally homeless families and vulnerable individuals. Nevertheless, it is proposed that local authorities maintain control over allocation priorities. It is unlikely that the social mix of new tenants will change dramatically as the result of new legislation. Only the poor are likely to make it through the hoop into social housing.

A final raft of policies that are of relevance to this study relate to the definition and ownership of 'social housing'. For the past half a century, this has been a relatively simple issue. Local authorities and Housing Associations have provided social housing and we can readily define the group that is of interest as those people renting in these two sectors. One major change that has already taken place has been that of Large-Scale Voluntary Transfers (LSVTs) from councils to HAs. This has involved HAs taking over the ownership and management of large

blocks of local authority housing — 185,000 homes had been transferred in this way by summer 1995. To a large extent, these transfers have been driven by public spending rules that have not allowed LAs to make desired improvements to their stock but which HAs, being in the private sector, have been able to undertake by raising finance on the basis of the value of the stock (see Wilcox (1994)).

These transfers offer no problems from the analytical point of view, since HAs are clearly within what we have defined as the social sector. The future might well see this distinction become much less clear as other organisations are brought into the ownership and running of council estates — the government is clearly interested in this possibility. Furthermore, it is proposed that profit-making organisations are also allowed to bid for funds from government to provide housing to rent at below market rent levels. Movement in this direction might make quite such a clear distinction as the one we are drawing between 'social renters' and others harder to maintain at some point in the future.

1.2 The Economic Framework

To be able to assess the evidence regarding the position of social tenants, we need some framework within which to operate. Why does the public sector intervene in the provision and financing of housing? What different sorts of intervention might be appropriate? What effects might different sorts of intervention have?

Let us consider that first question — 'why does the state intervene in the provision of housing, why is housing not left to the market in the same way as the provision of clothes or food?'. The usual sorts of answers to this sort of point involve a discussion of failures in the market and the existence of some sort of distortions preventing an efficient outcome and allocation. In the housing market as

a whole, such inefficiencies can be identified. In particular, the negative externalities created by unregulated building of new homes might lead to degradation of a rural environment valued by the population — a classic externality problem. As a result, planning regulations have acted to reduce or direct the supply of housing relative to what the market might have provided. This might result in a lower supply and higher price of housing than would have been thrown up by the free market.

Much more important, though, are likely to be equity considerations, or considerations of what are thought to be minimum adequate standards. In the nineteenth century, and even in the middle years of the twentieth century, most people had housing, but much of it was not of a standard we would now consider acceptable. If people only have incomes adequate to procure housing for themselves that society considers unacceptable, then the state will have to intervene. That, in essence, is what explains the provision of subsidised housing for those on low incomes. It is based on a moral argument rather than an economic one. It is a position founded in notions of equity and minimum acceptable standards, not necessarily dependent on a belief that the free market is failing from an efficiency perspective. Indeed, one could reasonably argue from an efficiency standpoint that public intervention has generally served to dampen market signals and reduce allocative efficiency. Such effects are almost inevitable where rents in a particular sector are kept below 'market' levels, where private rents are controlled or where housing benefits are paid.

That we accept that some form of government intervention is required to ensure that all have adequate housing is not enough to tell us how that intervention should be directed. There have been three main prongs to government policy in the past. One of these — the regulation of rents in the private sector — has been largely rejected on economic grounds. Keeping rents down and giving ten-

ants significant legal rights of continuing occupation contributed to reducing the supply of private rented housing. The evident problems of this approach have meant that using this as a significant tool in ensuring an adequate level of provision for the poor seems no longer to be on the economic or political agenda.

The other two main tools that government has, and has used, are the direct provision of housing at below market rents and the provision of cash benefits to individuals. These two broad methods are used extensively in the UK and elsewhere, and to a large extent it is with the choice between these methods that much of the analysis in this report is concerned. But, of course, there are a number of ways in which the provision of below-market-rent housing and of cash benefits can be designed and organised. The former can be provided directly by the public sector, as occurs with local authority housing, or through giving subsidies to organisations such as Housing Associations. For most of what follows, we make no distinction between these two routes and we make no comment on the relative appropriateness of the two methods of provision.

More germane to our concerns are the differences between various methods of paying cash benefits — whether or not related to actual housing costs, how related to income levels and so on. Nevertheless, the essential characteristic of such benefits is that they are related to income or economic status and depend on the characteristics of the individual, while the direct rent subsidy depends on the tenure status of the house.

Clearly, the two systems have the potential for causing different responses from individuals. Subsidising rents in one sector and not in another will give individuals an incentive to enter the subsidised sector if possible. It will also lead to inequities between sectors. Where access to the subsidised sector is rationed, there will be some people within the sector with precisely the characteristics of others outside the sector but enjoying the benefit of lower

rents not enjoyed by their privately-renting counterparts. Where the subsidised sector is rationed, and where mobility within it is difficult, the cordoning off of part of the housing stock like this can also lead to strains and inflexibilities in the labour market. In the specific case in the UK where tenancy in a protected sector is guaranteed for life, the value of staying in the sector is high. This value is increased by the availability of generous terms for the later purchase of the property inhabited. Providing blanket rent subsidies to individuals in a particular sector can also be wasteful if a large proportion of those in the sector have high enough incomes to be able to pay market rents in any case.

These are the sorts of arguments that have been marshalled in favour of the move away from rent subsidies to personal benefits. But benefits themselves have a number of potential drawbacks. They can be neutral between tenures and treat low-income people the same whatever their tenure. They can be fully portable between tenures and between geographical locations. They can be targeted on those who most need them: subsidy will not be 'wasted' on those who do not need it. But, because they have to be withdrawn when incomes rise, they can lead to work disincentives. If the benefit is withdrawn pound for pound as other income is earned, then, relative to blanket subsidies, a means-tested personal benefit will reduce financial returns to work. Where high rents are combined with low earnings (and low potential earnings), this disincentive effect is potentially serious. Ways of measuring the financial returns from work that result from these policies are considered in Chapter 3, while their actual importance, which can be determined only by empirical investigation, is considered in Chapter 4.

In the final substantive chapter, a series of reforms are considered. For there are many ways in which benefits can be paid — with different eligibility criteria, rates of withdrawal and so on. The choice between a rent subsidy and

a personal benefit might depend as much on the structure of the personal benefit as on any intrinsic difference between the two forms of payment. This is made very clear in the analysis that we carry out.

CHAPTER 2
The Incomes and Characteristics of Social Renters, 1961–93

2.1 Introduction

Any analysis of policies appropriate to the financial support of council and Housing Association tenants must start with a clear description of the incomes and other characteristics of the current social renting population. Equally, such an analysis is necessary to understand the impact of previous policies on the social sector. Here, therefore, we describe the incomes and circumstances of social renters, based on information from the Family Expenditure Survey (FES) between 1961 and 1993.

We start our descriptive analysis by looking at the demographic and economic characteristics of social tenants over that period. These are themselves, of course, important determinants of the incomes enjoyed by this group. Included as part of this chapter are some statistical analyses that are used to show how certain characteristics have become increasingly correlated with living in social rented housing, most notably lone parenthood and being out of work. Only then do we go on to look at the incomes of this group and set them in the context of the incomes of the population as a whole.

First, however, we provide a description of the data that we have used in our analysis. This is then followed by some background information about changing tenure patterns in the UK and how housing costs in the different housing tenures have changed over the past three decades. Given the small sample size of the Housing Association sector and the fact that, on the whole, tenants in Housing Association accommodation display broadly the same characteristics as council tenants, separate results for

Housing Association and local authority renters are not generally reported.

2.1.1 Data description

The analyses carried out in this research are largely based on data from the Family Expenditure Survey (FES). The FES is an annual survey of around 7,000 different households each year, drawn from the UK population. The data contain detailed income information as well as information about demographic and employment circumstances. We have a long time series of FES data going back to the beginning of the 1960s, analysis of which enables a description of social tenants from a period of growing numbers in the 1960s and 1970s, through to the 1980s when the number of tenants in this sector started to decline. Equally, the period under consideration covers a long period of low and relatively stable rents followed by two periods of rapidly-rising rents. Housing benefit itself was only introduced on a national scale in 1972, some way through the time period under examination, and it was fundamentally reformed at least twice, in 1983 and 1988.

One minor problem with the data is that whilst we define social renters to be those households living in local authority (LA) or Housing Association (HA) accommodation, prior to 1980 the FES contained no separate tenure category for HA accommodation: tenants in HA housing were classified as 'private unfurnished' tenants. Given the very small number of such tenants prior to the 1980s, this is unlikely to be a serious problem.

Details of the precise income measures used are set out in Section 2.3.1, but it is worth noting here that, as far as possible and appropriate, we have used income measures that are equivalent to those used in official low income statistics (Department of Social Security, 1995), and are the same as those used by Goodman and Webb (1994) in their work on the income distribution over the 1960s,

1970s and 1980s. The data are thus consistent across time, adjusted to account for the variability in the representation of the very rich in household surveys and 'grossed up' so that they accurately reflect the demographic composition of the population as a whole.

Many of the FES results are supplemented by results from the Survey of English Housing (SEH), carried out in 1993–94. This dataset enables us to analyse the income positions of those who have moved into and of those who have moved out of the social sector — obviously an important issue, given that a good deal of the change in the composition of this sector has reflected the effects of the 'right-to-buy' (RTB) policies of the 1980s. In this respect, it is important to be aware of the turnover of council tenants. Wilcox (1995, Table 91, p. 174) reports the number of lettings to new tenants by local authorities in England to be 255,000 in 1982–83, falling more or less continuously to 234,000 in 1993–94. Over this same period, the total stock of council dwellings fell from just under 5 million to around 3.5 million.

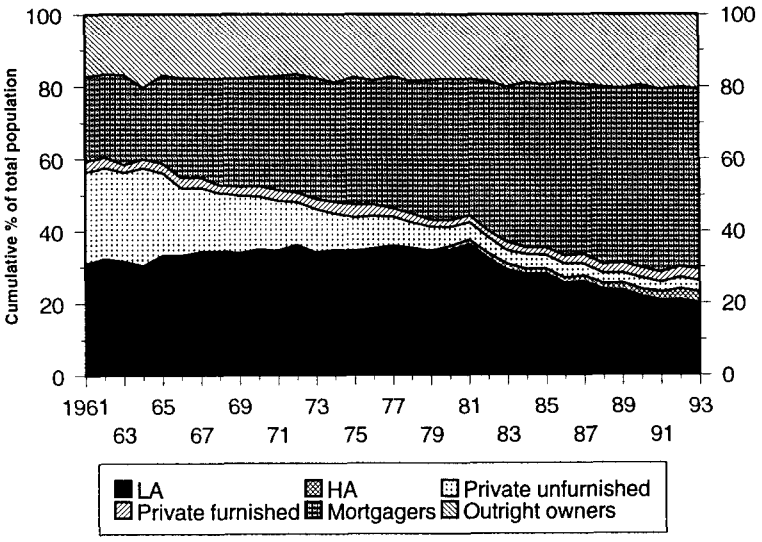
2.1.2 Changes in housing tenure and housing costs over time

To put our research into perspective, this section describes how the distribution of all families in the UK across the different housing tenures has changed over time, and how the housing costs of social tenants compare with those of other tenures.

Figure 2.1 illustrates how the tenure distribution of all UK families has changed over the period 1961–93. Note that this is not quite the same as the distribution of households by tenure — a household can contain more than one family unit. We choose the family unit as the basis of comparison because it is with *its* income and other family circumstances that we will be concerned.

FIGURE 2.1

Tenure breakdown



Source: Family Expenditure Survey, various years.

It is clear from Figure 2.1 that, since the early 1960s, the proportion of families living in social rented accommodation has fallen from almost one-third to just under one-quarter of the total. Council tenants still account for the great majority of this group, despite the fact that the HA sector has been growing quite rapidly in recent years. The proportion living in council housing increased slowly right through the 1960s and 1970s, reaching a maximum of 36 per cent of the total.

Figure 2.1 also highlights the expansion of owner-occupation, particularly during the early 1980s. The percentage of family units living in mortgaged households increased from 22 per cent in 1961 to around 35 per cent in the late 1970s and one-half of the total by 1993. The proportion of outright owners has remained broadly constant over the period, though will presumably start to grow as the increased number of mortgagers feeds through into the number of outright owners. The private furnished

rented sector has also remained largely constant in size (at around 2 to 3 per cent), whilst private *unfurnished* accommodation became much less significant, particularly over the 1960s and 1970s, with only about 3 per cent of the population now living in this tenure compared with 25 per cent in 1961.[1]

The FES also provides information on housing costs, which we can use for comparison across tenures and / or over time. Housing costs include rents, mortgage payments, water rates and various other miscellaneous housing expenditures, and are expressed throughout in January 1996 prices. Since 1989, rents in both the LA and HA tenures have increased significantly, largely as a result of changes in government policy in relation to the financing and provision of social rented housing. Central government subsidies to local authorities are now linked to 'guideline' rent increases and assessed management and maintenance needs. Guideline rents have been increased in real terms year on year, but at the local level rents have often risen well above the increases built into the subsidy calculation.[2] For example, in 1989–90, actual and guideline rents were broadly similar, but by 1992–93, actual rents stood 12 per cent higher than guidelines, on average (Malpass et al., 1993, Table 2, p. 34). In addition, the total Housing Association grant (HAG) allocated by central

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[1] According to Department of the Environment (1995b), the private rented sector accounted for 10 per cent of all housing stock in England in 1994. Our figures suggest that the proportion of households in the UK that are living in private rented accommodation is only just over 6 per cent. This discrepancy could be partly due to the different samples used (the *housing stock* in *England* versus *households* in the *UK*), but is most probably the result of undersampling of private renting households in the FES, particularly those living in bedsits and also multiple-tax-unit households.

[2] See, for example, Malpass, Warburton, Bramley and Smart (1993) for a fuller discussion of the implications of the 1989 reforms.

TABLE 2.1

Median housing costs[a] by tenure and age, 1993

All-tenures average = 100

Tenure	Age band					
	16–34	*35–49*	*50–59/64*	*60/65–74*	*75 plus*	*All*
LA tenants	105	105	101	97	97	103
HA tenants	119	111	114	107	106	111
Private unfurnished tenants	187	185	108	103	99	154
Private furnished tenants	260	227	181	124	65	247
Mortgagers	146	138	80	50	49	130
Outright owners	18	18	19	19	18	19
All	125	121	57	27	27	100

[a]Housing costs are at household level.

Source: Family Expenditure Survey, 1993.

government has been cut significantly over this same period, from over 80 per cent to less than 60 per cent of a project's development costs. This has required HAs to look to private funding sources and to raise rents in order to meet the shortfall.

Table 2.1 presents housing costs in 1993 for each tenure broken down into five age bands and indexed to the all-tenures average. We have provided an age breakdown in order to control for life-cycle effects, such as the falling real value of mortgage payments with age. No adjustment has been made to account for changes in household size or housing quality over the period.

It is evident that median housing costs are highest for young private furnished renters and, not surprisingly, are lowest for outright owners. (The rather high average housing costs for all private furnished tenants is driven by the fact that more than three-quarters of this tenure is made up of people aged 16 to 34, for whom housing costs are the highest.) For all tenures, except outright owners, housing costs fall with age. In almost every age-group, social

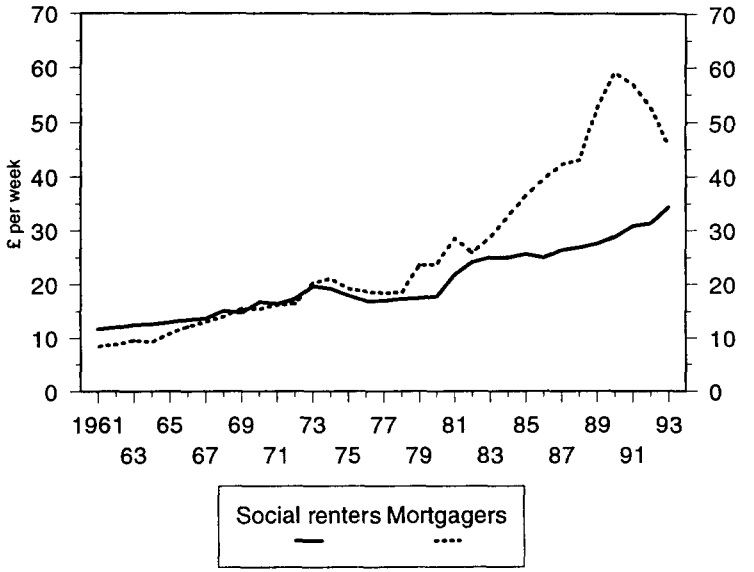
sector tenants have lower housing costs than other renters, the exception being the very old (75 plus) age-group, where private furnished tenants have much lower rents. However, housing costs for the oldest social renting households are much higher than for mortgagers and outright owners, whilst their incomes are much lower, on average (see Section 2.3).

The inequity that appears to exist between tenants and mortgagers in relation to housing costs is exacerbated by the fact that buying a home accrues additional benefits in terms of capital gains as house prices rise.

Figures 2.2 and 2.3 describe trends in median housing costs (in January 1996 prices) for social renters and other tenants since 1961. Again, the figures are unadjusted for household size. Although LA / HA rents increased quite sharply in the very early 1980s, this is probably mostly

FIGURE 2.2

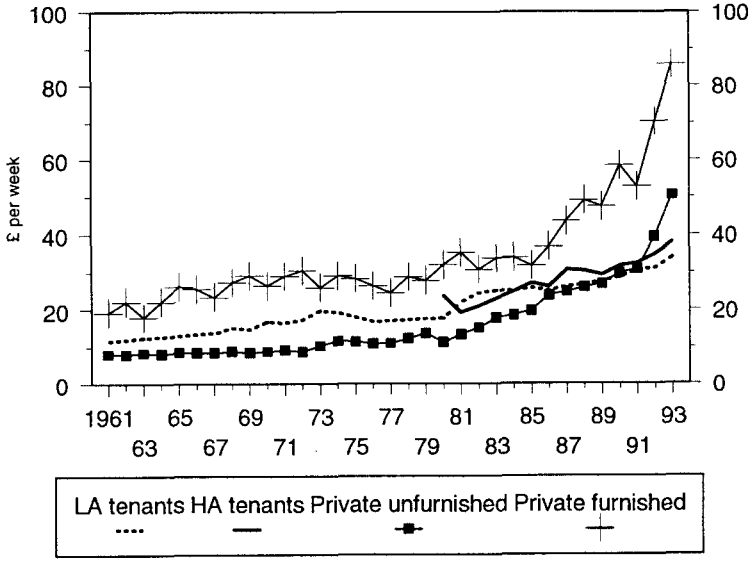
Trends in real median housing costs: social renters and mortgagers (January 1996 prices)



Source: Family Expenditure Survey, various years.

FIGURE 2.3

Trends in real median rent levels by tenure (January 1996 prices)



Source: Family Expenditure Survey, various years.

due to a 'catch-up' period after the low rent regime of the mid- to late 1970s,[3] so that rents in the social sector have been on a more or less steady upward path over the entire period.

Social rented accommodation has become increasingly costly to its tenants, since 1979 in particular; in 1993, HA median rents had reached £38 per week and LA weekly rents were £34 on average. However, these increases are dwarfed by the dramatic rise in house prices — and thus housing costs facing mortgagers — that occurred during the mid- to late 1980s (see Figure 2.2). As Figure 2.3 illustrates, private tenants also experienced considerable

[3]For a brief description of the evolution of social housing finance policies over the period, see Aughton and Malpass (1992).

rent increases after the deregulation of private sector rents was implemented by the 1988 Housing Act. Rents reached £50 and £86 in 1993 for private unfurnished and private furnished tenants, respectively, so that their housing costs are now the highest of all the tenures.

This variation in housing costs is interesting in its own right, but becomes even more important when average income levels in different tenures are compared. The 'affordability' of social rented accommodation to its tenants is discussed in detail in Section 2.3.4.

2.2 Demographics

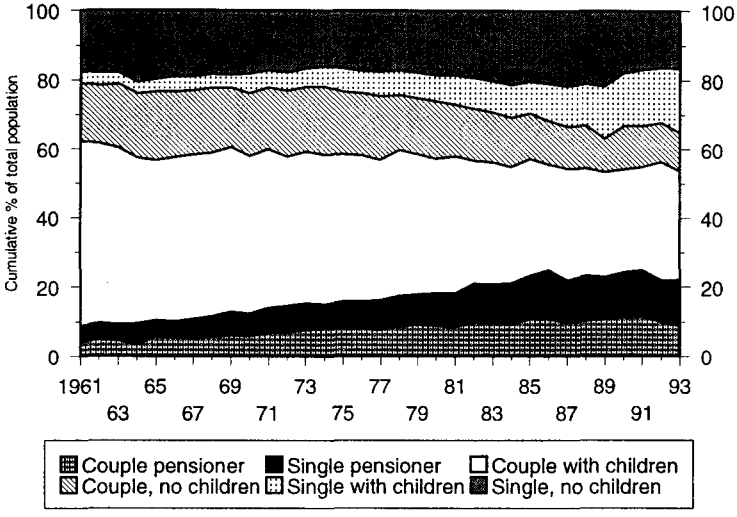
Before looking at the incomes of social tenants, however, we investigate their demographic and employment characteristics. We concentrate here on family composition and employment status. Other characteristics — such as the regional distribution of social renters — have changed relatively little over the period. The first two subsections provide simple descriptions over time using FES data, with additional information from the Survey of English Housing which enables us to distinguish ex-social renters and new social renters. In Section 2.2.3, we use the results of a statistical analysis to isolate the individual effects of employment and demographic changes.

2.2.1 Family composition

We begin our description of social tenants' characteristics with an investigation of the types of families that are found in the LA and HA tenures. The population is divided into six family groupings according to marital status, presence of dependent children and whether the household head is above or below pension age. Figure 2.4 shows how the family composition of households in the social renting sector has changed since 1961.[4] Table 2.2 compares the family breakdown of social renters with that of other tenures for selected years; the figures shown represent the

FIGURE 2.4

Family composition of social renters



Source: Family Expenditure Survey, various years.

TABLE 2.2

Family type: over- and under-representation of social renters

Over-/under-representation in each family type category

Family type	*1963*	*1973*	*1983*	*1993*
Couple pensioner	0.83	1.00	1.00	1.00
Single pensioner	0.71	1.14	1.50	1.63
Couple with children	1.13	0.98	0.83	0.86
Couple, no children	0.82	0.86	0.79	0.48
Single with children	1.00	1.25	2.25	2.71
Single, no children	1.06	1.14	1.11	1.00

Source: Family Expenditure Survey, various years.

[4]The discontinuity that is apparent between 1989 and 1990, with respect to the proportion of single people without children and couples without children, is due to a coding change in the 1989 FES. See Goodman and Webb (1994, p. 28).

degree to which social tenants are under- and over-represented in each category, calculated by dividing the percentage of social renters in each family type grouping by the percentage of the total population in each category. If this ratio equals one for any particular grouping, then that type of family is neither under- nor over-represented in social rented accommodation. Over-representation is indicated by a ratio of more than one, under-representation by a ratio of less than one.

It is evident that pensioners have grown as a proportion of social renters, up from 9 per cent of the total in 1961 to 22 per cent by 1993 (see Figure 2.4). From Table 2.2, it is evident that, back in the early 1960s, pensioners were, in fact, somewhat *less* likely than their younger counterparts to live in council housing. This was largely because of the timing of the increased size of the social sector, which saw many younger families moving into this tenure in the 1940s and 1950s. By the end of the period, single pensioners in particular were more likely to be living in the council or HA sector. So, whilst it is true to say that the growth in the number of pensioner families is a tenure-wide phenomenon, it is much more pronounced in the case of social renters: for all tenures, pensioners grew from 13 per cent of all families in 1961 to 17 per cent in 1993.

As far as non-pensioners are concerned, two major trends in particular are worth commenting upon. The first is the fall in the proportion of social renters who are couples with children. They accounted for more than one-half of all social tenants in the early 1960s, but just one-third by the early 1990s. Amongst the population as a whole, their share fell much less dramatically, from 45 per cent of the total to 37 per cent. The second notable trend is the growth in the number of lone-parent families. Whilst their representation amongst the population at large has roughly trebled over the period under analysis, there has been a sixfold increase in the proportion of social tenants who are single parents. Around one in five families

in council or HA accommodation are now single-parent families.

These observable changes in the family composition of social tenants are the result of three separate trends. The first is the change in the family composition of the total population. More interesting, however, are the other two: the family composition of those moving out of social rented housing relative to those staying behind, and the characteristics of those moving *into* the social sector. Information on movers-out and movers-in is not available in the FES, but can be gleaned from other sources, in particular the Survey of English Housing.

Using the 1993–94 SEH, Table 2.3 shows the breakdown of all current social tenants by family type, and also the same breakdown for those who have moved into the sector and those who have moved out. *Movers-out* are those prior social renters who bought either their current home or their first home under the right-to-buy scheme. *Movers-in* include only those who moved into the social sector in the three years prior to interview, constituting just over one-tenth of all social renters in 1993–94. When

TABLE 2.3

Family type of social renters: a comparison of movers-in and movers-out

Per cent

Family type	Social renters			All tenures
	All current	*Movers-out*	*Movers-in*	
Couple pensioner	9	15	2	9
Single pensioner	14	6	6	7
Couple with children	29	32	24	38
Couple, no children	11	35	8	23
Single with children	19	4	22	7
Single, no children	18	7	38	16
All	100	100	100	100

Source: Survey of English Housing, 1993–94.

analysing the results below, we should remember that the characteristics of those who have moved out of social renting under the RTB are the *current* characteristics of these families, *not* the characteristics of the families when they actually made the move. All SEH results have been adjusted throughout for non-response bias on the same basis as the FES results (see, for example, Goodman and Webb (1994, Section 1.2)).

Of those who have moved out of the social sector, 32 per cent were couples with children and 35 per cent were childless couples in 1993–94; only 4 per cent were single parents. Furthermore, only 7 per cent of families who moved out are composed of single childless individuals. The comparative figures for those who moved in show a much larger percentage of single parents and single childless families, and far fewer couples without children. This is probably the result of a fall in the supply of social housing, which has led to the targeting of social rented accommodation towards the most disadvantaged groups in society, such as young homeless people.

Compared with results from the 1993 FES, the grossed-up SEH reports a higher proportion of pensioners and single childless people in the social rented sector compared with the population as a whole, and a greater under-representation of couples with children.

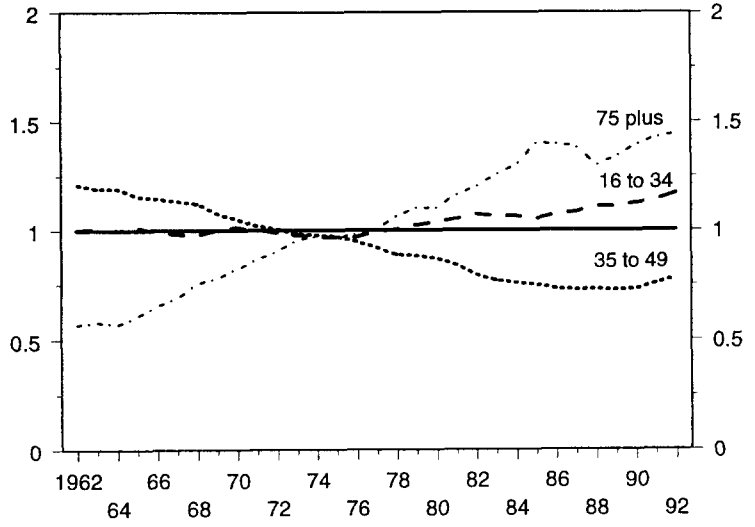
In an 'equilibrium' situation, the percentages shown in Table 2.3 would be very similar for movers out of and movers into social rented housing. However, the results presented above suggest that the composition of the total social sector will continue to move towards more single people and single parents and away from childless couples.

Age and sex composition

As well as being determined by the sorts of flows into and out of the sector that we have just identified, the future

FIGURE 2.5

Age breakdown of social renters: over- and under-representation in different age bands



Note: Three-year moving averages.
Source: Family Expenditure Survey, various years.

pattern of social renting will also depend upon the age profile of current social renters, for two reasons. First of all, there is clearly an age-group that is most likely to take advantage of right-to-buy policies — those of prime working age (here defined as aged 35 to 49); and second, if the population of social renters is elderly, then a relatively high proportion of properties are likely to be vacated, as tenants die, and then re-let to new tenants.

Figure 2.5 shows how the age profile of social renters has changed over the period since the early 1960s. Age bands are derived on the basis of the age of the head of the household. Over- and under-representation in different age bands is calculated by dividing the proportion of social renters in each age band by the proportion of the total UK population in each age band.

The pattern that emerges is one in which families headed by someone aged between 35 and 49 (so-called

'prime-age' individuals) have moved from being over-represented to being under-represented amongst social tenants, whilst the relative size of the very elderly and the younger age-groups has increased.[5]

The increased representation of older households in social rented accommodation is probably largely a result of the ageing of council tenants who were allocated housing during the 1950s and 1960s, when investment in new council housing was expanding rapidly. In line with the other trends previously identified, the changes in the age profile represent a sort of 'hollowing-out' effect, with 'prime-age' individuals being replaced to a large extent by the very young and the very old.

The increase in the number of very elderly single people, who tend to be largely women, and the growth in lone parenthood[6] in the social rented sector have meant that the proportion of social renting female household heads has grown substantially since the early 1970s. For example, in 1993, more than one-third of all social renting households (less than 15 per cent of households in other tenures) were headed by a woman.

2.2.2 Economic status

Whilst family composition does have some influence on income levels and economic well-being, a more important determinant will be the employment status of household members. This section examines how the employment status of families in the social rented sector has changed over time.

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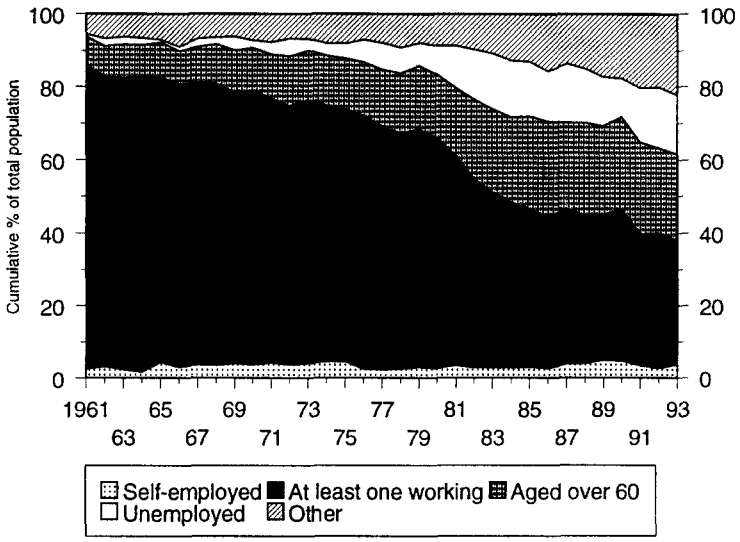
[5] Younger elderly households (that is, aged between pension age and 74) are also over-represented in social rented accommodation, but the growth has been less significant than that for the very elderly.

[6] According to the FES, 92 per cent of lone parents were female in 1993.

FIGURE 2.6

Economic status of social renters



Source: Family Expenditure Survey, various years.

It is apparent from Figure 2.6 and Table 2.4 that there has been a disproportionate growth in the number of unemployed, over-60s and 'other' economic status households in the social rented sector over the past 30 years or

TABLE 2.4

Economic status: over- and under-representation of social renters

Over-/under-representation in each economic status category

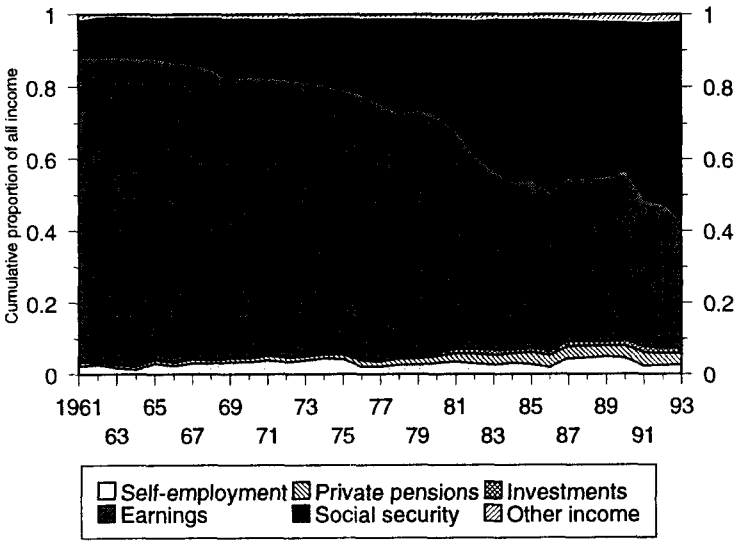
Economic status	*1963*	*1973*	*1983*	*1993*
Self-employed	0.43	0.50	0.37	0.40
At least one in employment	1.07	1.01	0.79	0.62
Aged over 60	0.75	1.00	1.35	1.33
Unemployed	2.00[a]	1.50	1.88	2.29
Other	1.20	1.40	1.83	2.20

[a]This rather high ratio is driven by small samples of the unemployed in all tenures in 1963: 1 per cent of social renters and 2 per cent of all tenures fall into this category in this year.

Source: Family Expenditure Survey, various years.

FIGURE 2.7

Share of income from different sources: social renters



Notes: Income shares are calculated by dividing the mean of each of the six income sources by mean BHC income.
The 'other' category includes maintenance payments, student grants and children's income.

Source: Family Expenditure Survey, various years.

so. (The 'other' category includes non-working lone parents, the long-term sick and disabled, and students.) This corresponds to a decline in the proportion of economically active households — only about one-half of non-pensioner households in this tenure included at least one earner in 1993, compared with almost 85 per cent of non-pensioners in other tenures.

Consequently, there has been an increase in the proportion of social renters who are dependent on social security benefits (particularly means-tested benefits), so that, by 1993, around 95 per cent of families in the social sector received state benefits in some form or another. In fact, for approximately one-quarter of social tenants, benefit payments are now the *only* source of family income. Furthermore, this source of income has grown from one-

tenth of all social tenants' income in 1961 to almost 60 per cent in 1993, although this growth did temporarily halt during the boom years of the late 1980s (see Figure 2.7). At the same time, the percentage of total social renters' income coming from employment has fallen from 84 per cent in 1961 to around 70 per cent in the late 1970s and to only just over one-third today.

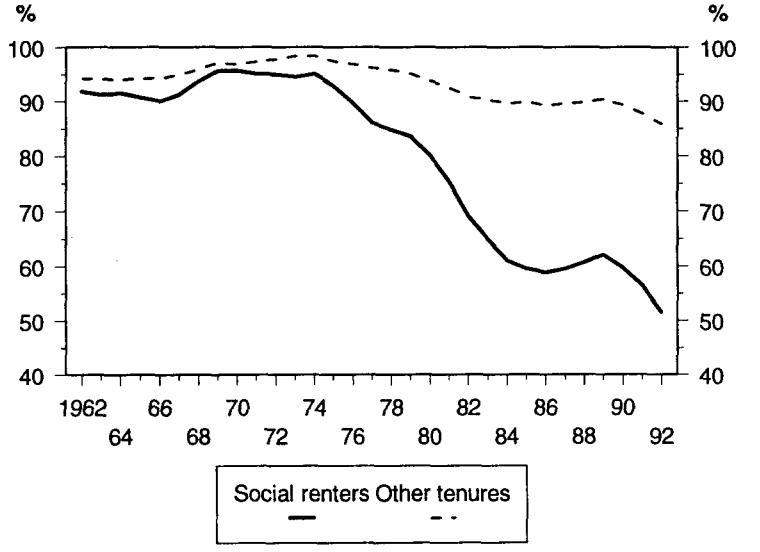
Many of these trends in income sources are the result of an increase in the size of the social renting pensioner population and the growing concentration of lone parents in the sector (see Section 2.2.1 above), these two groups being the most dependent on state benefits. For example, in 1993, *all* social renting single parents and virtually all pensioners received at least some of their income from social security. This finding is not surprising, however, given the universal nature of child benefit and the coverage of the state pension. Even when we take account of the growth in the pensioner population, however, we find that almost one-half of social renting *non-pensioners* received no income from employment in 1993 and another 18 per cent got less than a quarter from this source.

Figure 2.8 illustrates how the proportion of working-age (16- to 64-year-old) male household heads who *are* in paid employment (self-employed or employed, full-time or part-time) has changed since 1961, for social renters and for other tenures. The picture that emerges is one of a diminishing group of working-age men in employment in all tenures since the 1970s, but the decline in the percentage of working male social renters is particularly stark.

A large part of the continued growth in unemployment amongst social renters during the mid-1980s will have been a result of the better-off tenants buying their homes from local authorities under the RTB during this period. Again, we can draw on information from the 1993–94 Survey of English Housing to determine how far these observed trends are due to the changing composition of the social rented sector and how far they represent real

FIGURE 2.8

Percentage of male household heads in employment: social renters vs. other tenures



Notes: Three-year moving averages.
There is an inconsistency in the employment status figures between 1967 and 1968 due to a coding change in the FES. The relativity between social renters and other tenures should not be affected, however.

Source: Family Expenditure Survey, various years.

TABLE 2.5

Economic status of social renters: a comparison of movers-in and movers-out

Per cent

Economic status of household head	Social renters			All tenures
	All current	*Movers-out*	*Movers-in*	
Full-time	28	56	29	59
Part-time	6	4	4	5
Unemployed	19	7	30	9
Retired	22	23	8	17
Sick or disabled	8	6	3	3
Other inactive	17	4	26	7
All	100	100	100	100

Source: Survey of English Housing, 1993–94.

changes in the circumstances of those who remain in the sector. Table 2.5 presents a breakdown by economic status of all current social renters, those who have moved out of the sector under the RTB and those who have moved into the sector in the past three years.

Table 2.5 tells us that those families who have moved out of the sector under the RTB are twice as likely as social tenants as a whole to contain full-time employed household heads and far fewer unemployed or 'other inactive' heads. This latter group is largely composed of single parents (over 60 per cent), which explains why we find so few movers-out in this category and so many more movers-in (see Table 2.3). Table 2.5 also highlights the fact that a much higher proportion of movers *into* social rented housing are unemployed (30 per cent compared with 19 per cent for all current social renters).

This comparative analysis of the economic status of movers into and movers out of the social sector provides further evidence to suggest that a large part of the changing circumstances of social renters we have witnessed, particularly during the 1980s, is due to the most advantaged families moving out of the sector and poorer, less advantaged families moving in.

For those social renters who are in paid employment, the majority are found in manual jobs, although this proportion has fallen since the early 1970s (see Appendix A). For example, almost one-half of all social renting household heads in work were employed in skilled manual jobs in 1973; in 1993, this figure had fallen to 38 per cent. This follows the trend for the population as a whole, as employment opportunities have shifted from manufacturing into the service sector, although the decline has been less marked for social renters. In addition, the growth in non-manual work amongst social renters has been greatest in the 'low' non-manual professions, such as clerical and shop assistant work.

One of the reasons for the relatively large proportion of social renters employed in manual jobs is probably the generally poorer educational attainment of individuals in this tenure. For example, a much greater proportion of current social renting household heads (81 per cent in 1993) left education at the minimum school-leaving age than is true for other tenures (52 per cent). Correspondingly, a much smaller proportion of social tenants appear to have proceeded on to higher education: only 5 per cent left school more than two years after the minimum leaving age, compared with 21 per cent of household heads in other tenures. Information about education history was only available in the FES from 1978, and the general pattern of social renters having a greater propensity for shorter educational experiences does not seem to have changed much since then, although an increase in the numbers going on to further education is discernible for all tenures.

We have seen that the abundance of social renters in the 'other' category partly reflects the fact that this economic status grouping includes lone parents not seeking work (see results for family type above), but it is also a result of the inclusion of the long-term disabled aged under 60. This latter point is reflected in our finding that social renters tend to be more reliant on disability-related benefits than the rest of the population. For example, around 8 per cent of total social tenants' income came from this source in 1993, compared with only 2 per cent for other tenures.

As far as families in the other housing tenures are concerned, mortgagers and the private furnished rented sector consist primarily of households with at least one full-time worker. Households containing only part-time workers are most commonly found in the HA tenure and amongst outright owners.

2.2.3 The 'determinants' of social renting: changes over time

Introduction

We have already seen how the circumstances of social renters differ from those of the rest of the UK population, and how this divergence has become more pronounced, particularly since the late 1970s. However, what we have not been able to identify are the individual effects of each separate family characteristic; for example, whether the fall in the proportion of couples living in LA / HA housing is wholly due to a decline in the numbers of the employed in the sector, or whether it is a separate phenomenon in its own right.

It would be informative if we could, in addition, uncover these individual effects, by identifying the unique relationship between each characteristic (such as being a two-parent family) and the likelihood of living in social rented accommodation, controlling for all other factors (such as employment status). Moreover, it would be particularly interesting to see how these relationships have changed over time. Statistical analysis provides a vehicle that enables us to do just that.

As part of this current research, we have estimated four statistical models for the 1960s, the 1970s, the 1980s and the 1990s, to provide some indication of how the factors correlated with the probability of living in social rented housing have changed over time. A brief description of the methodology, together with a summary of the data used in the analysis and detailed results, is provided in Appendix B.

Marginal effects of demographic factors

This section provides a more intuitive interpretation of the statistical results: rather than reporting the coefficients estimated for each of the explanatory variables, Table 2.6

presents the 'marginal effect' of each of these variables on the probability of social renting (see Appendix B for details of the calculation). All of the variables used in our estimation procedure are 'dummy' variables, i.e. they take a value of one if a particular family characteristic is present and a value of zero otherwise. The marginal effect of a dummy variable therefore measures the change in the probability of being a social renter when there is a discrete jump in value from zero to one.

Our 'reference family', which is contained in the constant term of our equation, is a prime-age (35- to 49-year-old) couple with children living in the north of England, with at least one person working and where the main earner is employed in a manual job. The probability of our reference family living in social rented accommodation is measured by the constant term. In other words, in the 1960s, for every 100 reference families, 46 of them were living in social rented housing; by the 1990s, this figure had fallen to 26. The marginal effects reported in Table 2.6 relate to the impact of each of the dummy variables on the probability of social renting *relative to* this reference family. For example, in the early 1990s, being a childless single person in work increased the probability of a family living in the social sector by just over five percentage points compared with the reference family.

The results in Table 2.6 are presented for the 1980s and 1990s on the basis of our estimated model which excludes the education dummy, for the purposes of comparison over time (prior to 1978, education history was not recorded in the FES). The consequences of including an education dummy for our estimated marginal effects is illustrated in Appendix C. Almost all of the explanatory variables reported in Table 2.6, with the exception of some of the regional dummies, are statistically significant at conventional levels.

From Table 2.6, it is evident that single people are more likely than their married or cohabiting counterparts to live

TABLE 2.6

Marginal effects of demographics on the probability of social renting

Per cent

Explanatory variable	*1961–67*[a]	*1971–75*	*1981–85 (no education)*	*1989–93 (no education)*
Constant	45.5	37.0	30.2	26.1
Single, no children, in work	7.0	16.5	11.1	5.3
Single, no children, not in work	3.6	28.8	41.4	37.8
Single parent, in work	11.6	19.4	35.8	31.3
Single parent, not in work	19.1	49.0	62.0	63.2
Couple, no children, in work	–5.6	–2.3	–5.2	–9.1
Couple, no children, not in work	–0.7	26.5	37.0	24.4
Couple with children, not in work	17.3	42.7	56.7	57.5
Household head aged 16–34	–3.8	–1.8	2.3	0.1
Household head 50 to pension age	9.6	9.6	10.6	4.4
Household head pension age to 74	7.0	27.2	39.2	32.7
Household head 75 or older	1.1	29.0	40.5	34.6
Main earner is non-manual	–12.9	–22.3	–20.1	–16.1
London	–9.6	–1.8	–0.2	2.6
Southern England, not London	–5.0	–5.7	–6.8	–6.7
Midlands	2.3	0.2	–3.8	–2.9
Wales	–9.4	–1.7	–5.9	–5.3
Scotland	27.7	28.8	26.0	19.5
Northern Ireland	–10.6	2.5	1.8	3.5

[a]A greater number of years of data were included in the analysis of the 1960s due to the very small sample sizes of the FES in the early 1960s; furthermore, 1964 was excluded from the analysis due to the absence of regional information in our dataset for that year.

in LA or HA accommodation in every period, although the differences are smaller when non-working families are compared. Out-of-work families with dependent children (single people and couples) have consistently been the most likely to be living in social rented housing.

Table 2.6 also highlights the tendency for the impact of single parenthood and unemployment to become far more marked over time. For example, being a single parent out of work increased the probability of social renting by about one-fifth in the 1960s, but by the 1990s, the marginal effect had increased to 63 per cent — a more than threefold increase. The increased importance of unemployment is illustrated by the fact that the growth in the marginal effect of being an *employed* lone parent (by a factor of just over 2.5) is not as large as the increase in the marginal effect of being an *unemployed* lone parent.

Trends in the age composition of social tenants are also reflected in Table 2.6. Relative to the reference age-group (35–49 years), younger families — where the head is under 35 years old — are initially less likely to live in the social rented sector and then, in the 1980s and 1990s, slightly more likely. The oldest families, particularly the very old (aged 75 or over), have also become progressively more prone to be LA / HA tenants over the period, although this relationship is less strong today than in the early 1980s.

Another earlier finding that is confirmed by the results of our statistical analysis is the higher probability of manual workers living in the social sector. The non-manual work dummy had the largest (negative) coefficient in the 1970s, before the manufacturing sector started to decline, although non-manual workers are still less likely to be living in the social rented sector and this coefficient is higher today (–16 per cent) than it was in the 1960s (–13 per cent).

In terms of regional effects, Table 2.6 presents the effect of the regional dummies on the probability of social

renting relative to living in northern England (which encompasses the Northern Counties, Yorkshire and Humberside and the North West). Individuals are far more likely to be living in social rented accommodation if they live in Scotland than anywhere else in the UK, due to the large supply of council housing there. However, this effect fell during the 1980s, partly due to a relatively more substantial decline in social housing provision in Scotland in this period. This finding is confirmed, for example, by Wilcox (1995, Table 20, p. 104), who also demonstrates how social housing provision in London has declined more slowly than in other areas. This latter finding is borne out by our marginal effects for London, reported in Table 2.6, going from negative to positive over the period. The relative decline in the impact of the Scotland dummy in the 1990s is also due to a comparatively high unemployment rate in this part of the country at this time: in 1993, the unemployment rate in Scotland stood at almost 10 per cent, whilst the average rate for the whole of the UK was just under 8 per cent.

Including an education dummy (which records whether or not the head of the household left education after the minimum school-leaving age) in the estimation procedure increases the probability of social renting for the reference family, as reflected in the larger marginal effects reported for the constant term in Appendix C. This can be explained by the fact that the constant now incorporates only those reference families whose household head left education at or before the minimum school-leaving age: given our earlier findings (see Section 2.2.2), we would expect to observe a larger probability of social renting for those with lower educational attainment. This is confirmed by a negative marginal effect reported for the education dummy in both the 1980s and the 1990s (see Appendix C).

Perhaps not surprisingly, inclusion of the education dummy reduces the marginal effect of many of the other

explanatory variables, with the general pattern of results remaining broadly unchanged.

Example family analysis

The previous subsection presented the effects that each of our chosen explanatory variables has on the probability of living in social rented housing, and illustrated how these have changed over time. However, these effects are not additive. That is, we cannot simply add up the marginal effect of, say, being a single parent and the marginal effect of living in Scotland and infer that the result is the additional probability of being a social tenant for single parents living in Scotland. In order to identify the probability of families with a combination of different characteristics living in the social sector, we must calculate the marginal effect of different combinations of the dummy variables, using an 'example family' approach.

The example families we have selected are described in Table 2.7, and the probability of their being LA / HA tenants is reported. The reference family probability is also presented for comparison. Again, in order to facilitate comparisons over time, the models used for the 1980s and 1990s are those excluding the education dummy. This means that, in each period, the reported probabilities apply to each example family, regardless of the education history of the household head.

The results for our first example family confirm our earlier finding that single parenthood and unemployment have a significant positive correlation with the probability of social renting, and that this effect has increased over time. Whilst our reference family has become less likely to be living in the social rented sector, our example lone-parent family has a much higher probability today (96 per cent) than in the earlier periods of our analysis (84 per cent in the 1960s). This is despite the fact that the

TABLE 2.7

Probability of social renting for a selection of example families (additional probability shown in parentheses)

Per cent

Type of family	*1960s*	*1970s*	*1980s (no educ.)*	*1990s (no educ.)*
Reference family:				
Couple with children, in work, main earner manual, aged 35–49, living in northern England	45.5	37.0	30.2	26.1
Example families:				
1. Single parent, not in work, aged 16–34, living in Scotland	84.4 (38.9)	96.2 (59.2)	98.4 (68.2)	96.2 (70.1)
2. Single, person, no children, not in work, aged 75 or above, living in Northern Ireland	25.1 (–20.5)	85.0 (48.0)	95.4 (65.2)	91.5 (65.4)
3. Couple, no children, in work, aged 16–34, main earner non-manual, living in London	17.4 (–28.2)	11.3 (–25.7)	8.5 (–21.7)	6.5 (–19.6)
4. Couple with children, in work, aged 50 to pension age, main earner manual, living in southern England outside London	35.0 (–10.5)	34.0 (–3.1)	33.0 (2.7)	23.1 (–3.0)
5. Couple, no children, not in work, between pension age and 74, living in Wales	27.8 (–17.7)	79.4 (42.4)	90.2 (60.0)	75.9 (49.8)

Scotland dummy has declined in importance over the period (see Table 2.6).

Our second example family, which represents single-pensioner family units living in Northern Ireland, also shows a marked rise in their probability of living in social rented housing, particularly between the 1960s and 1970s, when their probability increased from one-quarter to over 80 per cent. From Table 2.6, it is clear that this is a result of a higher coefficient on the very elderly dummy and a stronger relationship between social renting and being economically inactive.

Example family 3 shows a steady decline in its probability of social renting over time, falling from 17 per cent at the beginning of the period to around 6 per cent in 1993. Even though the 16 to 34 age-group and those living in London are more likely to be living in the social sector today, these effects have been dominated by the fact that the probability of two-earner couples — particularly those working in non-manual jobs — living in social rented housing has fallen over the period.

The penultimate example presented in Table 2.7 represents a working-class family living in the south of England, with an older worker as the main earner employed in a manual occupation. During the 1980s, in particular, this type of family became less likely to be living in LA / HA accommodation, so that now they have a slightly (3 percentage point) smaller probability than the reference family of being social tenants. This appears to be because the negative regional effect is stronger than the age effect (the latter effect — being aged between 50 and pension age — fell quite dramatically between the 1980s and the 1990s, from 11 per cent to 4 per cent).

Finally, example family 5 in Table 2.7 illustrates that young pensioner couples who live in Wales were most likely to be living in the social rented sector in the 1980s, although this probability is still rather high in the 1990s, at 76 per cent. This example family's social renting probability increased significantly between the 1960s and the 1970s in particular. This corresponds to an increase in the correlation between social renting and being an out-of-work couple with no dependent children, a stronger relationship between being aged between pension age and 74 and living in social rented housing, and also a fall in the negative coefficient on our Wales dummy (again, see Table 2.6).

Conclusion

The results of the foregoing analysis generally confirm our previous findings on family type, economic status and the age composition of families in the social sector. Our statistical analysis has thrown more light on the changing circumstances of social renters, providing greater insight into the particular relationships between various demographic factors and the likelihood of a family living in council or HA accommodation. Our results give further credence to the view that social tenants are becoming increasingly concentrated amongst the poorest and most disadvantaged families in the UK.

2.3 Analysis of Social Renters' Incomes

2.3.1 The income measure

We now come on to consider the incomes of social tenants, how they have changed over time and how they relate to the incomes of people living in other tenure types. Before doing so, however, it is important to be clear about the various income measures available and the most appropriate measure for this type of analysis.

In official income statistics (Department of Social Security, 1995) and in the work of many outside analysts (Goodman and Webb (1994), for example), two standard measures of income are generally used. Because they are differentiated by their treatment of housing costs, it is important from our point of view — given that we are looking at the relative experience of a particular housing tenure group — to expose clearly the implications of using the different measures. The two generally used are the 'before-housing-costs' (BHC) and the 'after-housing-costs' (AHC) income measures. BHC income is the sum of net household income from six different sources, namely:

- self-employment;
- private pensions;
- investments;
- earnings;
- social security (including housing benefits); and
- other sources.

The 'other' income category includes items such as children's income, maintenance payments from any ex-spouse and education grants. Note, in particular, that the BHC measure includes housing benefit (HB) as a component of total income. The AHC measure deducts gross housing costs (essentially rent, mortgage interest and some smaller amounts covering such things as water rates and structural insurance) from the BHC measure.

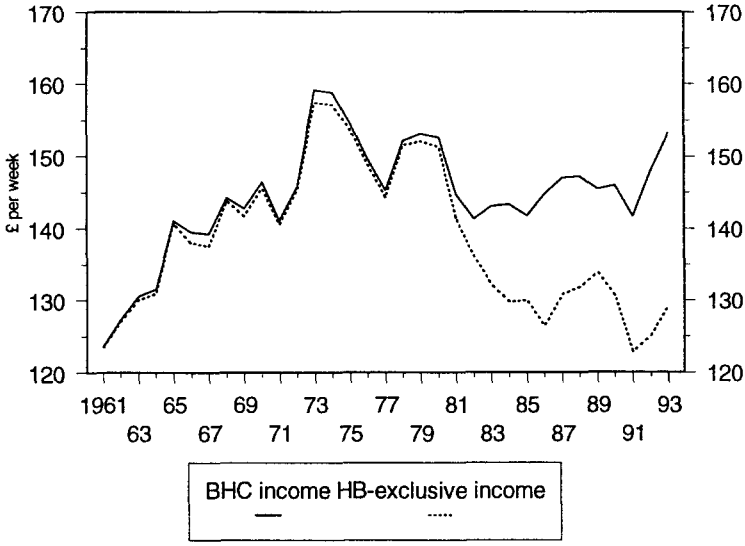
In fact, neither of these measures appears to us to be entirely appropriate for the purpose of our research. As the BHC measure includes HB as one of its components, a rise in council rents will actually appear to make council tenants better off relative to owners as their HB income increases, given that the majority of council tenants are in receipt of HB, many of them getting all of their rent paid by HB. This is not an effect that, in general, we wish to pick up. On the other hand, if the HB system becomes more or less generous over time, excluding HB income will miss part of a real change in living standards.

The AHC measure takes off housing costs, and has the opposite effect: an increase in council rents makes council tenants appear worse off relative to other tenure groups. Whilst this is a genuine effect, what we actually want to know is how incomes have changed independently of any change in housing costs. It will then be possible, as we show in Section 2.3.4, to look at the 'affordability' of social housing, given the combination of income and rent effects.

Instead of using either of these measures of income, then, we make use of an alternative measure: BHC income

FIGURE 2.9

Trends in social renters' median income: HB-exclusive income vs. BHC income



Source: Family Expenditure Survey, various years.

excluding any benefits paid to help with housing costs[7] (see Appendix D for details of how this measure was constructed). For a fuller discussion of the suitability of different income measures in distributional analyses, see, for example, Johnson and Webb (1992) and Department of Social Security (1994).

All reported incomes are measured in January 1996 prices and are equivalised to adjust for household size.[8]

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[7] For example, HB payment to low-income tenants, and help with mortgage payments for mortgagers in receipt of income support.

[8] The equivalence scale used is the McClements scale (see McClements (1977)), as used in the official Households Below Average Income statistics. It is also assumed that there is some degree of income 'sharing' amongst members of the household, so that average incomes are reported at the household level.

Figure 2.9 illustrates how BHC income and our HB-exclusive measure have changed for social renters since 1961, and demonstrates that the choice between income measures does affect the recorded trends in social tenants' incomes. The difference is particularly evident in the period since the early 1980s. This reflects both a growing number of HB recipients over this latter period and an increase in rent levels, resulting in higher HB payments to those in receipt. Trends in mean — rather than median — income over the period show a broadly similar pattern.

2.3.2 Trends in average income levels

Table 2.8 presents median income levels, on the basis of income excluding housing benefit payments, for each tenure in 1963, 1973, 1983 and 1993. Appendix E presents a tenure breakdown of mean income together with standard errors for these four selected years. The fact that median incomes are lower than mean incomes implies that the distribution of income in all tenures is positively skewed, and it has become increasingly skewed over the

TABLE 2.8

Median equivalent household HB-exclusive income, by tenure

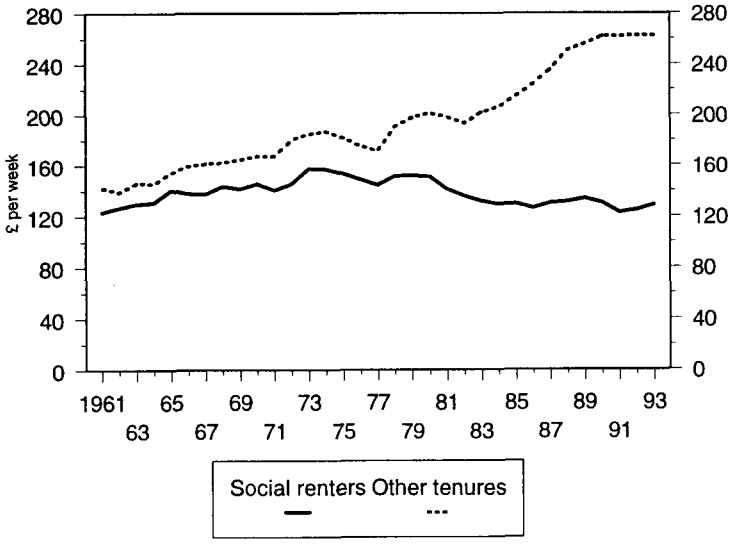
Pounds per week, January 1996 prices

Tenure	*1963*	*1973*	*1983*	*1993*
Social renters	130	157	132	129
LA tenants	130	157	132	129
HA tenants	—	—	142	129
Other tenures	146	185	202	263
Private unfurnished tenants	131	160	149	172
Private furnished tenants	160	192	164	204
Mortgagers	163	199	217	289
Outright owners	142	174	175	219
All	139	174	179	228

Source: Family Expenditure Survey, various years.

FIGURE 2.10

Trends in median HB-exclusive income: social renters vs. other tenures



Source: Family Expenditure Survey, various years.

past 30 years. These figures are only averages, though, and, as such, mask much of the variability that exists *within* tenures. For example, the standard errors reported in Appendix E illustrate the fact that average incomes amongst HA tenants are far more variable than those for families living in local authority housing. Furthermore, although it might seem that private renters are relatively poor compared with mortgagers, in fact some of the richest (as well as the poorest) households live in privately rented housing.

Both Figure 2.10 and Table 2.8 show that trends in income exclusive of HB were broadly similar for social renters and the rest of the population until the end of the 1970s. However, since then, average incomes have actually fallen in real terms in the social rented sector whilst, in other sectors, median incomes have increased rapidly (average incomes in the 1980s grew fastest in the mortgaged housing tenure, particularly as wages soared in the

boom years of the late 1980s). The result has been that, whereas social renters' median income was practically unchanged in 1993 compared with 1963 in real terms, the all-tenures average increased by 62 per cent over the same period.

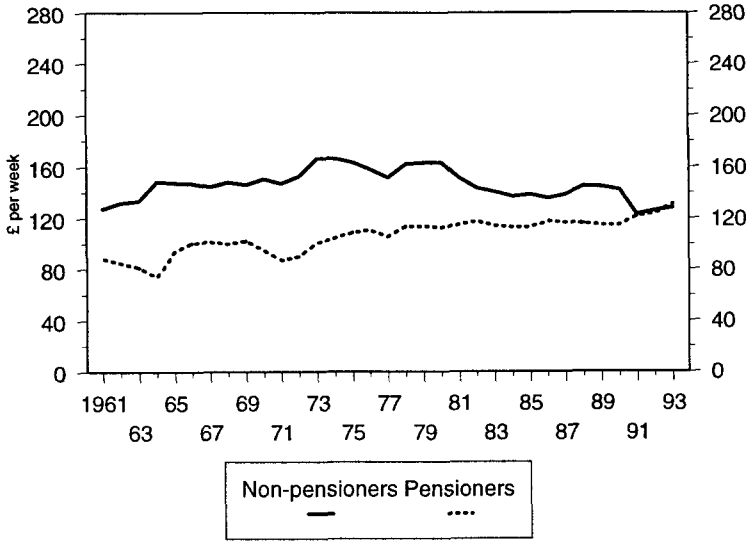
It is worth dwelling on this result a little. The median council tenant now is no better off — in income terms — than the median council tenant 30 years ago; in fact, he or she is slightly worse off. This means that, relative to the whole population, median incomes for this group have fallen from 92 per cent of the overall median to just 57 per cent. Relative to the rest of the population, council tenants have fallen behind in a way in which even the poorest 10 per cent have not over so long a period (see Goodman and Webb (1994)).

A large part of this trend is, of course, attributable to the changing composition of the social sector, as outlined in Section 2.2. Better-off tenants have left the sector through the right-to-buy policies of the 1980s and poorer ones have entered as entry has become more restricted. As such, social tenants are now composed of a very different group of people compared with 10 or 20 years ago. Rising unemployment and an increase in the prevalence of lone parenthood have both contributed to the real fall in social renter incomes since 1979. This helps to explain why we have seen an increasing reliance on state benefits as a source of income amongst families in the social renting sector.

Amongst social renters, pensioners' income has been consistently lower than non-pensioners' (see Figure 2.11). However, this difference is far less marked today than it was even in the early 1980s. In fact, in 1993, social renting pensioner income was marginally higher, on average, than social renting non-pensioner income.[9] In other tenures, however, pensioners still only receive around three-quarters of the level of non-pensioner income, on average.

FIGURE 2.11

Trends in median social renter HB-exclusive income: pensioners vs. non-pensioners



Source: Family Expenditure Survey, various years.

A major reason for the observed changes in the pensioner / non-pensioner income differential is that there has been a significant decline in the income that non-pensioner social renters receive from employment over the period (especially since 1990), so that non-pensioner total household income has fallen to the level of pensioners'. This confirms our earlier finding that a much larger proportion of social renters now tend to be unemployed or employed in lower-paid jobs than individuals in other tenures. These trends also reflect a compositional change, whereby non-pensioners have been the most likely to

[9] Too much emphasis should not be placed on a single year's results, however. Furthermore, lower unemployment and interest rates since 1993 could well have reversed this trend.

move out of social renting — pensioners (particularly single pensioners) have tended to stay in this tenure.

To some extent, we can control for compositional effects on average incomes by again making use of the Survey of English Housing to look at how the average incomes of current social renters recorded there compare with those of previous social renters and those who recently moved into the sector. Unfortunately, the accuracy of some of the income data in the SEH is questionable (see Appendix F), which restricts its usefulness in reporting average income levels for different groups. Nevertheless, income relativities *within* the SEH will be more reliable.

The following subsection discusses the position of social renters in the overall UK income distribution, using data from the FES to look at trends over time and data from the SEH to identify the compositional effects.

2.3.3 Social renters and the UK income distribution

Table 2.9 shows the position of households in each tenure in the HB-exclusive income distribution, using the 1993 FES. Income quintiles were calculated by dividing the FES population into five equal-sized groups on the basis

TABLE 2.9

Position of each tenure in each HB-exclusive income quintile, 1993

Proportion in each income quintile

Tenure	*Quintile 1*	*Quintile 2*	*Quintile 3*	*Quintile 4*	*Quintile 5*	*All*
LA tenants	0.47	0.30	0.15	0.06	0.02	1.00
HA tenants	0.44	0.28	0.14	0.11	0.03	1.00
Private unfurnished tenants	0.33	0.25	0.14	0.16	0.12	1.00
Private furnished tenants	0.34	0.14	0.14	0.14	0.24	1.00
Mortgagers	0.08	0.14	0.21	0.27	0.30	1.00
Outright owners	0.15	0.24	0.25	0.18	0.17	1.00
All	0.20	0.20	0.20	0.20	0.20	1.00

Source: Family Expenditure Survey, 1993.

of total household income, such that those families with the lowest 20 per cent of incomes make up the bottom quintile, those with the next highest 20 per cent are in the second quintile, etc.

If families in each tenure were distributed evenly throughout the income distribution, one-fifth of them would be found in each quintile. In fact, the picture that emerges is one of an over-representation of all renters, in particular LA and HA tenants, in the bottom quintile and a greater-than-average proportion of mortgagers at the top end of the distribution. Outright owners, who are primarily pensioners, are most prevalent in the second and third quintiles, although they are more evenly distributed than other tenure groups. Table 2.9 also highlights the fact that, whilst many private furnished tenants are amongst the poorest in the country, a larger-than-average proportion of them are found at the top end of the UK income distribution (24 per cent in 1993).

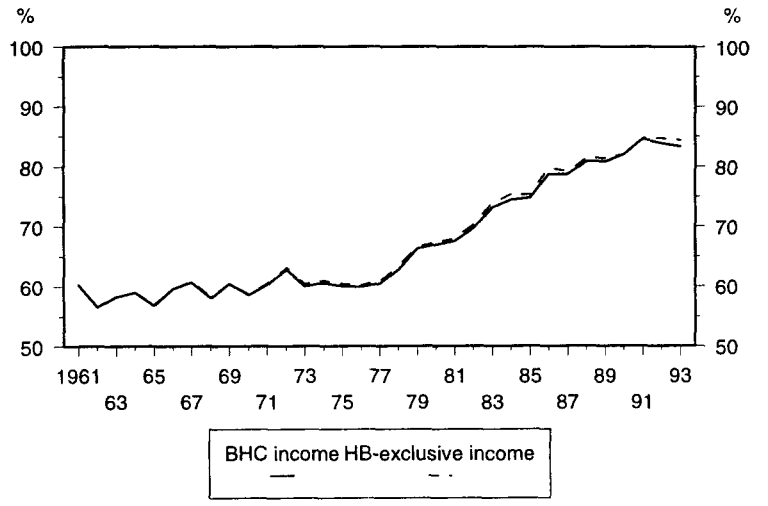
The relative position of social tenants appears rather worse in the statistics presented here than would have been the case if we had used an income measure *inclusive* of housing benefits. For example, using the BHC income measure results in fewer social renters found at the *very* bottom of the income distribution, as HB payments compensate many for higher rents. Significantly, payment of HB improves the relative position of social renting pensioners, but almost 90 per cent of this group are still amongst the poorest 50 per cent of the population.

Whichever measure of income we choose, social tenants remain concentrated in the lower half of the total UK income distribution, and this has become increasingly the case since 1961 (see Figure 2.12).

Figure 2.13 shows how the proportion of social renters in each income quintile has changed over time. Since the early 1960s, the percentage of social renters in the bottom two quintiles has increased from just under one-half to over three-quarters. The fraction of social renters in the

FIGURE 2.12

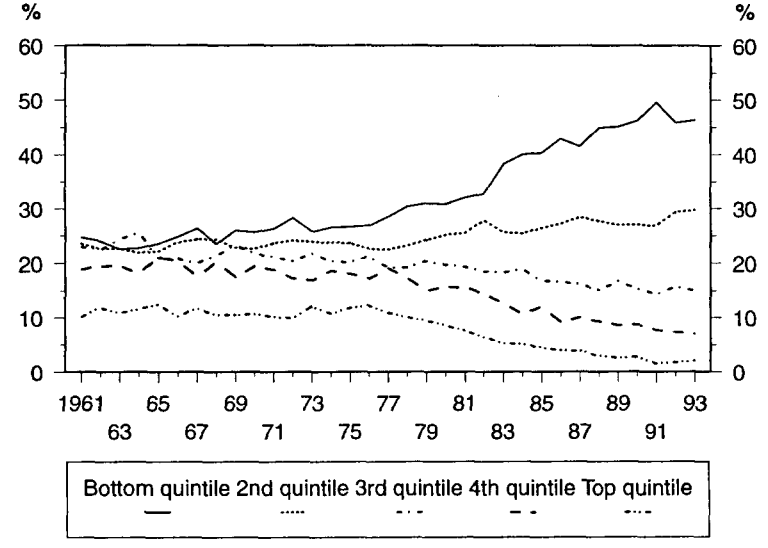
Percentage of social renters in bottom half of income distribution



Note: If the income distribution were equal, then 50 per cent of social renters would fall in the bottom half of it.
Source: Family Expenditure Survey, various years.

FIGURE 2.13

Trends in the percentage of social renters in each quintile (HB-exclusive income measure)



Source: Family Expenditure Survey, various years.

very bottom quintile has almost doubled over the period. Correspondingly, fewer and fewer social renters are found in the top quintile (only about 2 per cent in 1993).

Clearly, social renters as a group have become increasingly concentrated in the lower end of the income distribution since the late 1970s in particular. How far this reflects compositional changes is not clear from the FES, but we can use data from the Survey of English Housing to try to uncover these effects.

Whilst the SEH does have useful information on current and previous tenure, its income information is far less detailed than that found in the FES. Except for private tenants, there is no breakdown into sources of income, and overall income is only recorded in bands and for household heads and their spouse only. (Appendix F discusses the income information available in the SEH and provides a comparison of average incomes reported in the SEH and the FES.)

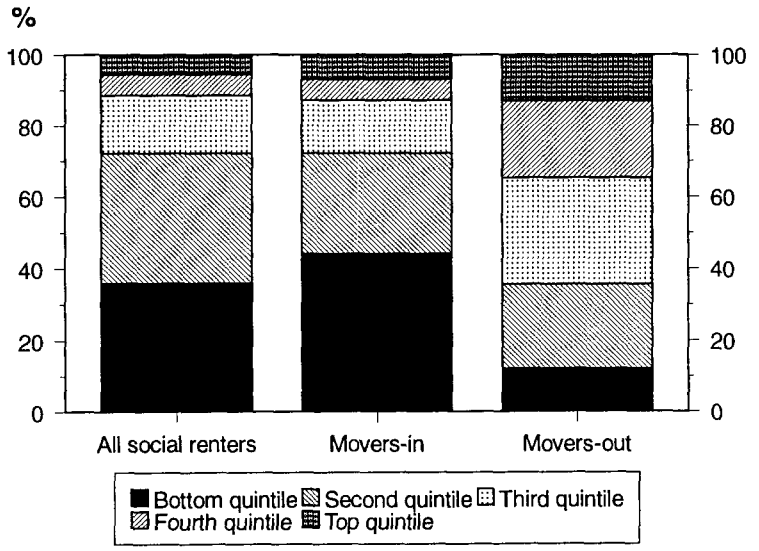
This does limit the usefulness of the data to some extent, but it does not prevent us from comparing the recorded incomes of various groups in which we are interested. Reported income levels might not be as accurate as in the FES but, as we noted above, there seems no reason to doubt the accuracy of the *relativity* of incomes within the SEH.

Figure 2.14 shows the stark contrast between the position of those who moved out of the social rented sector under the RTB and the position of the rest of the social renting population. (See Section 2.2.1 on family type for a definition of movers-in and movers-out.) Around 10 per cent of movers-*out* were in the bottom HB-exclusive income quintile in 1993–94, compared with almost half of all movers-*in*. Conversely, almost two-fifths of movers-out are found in the highest two quintiles; this compares with only just over 10 per cent of all current social renters.

The 1993–94 SEH reports a slightly lower median income for movers-in compared with that for all current

FIGURE 2.14

Percentage of social renters in each quintile: evidence from the SEH on movers into and out of the sector



Source: Survey of English Housing, 1993–94.

social tenants; median income in 1993–94 for movers-out is almost double that for all current social renters.

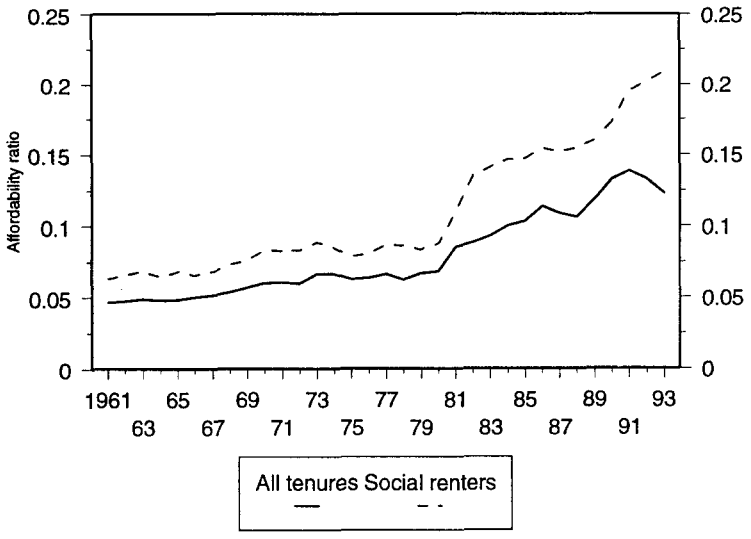
Together with our findings on family type and economic status, these results imply that compositional effects have been very important in terms of changes in the relative position of social renters in the total UK population, with the most affluent households moving out of the sector under the RTB and mainly the poorest and most disadvantaged families remaining or moving in.

2.3.4 The affordability of social rented housing

We now come to look at the affordability of social housing, as measured by the ratio of household *gross* housing costs[10] to unequivalised BHC income (which includes housing benefit payments), giving an indication of the proportion of total household income that is needed to

FIGURE 2.15

Median affordability ratios: social renters vs. all tenures



Source: Family Expenditure Survey, various years.

meet housing costs. Trends in real housing costs between 1961 and 1993 in the different tenures were presented in Section 2.1.2.

Figure 2.15 shows how housing affordability has changed over the period for social tenants compared with the population as a whole, growing particularly since 1979 from less than one-tenth to over one-fifth, on average. These trends are partly attributable to compositional changes within the sector (for example, the growth in the prevalence of lone-parent families, who tend to have higher-than-average affordability ratios) and partly due to an increase in LA / HA rents over the period. It is notable that, in the five years after 1988, social tenants' housing

[10]Gross housing costs consist of rent, mortgage interest, structural insurance, etc., and include any costs paid out of social security benefits.

TABLE 2.10

Median affordability ratios[a], by tenure and age band, 1993

Proportion in each age band

Tenure	*16–34*	*35–49*	*50–59/64*	*60/65–74*	*75 plus*	*All*
LA tenants	0.20	0.17	0.18	0.25	0.28	0.20
HA tenants	0.24	0.22	0.18	0.31	0.28	0.24
Private unfurnished tenants	0.25	0.26	0.21	0.21	0.32	0.25
Private furnished tenants	0.34	0.31	0.18	0.30	0.16	0.33
Mortgagers	0.15	0.12	0.07	0.07	0.08	0.12
Outright owners	0.02	0.02	0.02	0.03	0.04	0.03
All	0.17	0.13	0.06	0.05	0.07	0.12

[a]The median affordability ratio is calculated by dividing gross housing costs by unequivalised BHC income and taking the median.

Source: Family Expenditure Survey, 1993.

costs as a ratio of total income increased by one-third. This corresponds to a particularly steep rise in rent levels in the social rented sector in this period.

Table 2.10 reports affordability ratios in 1993 for each tenure, broken down by age band. Social renters' median affordability ratios were almost double the all-tenures average in 1993, with the greatest differences amongst elderly households. This is the result of lower-than-average incomes amongst LA and HA tenants (see Section 2.3.2 above). HA tenants in general have higher housing costs, both absolute and relative to income, than LA renters.

Table 2.10 also illustrates that mortgagers have rather lower affordability ratios than renters,[11] whilst outright

[11] Affordability ratios for mortgagers have varied greatly over the years, because of the volatility of the housing market and variations in interest rates

owners pay only a very small fraction of their income towards housing costs, on average, as one might expect. Private renters (except the older private tenants) are worse off, on average, than social renters, as measured by housing affordability. Private furnished tenants have the highest affordability ratios, at 33 per cent (increasing substantially since 1979, when affordability ratios stood at around 15 per cent for this tenure), corresponding to relatively large housing costs, on average. In fact, affordability ratios, along with rents, increased markedly throughout the private rented sector after 1988 when rent controls were abolished.

Pensioners in the social rented sector tend to have higher affordability ratios than non-pensioners, and these ratios have worsened particularly over the 1980s. For example, in 1976, 16 per cent of pensioner income was required to meet housing costs in this sector, on average; by 1993, this had increased to almost 30 per cent. The particularly high affordability ratios observed for elderly social tenants are explained by a combination of low incomes and relatively high housing costs, on average (see Table 2.1 in Section 2.1.2). However, the gap between social renting pensioner and non-pensioner affordability ratios narrowed during this same period: the non-pensioner ratio grew from less than half that of pensioners in 1976 to over three-quarters in 1993. This is presumably due to the decline in non-pensioner incomes relative to pensioner incomes over this period (see Section 2.3.2).

2.4 Summary and Conclusions

The general picture that has emerged from our analysis of the incomes and characteristics of social renters is that of dramatic changes in the composition of families in this

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and the impact these have had on housing costs.

tenure in the past 30 years or so. The social sector now contains a much greater proportion of families reliant on social security benefits, as the prevalence of lone parents and other economically inactive households has grown. Moreover, HA and LA accommodation is now much more costly to its tenants, both in absolute terms and relative to income, with social rents increasing by over one-third in real terms since 1989 alone.

Our main findings are summarised below.

- The proportion of all families in the UK who are resident in social rented (that is, local authority and Housing Association) accommodation fell from one-third in 1961 to less than one-quarter in 1993. *(Section 2.1.2)*
- Rents in the social rented sector have increased quite sharply since the late 1980s, by about 30 per cent in real terms between 1989 and 1993. However, real private sector rent increases have been far more significant over this period. *(Section 2.1.2)*
- Single pensioners are more than one-and-a-half times as likely and lone parents almost three times as likely to be living in the social sector than in other tenures, with these groups growing considerably as a percentage of all families in the sector over time. Correspondingly, a greater percentage of families in the sector are headed by women and very young (aged 16 to 34) or very old (aged 75 plus) individuals. *(Section 2.2.1)*
- Social renters are more than twice as likely to be unemployed and otherwise economically inactive than families in other tenures, and this divergence has become much more apparent since the late 1970s. *(Section 2.2.2)*
- Three-quarters of those social renters who were working in 1993 were employed in manual jobs, although this proportion has declined since the 1970s. *(Section 2.2.2)*

- The majority of social renters (95 per cent) receive state benefits in some form or another, with one-quarter relying on social security as their only source of income. *(Section 2.2.2)*
- Average incomes in the social rented sector have remained unchanged in real terms since 1961. In 1993, social tenants' median income was only half that of households in other tenures. The relative decline in income is most noticeable since the late 1970s / early 1980s, largely as a result of an increasing number of better-off council tenants taking advantage of right-to-buy policies (which acts to reduce the *average* incomes of those left in council housing). *(Section 2.3.2)*
- Social renting pensioners' income has continued to increase steadily, so that in 1993 their median income was, for the first time, marginally higher than non-pensioners' income in this tenure. But they are still poorer than pensioners in other tenures. *(Section 2.3.2)*
- Social rented accommodation has become more and more costly to its tenants, with the 10 per cent affordability ratio facing tenants in the late 1970s increasing to over one-fifth for current social renters. However, in the private sector, affordability ratios have risen even more sharply, particularly with regards to tenants living in private *furnished* accommodation, where rents have doubled since the late 1980s. *(Section 2.3.4)*

It is apparent, then, that tenants in the social sector are no longer as diverse a group of people (with respect to demographic and economic characteristics) as they were 20 or 30 years ago; as a group, they are now much more uniformly poor and disadvantaged. All of this suggests that the current system of means-testing housing benefit payments is not necessarily appropriate, given its work incentive problems and the fact that the *majority* of social renters receive HB. Instead, it might be more appropriate for the government to consider a return to blanket 'bricks-

and-mortar' subsidies to local authorities and Housing Associations, which would provide 'affordable' housing to low-income families without forcing them to become reliant on welfare benefits.

Since the Conservative government embarked on its policy to diminish the role of local authorities in the provision of low-cost rented housing, the general living standards of social tenants as a group have substantially declined. This has largely resulted from the compositional changes that have occurred within the LA and HA sectors, which are a direct result of the government's right-to-buy policies of the 1980s. Consequently, there is now a far greater concentration of unemployed and retired households in the social rented sector and an over-representation of one-parent families, many of whom have no source of income other than state benefits. The most appropriate subsidy regime for the social housing sector must therefore be considered in the light of these changes. It is to this question of the most suitable form of subsidy that we turn in the remainder of this report.

CHAPTER 3
Measuring Dependency

3.1 Housing Benefit for Social Tenants

3.1.1 Introduction

We have seen how tenants in local authority (LA) and Housing Association (HA) accommodation are now concentrated towards the bottom of the income distribution. This has occurred alongside rent increases in these sectors. The inevitable result has been a growing proportion of social tenants dependent on housing benefit (HB). More than 60 per cent of all social tenants now receive some help with their rents from HB. This combination of circumstances has raised fears about the possible effects that the interaction between relatively high rent levels and low actual and potential income levels might have on work incentives.

In this chapter, we explain the structure of HB and outline the methods we use in the next chapter to consider the effects of HB on work incentives. In particular, we look at appropriate ways of thinking about HB, rents and income, appropriate definitions of income and useful measures of welfare dependency. In the next two chapters, we go on to apply these measures to allow an assessment of the current situation facing social renters and the effects of various reforms.

3.1.2 Recent changes in rents and benefits

Average rents in the local authority sector rose by around a third in real terms between 1987–88 and 1995–96. For HA tenants, the rises were even more dramatic. The average weekly rent for a newly let HA property rose from £26 in 1989 to £53 in 1993.

One major result of these changes has been increased spending on HB. In cash terms, spending on rent rebates for council tenants has risen from £2.5 billion in 1987–88 to over £6 billion in 1995–96. Over the same period, there has been a *fall* in the number of claimants from just over 3.5 million to around 3 million by 1995. In other words, the increase in spending is more than entirely accounted for by increases in the average amount received rather than by increases in the numbers of recipients. In this way, the rise in HB expenditure differs from rises in expenditure on most other benefits over the past few years, which have been driven almost exclusively by increasing numbers of beneficiaries resulting from falling levels of employment.

Among council tenants, there is an even distribution in the numbers above and below the age of 60 receiving HB — around 1.5 million in each category. Of those HB recipients over the age of 60, just under half were also in receipt of income support (IS), whereas the proportion of the under-60s receiving IS is much higher, at just over three-quarters of the total. More than half a million HB recipients who are LA tenants are single parents and another third of a million are non-pensioners entitled to a disability premium. As HB is a means-tested benefit, it is not surprising that in 1994 only 150,000 LA tenants receiving HB had earned income.

As we have already seen, the corollary of these increased rents and consequent increased HB payments has been reduced government spending on subsidising rent levels directly. There is a straightforward choice between subsidising rent levels for all tenants in the council / HA sectors or just helping those with the lowest incomes. The declared policy of the government has been to shift resources from the former type of expenditure to the latter so that the resources spent are better targeted — only those in need of the subsidy receive it. However, moving from universal to means-tested benefits changes the labour supply incentives created by the benefit system.

3.1.3 The benefit system and labour supply

When thinking about the incentives to take up employment that are created by the benefit system, we need to consider three dimensions of the benefit system:

- *The level of benefits that people receive while out of work.* The higher this level is, the lower will be the incentive to take up employment. Of course, this level cannot simply be seen as a tool for influencing people's labour supply decisions. It also represents the minimum standard of living that people are guaranteed.
- *The amount of benefit that people can receive while in work.* The withdrawal of benefits when people move into work lowers the net gain that people receive when taking up employment, and therefore reduces their incentive to work. This can be avoided by continuing to provide benefits while people are working. At the other extreme, benefits may only be paid to people who are working. In this case, the benefits will increase in-work income and thus improve the incentive to take up employment.
- *The cost of the benefit system.* In the end, the cost of all benefits must be borne by taxpayers. The higher the level of benefit, in or out of work, the more the provision of benefit will cost. The levying of tax to fund the benefit system may itself cause work incentive problems and other economic distortions.

One important point must be made here. The massive increase in HB spending on social tenants does not represent a net increase in government expenditure on social tenants because it is a direct result of reduced expenditure on subsidising rent levels. That is why the focus of this chapter is *not* on levels of HB spending. This should be considered only in the context of the structure and amount of total spending on subsidies for social renters, and that is a subject for a separate study.

Viewed within this framework, the manipulation of the benefit system to provide incentives to move into work involves a number of related trade-offs. Once people are provided with out-of-work income, their incentive to take a job is reduced. This can be counteracted by allowing people to keep their benefits as they move into employment or by providing in-work benefits targeted on the groups for whom the benefit system provides the greatest work disincentives. But such policies increase the tax burden needed to fund the benefit system.

The precise nature of a benefit system will depend on how these considerations are traded off against each other. To some extent, many of these questions are political. What is an acceptable minimum level of out-of-work income? How great a tax burden is acceptable? However, before we can address such questions, we need to get some idea of the scale of the trade-offs involved and of which measures we would expect to have the greatest effect on labour supply.

3.2 Background, Methodology and Data

In the particular context of housing benefit and rent levels in the social sector, we need to outline how the current system works and the methodology we shall use to look at the impact on work incentives. We start by outlining the structure of the HB system. We then look at how this benefit interacts with other sources of income, in particular family credit (FC). Next, we discuss our measure of income, and finally we discuss the measures that will be used to examine the possible impact of the benefit system on work incentives.

3.2.1 Structure of housing benefit

Housing benefit is means-tested and is designed to pay people's rent when they are out of work or on low incomes. It is payable to private tenants as well as Housing

Association and local authority tenants. In what follows, we ignore HB for private tenants and all the problems of the private sector, not because we consider them unimportant but because the social sector is the focus of this study.

For families in receipt of income support, HB covers the whole of their rent, so effectively their net rent is zero. Once a family becomes ineligible for IS, either because their income is too high or because they work more than 16 hours per week, the amount of HB they receive will be reduced as their income rises. To determine the amount by which HB will be reduced, we need to find the family's 'excess income', which is given by

Excess income = (Earnings – Disregard) + Other income – Needs.

Earnings is the amount of income the family receives from working. Not all earnings count when calculating excess income. Depending on the composition of the family, a small part of their earnings is ignored through the earnings disregard. The levels of the main disregards for the 1996–97 benefit system are given in Table 3.1. These mean, for example, that the first £5 of earnings by a single person are ignored in the calculation of HB entitlement, while for single parents the first £25 are ignored.

Other income is income from sources other than earnings, such as pension payments and most benefits. Certain benefits, such as attendance allowance, are ignored. Income from family credit, a means-tested in-work benefit,

TABLE 3.1

Earnings disregards in the 1996–97 benefit system

Family type	*Earnings disregard*
Single person	£5
Lone parent	£25
Couple	£10
Disabled	£15

TABLE 3.2

Personal allowances for needs calculation in the 1996–97 benefit system

Family type		*Personal allowance*
Single	16–24	37.90
	25 or over	47.90
Lone parent	18 or over	47.90
Couple	One or both over 18	75.20
Child additions	Under 11	16.45
	11–15	24.10
	16–17	28.85
	18	37.90
Premiums	Family	10.55
	Lone parent	11.50

counts in full in the calculation of excess income. This has important consequences, as we shall see below.

The final element needed to calculate excess income is the family's needs. This is the amount of income the family can have before their HB is reduced. It depends on the composition of the family. The main needs allowances for non-pensioners are shown in Table 3.2 for the 1996–97 benefit system.

As an example, take a couple with two children under the age of 11. Suppose they earn £140 per week *after income tax and National Insurance* and get £19.60 in child benefit.[12] They would have a personal allowance of £75.20 plus two allowances of £16.45 for their children. They would also have a family premium of £10.55, bringing their total needs to £118.65.[13] They have a £10 earn-

[12]For the moment, we ignore the fact that they would be entitled to family credit. This will be covered below.

ings disregard and their child benefit counts as other income, so their total income is £149.60. Their excess income will therefore be £30.95.[14]

Once we have found the family's excess income, we can calculate their HB. The basic formula is

HB = Rent – (Taper × Excess income) – Non-dependant deduction.

The rent element will, for local authority tenants, be the rent paid on the property. If there is no excess income or non-dependant deduction, then the family will receive HB which covers the whole of their rent. Otherwise, their HB will be reduced by a proportion, known as the taper, of their excess income. In the current benefit system, the taper is 65 per cent. This means that HB will be reduced by 65 pence for every pound of the family's excess income. Suppose our example family have a rent of £40 per week. Their excess income is £30.95. This would reduce the HB by £20.12 (65 per cent of £30.95), so HB would cover £19.88 of the family's rent.

There are some other complications, the most notable being non-dependant deductions (NDD) and capital limits. A NDD is an amount that is deducted from HB where there is another person besides the claimant's partner and dependent children living in the household. It is assumed that this represents the contribution to the rent that this person makes, whether or not this contribution is actually made. If there were another member of our example family who no longer counted as a child for benefit purposes (for example, was over 18 years of age) and this person was earning £100 per week, the amount of HB paid would be reduced by £12 currently, leaving our family with £7.88 in HB. For many families, these NDDs are an

[13] 75.20 + 16.45 + 16.45 + 10.55.

[14] 149.60 – 118.65.

important consideration in calculating their HB entitlements. They have an effect both on their living standards and on their financial returns from employment.

Capital limits operate so that any HB claimant with capital in excess of £16,000 is ineligible for HB, and a claimant with capital lower than £16,000 but greater than £3,000 will have their HB entitlement reduced by £1 for every £250 of capital over £3,000.

3.2.2 Housing benefit and subsidised rent

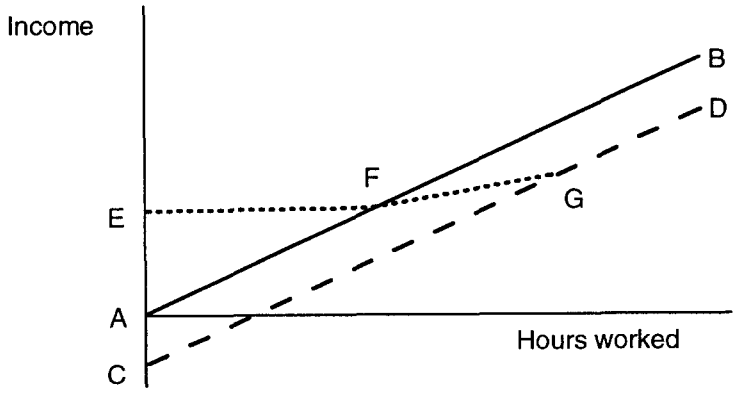
Over the past 15 years or so, the UK benefit system has moved away from subsidising rent levels in the social sector to an increasingly means-tested system in which HB is expected to help those on low incomes to pay their rent. In the local authority sector, it operates by reducing the net rent bill faced by tenants. We can now consider how to interpret these changes within a framework that allows the different sorts of subsidy to be compared directly.

One of the basic conceptual tools we shall use is illustrated in Figure 3.1. It shows the interaction between rents / HB and net income given original income (or hours). For the moment, we ignore tax and other benefits as well as many of the finer details of the operation of HB. The aim is to highlight the basics of how the system operates. On the x-axis are hours of work, starting at zero at the origin. The y-axis indicates net income, the exact interpretation of which we will come to soon.

The line AB represents a relationship between hours of work and the person's income from employment in the absence of any benefit system. It starts at zero and rises as the person works more hours. With no benefit system, the person would have to pay their rent out of this income, and the rent would be the same regardless of the number of hours worked. So the line CD shows the amount of income the person would have after paying their rent. At zero

FIGURE 3.1

Simplified impact of the benefit system



hours, this income would, of course, be negative. There is a sense in which this treats rent like a tax because it is a necessary item of expenditure. In the subsidised social sector, there is little or no choice over rent level; actual rent level depends mainly on the level of government subsidy, so the treatment of net rent as a tax is an appropriate way of thinking about rent costs for social tenants.

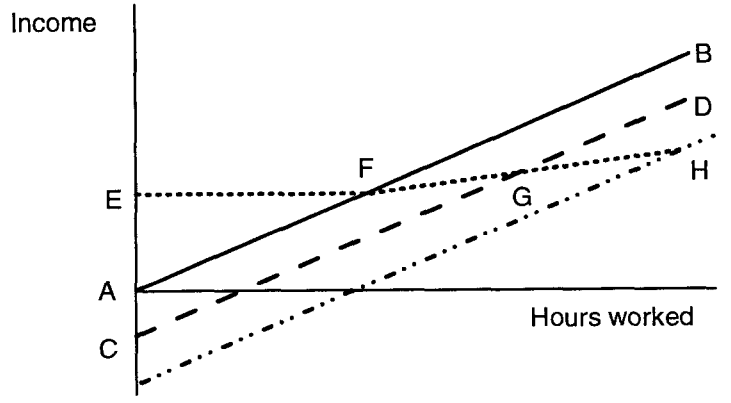
Let us now introduce the benefit system. Income support guarantees people a minimum level of income, amount E in Figure 3.1. In other words, the person will receive an income of E if they do not work. In addition, for social renters, HB will cover the whole of their rent while they receive IS. So, in effect, while they receive IS, they pay no rent. Once the person's income from employment is more than E, or hours of work exceed 16 per week, the person stops receiving IS. After this point, the amount of HB received by the person falls, so they have to start paying a proportion of their rent. This is what is happening along the line FG, where their income after paying their rent is below AB (the amount that they earn) but above CD (the amount they would have if there were no benefit system).

Finally, at the point G, the person no longer receives any HB and has to pay the whole of their rent. From here on, their income after paying rent moves up along the line CD as they work more hours. Thus, allowing for the effect of the benefit system, the person's income after paying rent moves along the line EFGD. This line is the person's budget constraint. It shows the level of income after paying rent that a person would receive across a range of hours worked.

We can now see what happens if the rent increases. The effect is to shift the line CD downwards, which is shown in Figure 3.2. Up to the point G, this has no effect on the person's income after paying rent. Over the range EF, the person still gets IS and so the whole of their rent is covered by HB. Over the range FG, the person receives tapered HB, but the change in the rent level makes no difference to their excess income, and it is this, rather than the level of the rent, that determines how much rent they must pay for themselves. So the only effect of the increase in rent over the range EG is to increase the amount of HB being paid. No real change to the government's finances has occurred here. All that has happened is that the govern-

FIGURE 3.2

Impact of rent increase



ment notionally receives more rent from the tenant, but pays that extra rent through increased HB payments.

After point G, the person continues to receive HB until the point H. This HB covers part of the rent increase, with the remainder being paid by the tenant from their other income. Over this range, the person's income after paying rent (the line GH) is below that which they would have had before the rent increase (the line CD). So even though they now receive HB, they are *worse off* than before the rent increase. Beyond H, the person no longer receives HB, and so pays the whole of their rent, including the increase, from their other income.

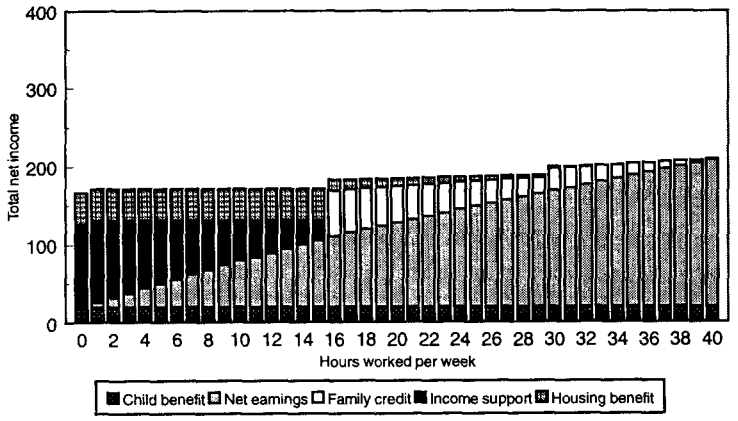
For anybody already on HB, changes to rent levels make no difference to their after-rent income because any rent increase will be met in full by increased HB and any rent decrease will result in correspondingly lower HB. For anyone not already on HB, a rent increase makes them worse off, as the increased rent is an unavoidable additional expenditure, but if their incomes are low enough, they will float onto HB. So, when rent levels are increased, both the numbers on HB and the amount paid in HB *increase*, but the actual subsidy for social renters *decreases* because lower direct subsidies to rent levels are required.

3.2.3 Housing benefit and family credit

In Section 3.2.1, we looked at the calculation of HB for an example family when they were earning a particular amount. In Section 3.2.2, we looked at a simplified budget constraint, highlighting the interaction of subsidised rents and HB. However, real budget constraints are rarely as straightforward as this. Figure 3.3 shows the budget constraint for the example family we used earlier. The benefit entitlements and tax liabilities are calculated in accordance with the 1996–97 benefit system. We assume that one partner is working and earns £6 per hour. We can now

FIGURE 3.3

Decomposition of income for example household: couple, two children; £40 per week rent; one earner on £6 per hour



see the interaction between family credit and housing benefit.

In Figure 3.3, the total height of each bar represents total income at that number of hours of work. The constituent parts of each bar represent particular types of income. In each case, the bottom chunk represents child benefit, the level of which never varies with hours of work. The solid black area represents income support, which runs out at 16 hours. Just below this is earnings (after tax and National Insurance) and above it is HB. The white bars from 16 hours on represent family credit.

For simplicity's sake, we illustrate all this with reference to an income figure that is not net of rent. This is merely to make the picture easier to comprehend and has no impact on its shape. Also for ease of interpretation, we ignore council tax benefit.

At zero hours, the couple receive £107.05 in IS, £19.60 in child benefit and £40 in HB. This HB covers the whole of their rent, so in effect they face a net rent of zero. If one partner were to work 16 hours or more, then the family become ineligible for IS. As they have children, at this point they become entitled to FC. If the worker has a job

that pays £6 per hour, then at 16 hours the family receive nearly £59 in FC. If we ignore HB for the moment, the family's net income would jump by £38 between when the person works 15 hours and when they work 16 hours, as the amount of FC they become entitled to exceeds the amount of their lost IS.

This is exactly what FC is supposed to do — to cause a jump in people's income when they work 16 hours per week.[15] But there is one complication. Family credit counts as income when calculating the amount of HB to be paid to the family. While on IS, the family had the whole of their rent covered by HB. Once they work 16 hours, though, HB only covers £13.40 of their rent. The remaining £26.60 must be paid from the family's other income. If we take account of this extra rent that has to be paid, then the household's net income only increases by £11.32. So the existence of HB limits the impact of FC on the family's budget constraint.

In general, the potential problem of limited rewards from further hours of work is amply illustrated by this example. Despite a gross wage of £6 per hour, 40 hours of work per week make this family only about £40 better off than no work at all — an effective wage rate of just £1 per hour. Housing benefit must bear a large part of the blame for this.

3.2.4 Income definitions

Before assessing the impact of the benefit system on people's labour supply incentives, we need to look at a number of issues surrounding the definition of the relevant income measures. From an economic point of view, we would expect people to be concerned with the purchasing power that supplying labour provides — that is, with their

[15] See Duncan and Giles (1996) on family credit design and incentive issues.

income (including any state benefits received) after paying income tax and National Insurance contributions. Thus in looking at how people's position changes in response to different policy regimes, we look at changes in their income net of income tax and National Insurance.

In addition, as we are specifically concerned with the impact of rent levels and related benefits on labour supply, we need to use a measure of income that is also net of housing costs. This must be the case in principle because where rent level is set by government decision and housing expenditure is a necessity for individuals, rent acts very much like a tax that has to be paid regardless of other consumption choices. To see the need for this treatment, consider the situation of a household receiving £100 in income support and getting full HB to cover their rent of £30 per week. The household's before-housing-costs income is £130 per week, while their after-housing-costs income is £100 (£100 + £30 HB – £30 gross rent). Now suppose the household's rent increased to £50. They would now receive £50 in HB which increases their BHC income to £150. Their AHC income would remain the same, at £100. So on a BHC measure, the rent increase appears to make the household better off, while an AHC measure suggests that the increase has no effect on their well-being.

The household are indeed unaffected directly by this rent increase. They are still living in the same accommodation for which they pay no net rent, as their gross rent is met in full by HB. Additionally, they still have £100 to spend on other consumption. Of course, if the household were not on HB, the rent increase would make them worse off. Again, we require an AHC measure to capture this, as the household's BHC income would be unaffected by the rent increase.

There are a number of possible objections to the use of an AHC income measure. However, in the case of social renters, these are of limited relevance. Outside the social

rented sector, the rent level will often reflect the household's preference to live in a particular standard of accommodation. For the social rented sector, accommodation is often not chosen by the tenant, and the rent structure is relatively flat, taking little account of the standard of the accommodation. Finally, it is worth repeating that the level of social rents is a matter of government policy and depends on political decisions about the appropriate level of subsidy. Rent policy can be seen as an extension of a government's benefit policy as well as an integral part of its housing policy.

A second issue that arises is the sharing of income and housing costs within the households and families. For income, we make one of the standard assumptions — that people care about the income of their immediate family unit. We take the same definition of a person's immediate family as is used by the benefit system, that is, the person, their partner (if any) and any children still at school.

Where there is more than one family unit, there is an issue about who actually pays the housing costs. One common assumption is that all housing costs are met by the 'main' family unit in the household. However, the benefit system assumes that other family units make contributions to housing costs and this is reflected in non-dependant deductions from benefits. In the absence of any actual data on how housing costs are shared, our usual assumption is that each family unit pays rent equal to their appropriate non-dependant deduction, with the remainder of the rent being met by the 'main' family unit.[16] For most results, this assumption makes little difference.

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[16] 'Main' is defined as in the FES data and is self-defined by the household being interviewed.

3.2.5 Measures of welfare dependency

Looking at budget constraints for example families can provide a degree of insight into the operation of the benefit system, but it has a number of drawbacks. First, the representations depend upon the particular situation of the example family chosen. We could alter the shape of our diagram by changing the wage rate, the rent level, the number or ages of the children, whether or not the person has a partner, etc. More importantly, such diagrams give no clear representation of the population as a whole. For instance, only 6 per cent of families in the UK are comprised of two adults, only one of whom works, and children. Yet this is often referred to as the typical or average family type.

To gain a much better insight into the effects of the benefit system, we have to look at a representative cross-section of the population. This we draw from the Family Expenditure Survey (described elsewhere in this report). We describe their work incentive position through the use of a number of common measures of the impact of the benefit system. An outline of how these measures are calculated and how they are interpreted is given here.

The average tax rate (ATR) measures the proportion of a person's gross earnings that are taken in direct taxes and lost benefit entitlements. It is calculated as one minus the ratio of the increase in net income from taking up a job to the gross earnings that the job provides. Take, for instance, the example family considered earlier. At zero hours, the family's net before-housing-costs income is £166.65. With £40 rent, their after-housing-costs income will be £126.65. Now were the earner to work 40 hours at £6 per hour, their gross earnings would be £240. But after paying income tax and National Insurance and having their benefit entitlements reduced, the net after-housing-costs income of the family will increase by only £42.49, to £169.14. The ATR faced by the family will therefore be

82.3 per cent (i.e. 1 – 42.49/240). In other words, over four-fifths of their gross earnings are lost in tax and reduced benefits. Clearly, the average tax rate is just a way of measuring the proportion of gross earnings that is effectively received.

A related notion is that of the replacement rate (RR). This is the ratio of the net income in work at a particular hours and wage level to the net income out of work. So it is *not* just a description of the effective relationship between net and gross returns to work. Again, we take our example family and consider the case of one partner working 40 hours at £6 per hour. Their net after-housing-costs income will be £126.65 out of work and £169.14 in work. Thus their replacement rate will be 74.9 per cent (126.65/169.14). This can be interpreted as meaning that were the person to give up working, their income would still be about 75 per cent of their in-work income. In most cases, ATRs and RRs tell much the same story, so only ATRs will be reported in the following analysis. The only significant difference is that RRs are affected by the *level* of out-of-work income as well as by the size of the return to working. In certain situations, particularly where a spouse is working, this will be important. So family income out of work might be quite high because one member of the family works. If they are earning £300 per week, then the numerator in the replacement rate fraction will be large and the RR will be high as a result. The ATR will not be directly affected. This indicates that RRs pick up *income effects* that are not picked up by ATRs. That is, having a high out-of-work income decreases the incentive to work, even given a low or zero ATR.

Another measure that is often reported is the marginal tax rate (MTR). This measures the amount by which net income would increase were a person to earn an extra £1 of gross income. Suppose somebody is paying income tax and National Insurance and is receiving housing benefit and family credit. Their MTR is calculated as follows:

Gross earnings increase by	**£1**
Income tax rises by	24 pence
NI rises by	10 pence
So after-tax earnings rise by	66 pence
FC falls by 70% of 66 pence =	46.2 pence
HB falls by 65% of the remaining 19.8 pence =	12.87 pence
Final gain is 66 – 46.2 – 12.87 =	**6.93 pence**
Marginal rate is	93.07%

The MTR indicates the change in net income from a small shift in the amount a person works. At high MTRs, there is little gain to a person from working an extra hour. Where very high MTRs exist over a wide spread of income, then several extra hours of work may yield very little, and reducing hours (sometimes significantly) would result in little loss of net income but a large increase in non-employment time. So if ATRs are low, indicating high financial returns to enter employment, but MTRs are high, it implies that financial returns to employment would be greater at a lower hours level than the one calculated. It does not necessarily follow that individuals would prefer to work fewer hours; a full model of labour supply would be required to determine this.

In our empirical sections, we also use two other measures of the direct impact of HB on incentives. We have chosen to show the proportion of social renters in work receiving HB, to indicate how far the HB system extends up the income scale and the proportion of tenants who would escape the HB system in work. We also show a related measure which is the average hours of work needed under different HB systems to come off HB. Clearly, the more generous the HB system is, the higher the number of hours that need to be worked to escape HB.

In summary, ATRs, RRs and MTRs are useful measures of the financial gains that a person can expect from moving into employment or changing their hours of employment, although care must be taken in the interpreta-

tion of these measures. They are not an adequate basis for determining how many people will move into or out of work or will change their numbers of hours worked. For that, one needs a model of labour supply decisions which we have not attempted to produce here. In addition, particular care must be taken with the interpretation of these measures for unwaged individuals. The level of the calculated financial returns to work will depend on an assumption of the potential wage of that individual, their potential hours of work and the employment decisions of their spouse. These can only be assumed or estimated and these assumptions are crucial to the levels.

CHAPTER 4
Current Effects

In this chapter, we examine the financial returns to working faced by tenants in the social rented sector. This concern over the financial returns to employment for social tenants arises at least in part from their unemployment rate being twice the work-force average. The question we seek to address is, given their wage levels, whether the tax and benefit system in conjunction with rent levels faced creates high barriers to employment for social tenants. We apply the measures discussed in Chapter 3 under the current tax and benefit regime to study which social tenants face serious work disincentives and whether the incentives faced by social tenants are worse than those faced by families not in the social rented sector.

We have used IFS's tax / benefit model, TAXBEN,[17] to look at measures of returns to employment for a representative sample of the UK population. For those who are currently in work, we need to calculate the income that they would receive out of work. This is a relatively straightforward task, given that we know a large amount about the families' situations and that benefit payments are determined by known rules. For those currently unemployed, the problem is more difficult. We need to know what their in-work income would be. This involves estimating an hourly wage that they would receive and specifying the hours that they would work. In general, we will calculate our results at two hours levels — 20 hours and 40 hours — which roughly proxy the choices involved in taking a part-time or a full-time job. We provide tables for

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[17] See Giles and McCrae (1995).

the full-time hours choice in the main text and show the part-time tables in Appendix G.

More details on how we estimate wages for those out of work are provided in Appendix H. In general terms, we run regressions that use data on those in work to predict the wages of those out of work based on such variables as age and education. We do not pretend that the results from this simple procedure are exactly 'correct', but they are our best estimates of the potential wages that could be earned by unwaged social tenants. In any case, the general tenor of our results is robust to the exact method used for predicting wage levels.

Our results are based on three years of FES data from 1991 to 1993, with all incomes uprated to end-1995 earnings levels. This gives us a sample of roughly 4,000 households from the social rented sector. We use the 1996–97 tax and benefit system as the basis for calculating our work incentive measures.

4.1 The Position of Social Renters in Employment

This section describes the incentives faced by social renters currently in employment. But before going on to look at these specific measures, it is worth reminding ourselves of the wages earned by social renters.

Table 4.1 shows that the wages earned by social renters are low, and they are low relative to the average wage of the whole population. The mean for male social tenants is £6.60 per hour, and 10 per cent of men in this tenure group receive less than £3.75 per hour. Even at the top end of the distribution, male wages are still relatively low. The 90th percentile wage is less than £10 per hour, little more than the 1995 male mean wage of £8.91[18] across the whole population. That almost the entire distribution of wage

[18] Source: New Earnings Survey 1995.

TABLE 4.1

Summary statistics of the actual hourly wage distribution among social renters

Pounds per hour

	Men	*Women*
Mean	6.60	4.61
Median	6.10	4.00
10th percentile	3.75	2.61
90th percentile	9.74	7.02

levels in the social rented sector is below the economy-wide average is an indication of how concentrated in low-wage jobs social renters are. Wages of women in this sector are equally low, and, not surprisingly, lower than male wages. Half earn less than £4 per hour.

Using the gross weekly incomes and the hours of employed individuals in the FES, we calculated the levels of replacement rates, average tax rates, the proportion of tenants with high ATRs, those with high marginal tax rates, the proportion on housing benefit and the average number of hours that would have to be worked to come off HB. The results are shown in Table 4.2, where men and women are split into categories that represent reasonably homogeneous groups. Some of the groups are not mutually exclusive, so the sum of the population totals for men and women will exceed the total. Most of the overlaps occur where individuals in couples appear both in the children / no children split and the waged spouse / unwaged spouse split. It is important to recognise that all of the social tenants represented in Table 4.2 are in employment. Even if they appear to face severe disincentives to employment, by virtue of the fact that they are waged, they must derive greater benefit from employment than from being unwaged.

TABLE 4.2

Summary statistics for employed social renting population: current system

		Average replacement rate	*Average level of ATR*	*Percentage with ATR > 60%*	*Percentage with MTR > 60%*	*Percentage in work on HB*	*Hours of work to escape HB*
Men	Single	31%	52%	44%	5%	10%	20
	Unwaged spouse	59%	67%	73%	34%	15%	27
	Waged spouse	47%	44%	23%	5%	2%	9
	No children	41%	41%	18%	3%	4%	11
	With children	58%	60%	58%	27%	9%	20
	All men	48%	53%	44%	15%	8%	17
Women	Single, no children	45%	56%	51%	17%	19%	20
	Unwaged spouse	71%	57%	53%	54%	54%	30
	Waged spouse	62%	20%	7%	6%	3%	2
	No children	58%	26%	11%	10%	12%	9
	With children	69%	31%	24%	26%	18%	10
	Lone parent	68%	42%	34%	77%	71%	37
	All women	61%	36%	27%	27%	25%	16

4.1.1 Men in employment

Table 4.2 shows that the mean average tax rate for male social tenants is just over 50 per cent, while the mean replacement rate is just under 50 per cent. Forty-four per cent of our sample had ATRs in excess of 60 per cent. The highest ATRs are found for men with children and men with an unwaged spouse (clearly, some men fall into both these categories). Both of these groups are entitled to relatively high out-of-work benefit levels, either because their children confer greater needs for the family or their unwaged spouse provides little other income. Entitlement to high levels of benefit out of work increases the range of income over which benefit is withdrawn for a given wage level. This reduces the net gain from employment.

Marginal tax rates follow a similar pattern. But only 15 per cent of the employed sample have a MTR greater than 60 per cent, implying that most social renting men in waged employment work enough hours to escape from means-tested benefits. But this low average hides certain groups that have much higher MTRs. Again, we see that men with children or those with unwaged partners are much more likely to have high MTRs, because their income is not high enough to escape the reach of means-tested benefits altogether.

By contrast to the groups with high ATRs, RRs and MTRs, very few two-earner couples (both with and without children) have incomes that are low enough for them to receive means-tested benefits. Only 5 per cent of men with a waged spouse have MTRs in excess of 60 per cent, and only roughly a quarter have ATRs greater than 60 per cent. So in most cases where both partners are in work, the couple has enough income to avoid the high withdrawal rates associated with means-tested benefits, given their rent level in the social rented sector.

Finally, if we consider the direct measures of dependency on the HB system, few employed men in the social

rented sector are entitled to HB because their earnings are high enough to float them off the benefit. Entitlements are highest for single men, often young with very low wages, and men with an unwaged spouse. The number of hours of work needed to come off HB also follows the same pattern, and the average number is reasonably low, at 17 hours of employment per week.

4.1.2 Women in employment

Many of the patterns we observe for employed male social renters are repeated for women. ATRs and RRs are highest for women with an unwaged spouse, though there are relatively few such families. We also see that single women and employed lone parents face high ATRs. In general, ATRs are lower for employed women than for employed men because a large proportion of them will be secondary earners with partners on incomes that would not entitle them to any means-tested benefits even if they were to leave waged employment.

It is interesting, though, to compare the pattern of RRs with that of ATRs. Women with waged spouses have rather high RRs and low ATRs. This reflects exactly the difference between the two measures discussed in the previous chapter. RRs measure an income effect that is not picked up by ATRs and their high level is an indication that women with working spouses would have a relatively high income level out of work. ATRs do not pick up this effect and are very low for this group because they are generally entitled to no benefits when out of work and so none are withdrawn when work is entered.

MTRs are, on average, higher than for men, which is a reflection of the extremely high MTRs that lone parents face, of women's lower wage rates and of the fact that they often work part-time, which gives a higher degree of entitlement to means-tested benefits. But some of these high MTRs are exaggerated in Table 4.2 because a signifi-

cant proportion of the women with high recorded MTRs are actually receiving income support while working at the levels of the earnings disregard and therefore facing MTRs of 100 per cent. About 10 per cent of those in some sort of work appear to be in this position, though this proportion reaches a third among single parents, who are able to earn £15 per week before IS is withdrawn. Consequently, 25 per cent of the employed women social renters and 71 per cent of employed lone parents are entitled to HB at the hours they work. If women are working on the earnings disregard, they will have very low ATRs and this is another reason why ATRs are lower for our employed women than for employed men in the social sector.

The column in Table 4.2 that shows the number of hours that have to be worked to escape HB also sheds light on the incentives faced by employed female social renters. Compared with men, women with an unwaged spouse have to work more hours to escape HB, as their wages are typically lower, but those with a waged spouse have to work fewer hours because their partner's earnings are likely to be higher. On average, women in couples with or without children have to work fewer hours for precisely the same reason. But perhaps the most striking feature of this column is that lone parents already on average have to be employed 37 hours per week to escape HB.

4.2 The Position of Unwaged Social Renters

We now consider what effect the current tax and benefit system would have on the incomes of unwaged social renters if they were to take up employment. Before we can do this, we need to estimate the hourly wages they would receive if they became waged. For each person, we have estimated the wages we would expect them to receive, given their age, education and other characteristics. The estimates are based on the wages that are received by

TABLE 4.3

Summary statistics of the estimated wage distribution

Pounds per hour

	Men	*Women*
Mean	5.97	4.25
Median	5.93	3.97
10th percentile	4.64	3.50
90th percentile	7.22	5.25

employed social renters. Details of how these estimates were derived are provided in Appendix H.

Some summary statistics on the estimated wage distribution are given in Table 4.3. For both men and women, the estimated wages are, on average, below those observed for employed social renters. However, the distribution of estimated wages is not as diverse as that of employed social renters. Only £2.68 separates the 10th and 90th percentiles in the estimated male distribution compared with £5.99 for the distribution on which the estimates are based. This is a normal feature of this type of estimation process, which tends to concentrate estimates around the mean. This is because many of the most important factors that govern actual wage levels, such as motivation or ability, cannot be observed in our data. Our estimates are based, therefore, on the best proxies we have available (such as education level) for these factors which do not vary as much as the characteristics we are trying to measure.

After estimating hourly wage levels for the unwaged, we choose representative hours levels to indicate full-time and part-time work. The hours levels chosen were therefore 40 and 20 hours respectively. In Table 4.4, we show the results for full-time hours, and the equivalent part-time results are given in Table G.1, but reference will be made to the part-time results in the main text.

TABLE 4.4

Summary statistics for unwaged social renting population at 40 hours per week: current system

		Average replacement rate	*Average level of ATR*	*Percentage with ATR > 60%*	*Percentage with MTR > 60%*	*Percentage in work on HB*	*Hours of work to escape HB*
Men	Single	35%	58%	41%	6%	1%	19
	Unwaged spouse	68%	75%	88%	48%	10%	26
	Waged spouse	56%	54%	33%	5%	—	10
	No children	51%	60%	58%	—	—	19
	With children	71%	75%	85%	54%	11%	25
	All men	58%	67%	68%	32%	6%	22
Women	Single, no children	44%	61%	62%	6%	6%	22
	Unwaged spouse	76%	74%	86%	74%	40%	35
	Waged spouse	64%	34%	15%	8%	3%	4
	No children	66%	55%	50%	27%	27%	22
	With children	73%	59%	59%	53%	25%	23
	Lone parent	62%	58%	52%	96%	36%	37
	All women	66%	58%	56%	60%	27%	27

Again, the direct measures of the financial return from employment are the ATRs and RRs, but the other figures in Table 4.4 are also instructive. Very high MTR levels at the particular hours level chosen indicate that these individuals would lose little income by working fewer hours. Hence, if ATRs are low but MTRs high, it indicates there would be a similar financial incentive for an individual to enter waged employment at a lower hours level than the one chosen here. The same is equally true if the proportion on HB in work is high or the hours of employment needed to escape HB are high. On the other hand, if the ATR *and* the other measures of welfare dependency are high, it indicates there is little financial net gain from employment.

4.2.1 Unwaged men

We look first at the incentives faced by unwaged men. Table 4.4 shows the results for the unwaged social renters that correspond to Table 4.2 for employed social renters. The imposition of 40 hours in work differentiates these results from the employed sample above, where we can observe hours levels. For men, this is a relatively unimportant problem because the vast majority work in a small range of hours around 40 hours per week. But it does complicate some simple comparisons between the tables which might well be driven by varying hours levels as well as other features.

For nearly all groups of unwaged men, ATR levels and the proportion greater than 60 per cent exceed the corresponding group in the employed sample. This is a reflection of the fact that there is a greater proportion of the type of men in the unwaged sample who, if waged, receive lower wages than the majority of employed male social renters.

The ATRs for men with children and those with unwaged spouses are higher than those for the corresponding

men already in employment. This implies that more of these men face lower financial returns to work than the men we observe in employment. The picture for the measures of MTRs and dependence on benefits in work shows the same story. Relative to the employed group, the unwaged men face higher MTRs and would have to work more than five more hours to escape HB than the group already in employment. Overall then, unwaged men face smaller net financial gain from waged employment, but the pattern between different types of unwaged men is very similar to that of waged men.

The results indicate that men with greater disincentives to work are less likely to be in employment but this does not mean that men with these disincentives will not supply labour. An equally valid explanation would be insufficient demand for unskilled men, even at the low wage levels we have estimated. If the estimates of net benefit from employment are low for unwaged men at 40 hours of work, they are even lower for our part-time hours level, shown in Table G.1. At 20 hours, the average ATR for all unwaged men is 79 per cent, 68 per cent of men would have a MTR greater than 60 per cent, and 53 per cent of men would still be in receipt of HB in work. Consequently, part-time work will seem especially unattractive to these social renters, particularly if they are the primary earner in a couple.

4.2.2 Unwaged women

The figures in Table 4.4 for unwaged women show similar results to those for men. ATRs are higher across the board as wages are on average lower than for employed women. The difference between relatively low ATRs for women with a waged partner and very high ATRs for women with an unwaged partner are striking. They serve to highlight much previous work indicating how relatively financially

unrewarding it is for many women married to unemployed men to work themselves (Kell and Wright, 1990).

Nearly all lone parents would have a MTR greater than 60 per cent, although nearly two-thirds would not receive HB in work. This implies that their earnings would not be high enough to float them off family credit almost regardless of their hours of work. Another measure of how low the potential gains from employment for unwaged women are is that the average hours of work required to escape HB are 27.

The results for part-time work in Table G.1 are very interesting. As we would expect, the proportion with high MTRs is even greater at lower hours levels for nearly all groups of women, but the average ATR for lone parents is 11 percentage points lower. This is entirely a reflection of the earnings disregards in the means-tested benefit system that allow a little paid work before benefits are withdrawn. These can increase the gain from employment, but only up to the level of the disregard; any employment in excess of this suffers from exceedingly high withdrawal rates.

4.3 Do Wage Levels Matter?

In the previous two sections, we have shown that unwaged social tenants, particularly couples with children, lone parents and couples with an unwaged partner, gain relatively little financially from employment relative to unemployment. Employed social tenants face a similar pattern of financial returns but the gains from employment are in general greater than those for the unwaged. These lower financial returns for unwaged social tenants can be partly explained by a greater proportion of the unwaged group falling in categories with high average tax rates (such as families with children). But even within groups such as lone parents, our estimates of financial returns are greater for those in employment than for the unwaged.

The main explanation for these lower returns is that our estimated wage for the unwaged group is lower than that for the waged group because their characteristics are associated with lower-waged individuals. Consider again the hypothetical budget constraint for a couple with two children with one earner potentially receiving £6 per hour from employment shown in Figure 3.3, reproduced for convenience in Figure 4.1. If this wage is doubled, we get a new budget constraint, shown in Figure 4.2. It is immediately apparent that this family would face much more favourable financial returns from work at the higher wage level than at the lower one. At 40 hours, ATRs would be much lower, as out-of-work income is the same but in-work income is significantly higher. Marginal tax rates are also lower as this family has no entitlement to means-tested benefits at any hours level for the man higher than 18 hours.

Wage levels have important effects on the financial returns to employment. It is therefore an interesting question to consider what the returns shown in Table 4.4 would look like if the unwaged social tenants could not only

FIGURE 4.1

Decomposition of income for example household: couple, two children; £40 per week rent; one earner on £6 per hour

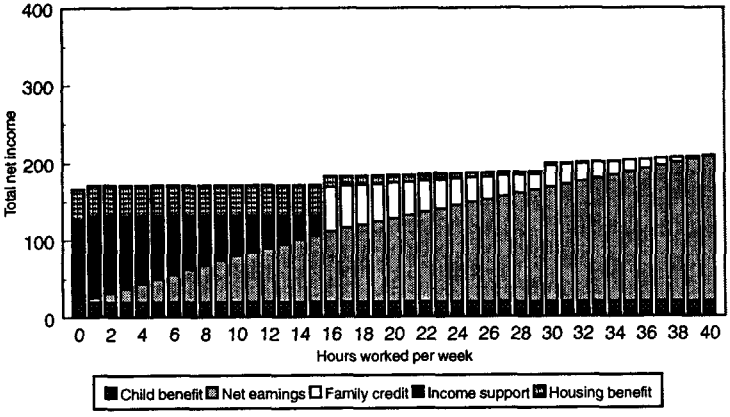
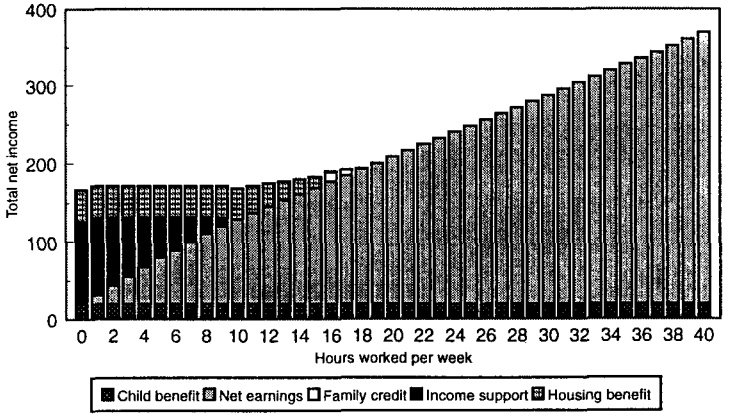


FIGURE 4.2

Decomposition of income for example household: couple, two children; £40 per week rent; one earner on £12 per hour



match their employed social tenant counterparts, but could earn wages centred around the national median.

In Table 4.5, we show the same table for the unwaged group at 40 hours of work, but increasing all male wages by 28 per cent and female wages by 57 per cent. This brings the median wage for men and women in our sample up to the national medians of £7.60 per hour for men and £6.24 per hour for women.[19]

It is apparent in Table 4.5 that ATRs have fallen, but not dramatically. Indeed, for female lone parents they have actually risen on average. At first sight, this might seem very odd; to understand it, we have to recall exactly what it is that the average tax rate is measuring. It is measuring exactly what it says — the average rate at which income is reduced or withdrawn at the given gross earnings level. So, if an individual is facing a very high marginal rate at a given earnings level, then a rise in earnings could easily increase the average rate. This is

[19] National median wages from New Earnings Survey 1995.

TABLE 4.5

Summary statistics for unwaged social renting population at 40 hours per week: raising wages to median levels

		Average replacement rate	*Average level of ATR*	*Percentage with ATR > 60%*	*Percentage with MTR > 60%*	*Percentage in work on HB*	*Hours of work to escape HB*
Men	Single	33%	53%	17%	2%	—	15
	Unwaged spouse	63%	69%	81%	15%	1%	21
	Waged spouse	49%	50%	26%	—	—	9
	No children	42%	54%	36%	0%	—	15
	With children	62%	70%	82%	16%	1%	20
	All men	51%	62%	56%	9%	1%	18
Women	Single, no children	40%	51%	14%	—	—	14
	Unwaged spouse	68%	70%	76%	32%	4%	23
	Waged spouse	58%	34%	9%	2%	0%	3
	No children	56%	49%	38%	—	—	14
	With children	65%	58%	52%	25%	3%	15
	Lone parent	60%	64%	77%	56%	8%	24
	All women	57%	58%	55%	30%	4%	18

particularly likely, given a benefit like family credit, which reduces ATRs by providing a big incentive to work at 16 hours but is then withdrawn rapidly creating high MTRs.

The other measure of benefit dependency in the table — the replacement rate — captures the positive work incentive effects of higher earnings better. But even it does not change dramatically for some groups. And this does just reflect the fact that with a large proportion of extra earnings being withdrawn when means-tested benefits are received, the returns to the higher earnings are blunted. Nevertheless, they are positive and for many people significantly positive.

It is very instructive also to consider the other measures of welfare dependency. The proportion with high MTRs falls dramatically as individuals are no longer entitled to means-tested benefits with these higher wages. This is also clear from the HB measures, as very few individuals are still entitled to HB and the number of hours needed to be worked to escape HB falls to 18 for both men and women. Therefore additional income at the same hours of work or increases in hours worked would have a much more significant effect on ATRs. If social tenants could receive median wages, welfare dependency in work would almost be eliminated.

Wage levels are important in determining the incentives social tenants face. While we are not suggesting in any way that a practical policy would be to increase wages to the national median, this exercise was instructive as a means of identifying a key underlying problem. Unwaged social tenants can generally expect to receive very low wages in the labour market which often do not provide enough income to escape means-tested benefits. In this respect, they are different from other groups such as mortgagers who generally receive much higher wages.

4.4 Conclusions

For both employed and unwaged social renters, we have shown that incentives to work are much lower if families have children or couples have an unwaged spouse. These are the particular groups to which any policy directed at improving incentives should initially be addressed. Increased social rents over the 1980s and 1990s can only have made incentives worse, as they have increased the reliance on housing benefit out of work and therefore also increased the range of earnings over which benefits are withdrawn.

But perhaps the primary reason for worrying about work incentives faced by social tenants is that their wages are low relative to those of the rest of the work-force. This means that even at full-time hours of work, and current rent levels, many would still be dependent on the means-tested benefit system, and they would have little chance of escaping from this. The next chapter examines various practical reforms that could improve incentives for these groups.

CHAPTER 5
Reforming the Benefit System

We have seen the extent of the potential work disincentives, given the benefit system, rent levels and the earnings of those in the social renting sector. In this chapter, we look at a number of different reforms that might have an impact on the situation. The reforms reflect the different approaches that can be taken to the benefit problem. We begin by examining the effects of a reduction in levels of social rents. This can be seen as a move back toward a system of universal benefit and away from reliance on means-testing.

We then consider a series of reforms that focus on aspects of the housing benefit system. The first is a reduction in the HB taper, the second is an increase in the earnings disregards and the third incorporates the family credit needs allowance into the HB system. Each of these reforms is successively more targeted on the groups that face the highest work disincentives.

The final reform we consider is a decrease in the amount of rent that is eligible for HB. Unlike the other reforms considered, this aims to change incentives by reducing the level of out-of-work income.

5.1 Lowering Social Rents

5.1.1 The reform

Local authority rents have risen markedly over the past two decades. In real terms, they have risen by 100 per cent since 1979[20] and by some 33 per cent since 1988. Here,

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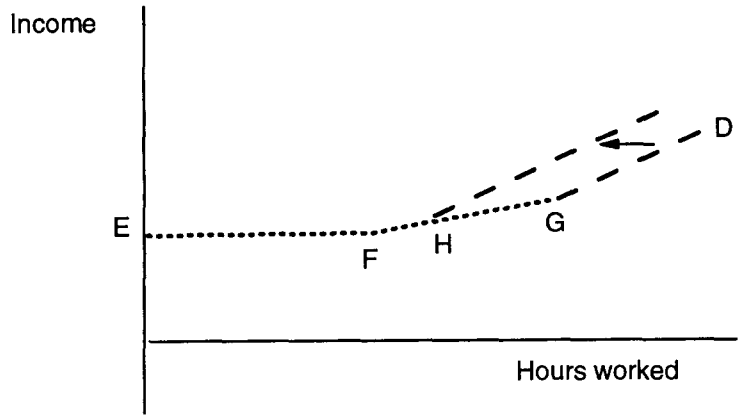
[20]Though, as we saw in Chapter 2, some of this growth could be considered as 'catch-up' on the relative rent falls seen in the 1970s.

FIGURE 5.1

Simplified impact of a rent decrease



we examine the impact of reducing social rents by 25 per cent from their current level. This returns local authority rents to their average level in 1988. The direct revenue effect of this reform is to lower HB expenditure by £1,800 million while reducing local authority rental income by £2,350 million. Additionally, Housing Association rental income would fall by £400 million. The total cost can therefore be considered to be about £1 billion.

In Figure 5.1, the line EFGD is the simplified budget constraint that we derived in Chapter 3. The effect of a rent decrease is to shift the point G, at which the individual comes off HB, to the left (i.e. fewer hours of work). For those in the range EH, this has no effect on their after-rent income. They continue to pay the same amount of rent net of HB, which is zero for those in the range EF. For those in the range HG, the reduction in rent removes their entitlement to HB. However, their after-rent income will have increased, as the amount that they actually pay in rent will have been reduced. For those beyond G (i.e. those not receiving HB before the reform), the effect is to increase their income by the full amount of the rent decrease.

It is obvious from the figure that ATRs at hours greater than at point H will be reduced as after-rent incomes rise.

Equally, the range of high MTRs is reduced as HB, covering lower rent levels, runs out more quickly. It is also worth noting, though, that lowering rent levels has an *income effect*. At any given hours level, income is increased and so there might be some incentive to reduce hours in the knowledge that living standards could be maintained if doing so.

This result, as we shall see, holds only because in-work income is raised while out-of-work income stays the same. Where out-of-work income is also raised — which occurs if there is no entitlement to HB when out of work — then ATRs are unaffected.

5.1.2 Summary impact of the change

To see the effect of the reform on the entire population, we need to look at our tax and benefit model results. Here, we summarise some of the main results in one table describing the potential effects on currently unemployed men and women — men and women at 40 hours of waged work — and another table repeating the analysis for waged men and women.

The columns show the percentages of each group whose ATR falls and its average reduction among those for whom it does fall; similar numbers are given for rises. We then show the percentages who would still be on HB in work and the hours of work they would need to do in order to escape HB. The final column shows the percentages who would have MTRs in excess of 60 per cent.

- *Unwaged men.* We would expect people to be encouraged to move into employment if the net gain from taking a job is increased. We can measure this change by examining shifts in potential ATRs. For men who are currently unemployed, in nearly 90 per cent of cases, the rent reduction lowers the ATR they face on taking up work for 40 hours per week at their estimated wage. However, the ATR reductions are small on aver-

TABLE 5.1

Results for unwaged at 40 hours per week: lower rent

		Percentage with lower ATR	*Average decrease in ATR*	*Percentage with higher ATR*	*Average increase in ATR*	*Percentage in work on HB*	*Hours of work to escape HB*	*Percentage with MTR > 60% in work*
Men	Single	96%	–4%	—	—	—	15	6%
	Unwaged spouse	92%	–4%	—	—	3%	20	48%
	Waged spouse	64%	–4%	—	—	—	7	5%
	No children	80%	–4%	—	—	—	16	—
	With children	89%	–4%	—	—	3%	18	53%
	All men	89%	–4%	—	—	2%	17	31%
Women	Single, no children	93%	–5%	—	—	—	18	—
	Unwaged spouse	78%	–4%	—	—	15%	26	68%
	Waged spouse	22%	–5%	—	—	—	2	8%
	No children	47%	–5%	—	—	13%	19	13%
	With children	58%	–4%	—	—	8%	16	52%
	Lone parent	86%	–5%	—	—	10%	25	96%
	All women	69%	–5%	—	—	8%	19	58%

TABLE 5.2

Results for employed: lower rent

		Percentage with lower ATR	*Average decrease in ATR*	*Percentage with higher ATR*	*Average increase in ATR*	*Percentage in work on HB*	*Hours of work to escape HB*	*Percentage with MTR > 60% in work*
Men	Single	77%	-4%	—	—	7%	17	4%
	Unwaged spouse	79%	-4%	—	—	9%	21	33%
	Waged spouse	60%	-4%	—	—	—	6	5%
	No children	55%	-4%	—	—	2%	9	2%
	With children	77%	-4%	—	—	5%	14	27%
	All men	70%	-4%	—	—	5%	13	14%
Women	Single, no children	62%	-5%	—	—	15%	16	12%
	Unwaged spouse	27%	-6%	1%	2%	47%	23	50%
	Waged spouse	14%	-9%	—	—	1%	1	6%
	No children	18%	-7%	—	1%	11%	7	8%
	With children	16%	-8%	—	—	14%	7	25%
	Lone parent	37%	-5%	—	—	61%	25	76%
	All women	28%	-6%	—	3%	21%	11	26%

age for all the groups. Only 9 per cent of the sample have their ATRs reduced by more than 5 per cent. So while this reform may have some effect in encouraging unemployed men to work, it is unlikely to be large.

As we will see, however, by comparing Table 5.1 with those that accompany the other modelled reforms, the proportion who would still be on HB at 40 hours, and the hours of work required to escape HB, are relatively low. On average, even those with children or with an unwaged spouse would need to work only about 20 hours per week to leave HB altogether. Only very small proportions would still be on HB at 40 hours. Nevertheless, the proportions facing MTRs in excess of 60 per cent are barely affected. This just reflects continued entitlement to family credit, which is, of course, not affected by rent levels.

- *Unwaged women.* The reduction in rent lowers the ATRs of virtually 70 per cent of out-of-work women potentially involved in taking a job for 40 hours per week. The great majority of those without an employed spouse would see an ATR reduction, as opposed to just a fifth of those with a husband in work. As with the men, while the effects are widespread, they are not large in percentage terms. Among those seeing some reduction in their ATR, the average reduction is only some five percentage points. As shown in Table G.2 in Appendix G, the proportion of women with lower ATRs at 20 hours per week is much smaller — just a third being affected. The assumed number of hours of work matters a great deal for the results that follow.

  Other than that group with a waged spouse, most of the groups of women would need to work some 20 to 25 hours per week to get off HB. This still leaves nearly all of the lone parents on some means-tested benefit — largely family credit — at 40 hours of work. But just one in ten would be on HB at 40 hours of work as against one in three at current rent levels. Cutting rents

even just back to their 1988 level could have a major impact on the depth of HB dependency.

- *Employees.* The results for employees in many respects mirror those for people out of work. ATRs fall for most men, though for a much smaller proportion of women. The small proportion of women affected reflects the fact that a large proportion of employed women have employed spouses, and lower rent reduces both their in-work and their out-of-work income by the same amount. Therefore their ATRs will not be affected. The proportions of workers entitled to HB again fall relative to the base system, but for women especially they are much higher than is predicted for the unemployed sample at 40 hours. That is just because a large proportion of women in employment are working part-time. In that respect, the tables are not directly comparable. There are only very small effects on the MTRs of people in work as a result of this sort of rent reduction. The MTR will only fall for those for whom the rent reduction is adequate to allow them to escape from HB. This will be true of only 3 per cent of employed men and 4 per cent of employed women.

Overall, a reduction in social rents reduces the work disincentives faced by most of those currently not in work. Lower ATRs reflect the fact that while in-work income is increased by this change, out-of-work income is unaffected — those on HB see no change in their real living standard. The changes in ATRs are modest in magnitude because the benefits are spread very widely among the social renting population. Groups whose ATRs are unaffected are those with working spouses for whom incomes are increased equally both in and out of work. As a result, the return to working is unaffected. Few people's MTRs are affected because the only way in which they can be altered by this reform is if people are taken off HB

altogether. Nevertheless, the range of incomes over which high MTRs apply is reduced.

As we have illustrated both diagramatically and by modelling the effects on the population, cutting rents does reduce actual and potential benefit dependency. It increases not only the return to working full-time relative to not working but also the range of hours and income levels at which working extra hours is worth while.

5.2 Lowering the Housing Benefit Taper

5.2.1 The reform

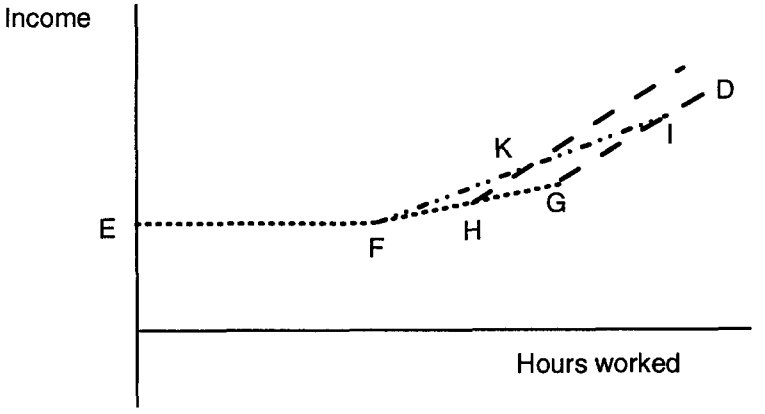
Cutting rents has a number of positive effects, none of them dramatic. If we want to concentrate resources on lowering ATRs, then more direct measures aimed at increasing in-work incomes might be thought appropriate. One such measure might be a reduction in the rate at which HB is tapered away as incomes rise. At present, once a family has income in excess of their needs for HB, their benefit is reduced by 65p for every £1 of excess income. This is the HB taper. Here, we consider a significant reduction in the taper to 30 per cent, so a family would have their benefit reduced by only 30p for every extra £1 of excess income.

The general effect of this can be seen in Figure 5.2, which compares the effect of reducing the taper with the effect of cutting rent levels. The original budget constraint lies along the line EFGD. Remember that the effect of cutting rents is to shift the point at which HB is escaped down from G to H, at which point the steeper section of the budget constraint now begins.

The effect of cutting the taper is rather different. The flatter part of the budget constraint starts at the same point but is less flat, with the consequence that it is longer, stretching from F to I. Two effects are obvious. Anyone currently on HB is made better off by this reform, and most

FIGURE 5.2

Comparison of rent reduction with lowering taper



of them will do better from this than from a cut in rents. But the hours of work required to escape HB are raised from G to I. By comparison with a cut in rents, it is clear that a taper reduction gives more help to those on relatively low incomes. Whereas nobody working more hours than at I gains from the taper cut, everybody in this range gains from the rent reduction.

While MTRs for those in the range FG are reduced, MTRs for those in the range GI are increased. More hours of work are required to take someone off HB altogether, but the returns to working are reduced compared with a rent reduction for each extra hour past K.

Finally, bear in mind again the effects on second earners. If the first earner is already working — at G, say — the effect of this reform will be to cut the return to work of the second earner. Their initial MTR will be raised and so, therefore, will their final ATR.

The range of possible changes is evidently complex. We now indicate what the actual changes could be as a result of this reform. Note that, if restricted to social tenants, the overall *first-round* cost of such a reform would be around £1 billion, similar to the cost of the rent cut.

5.2.2 Summary impact of the change

- *Unwaged men.* The reduction in the HB taper would lower the ATR faced by about half of unemployed men were they to work 40 hours per week. While this compares unfavourably with the effects of a reduction in rents, the average size of the reductions for those whose ATRs are reduced is a little larger.

  The only way in which this reform can reduce ATRs is by increasing incomes in work, which only occurs if the individuals concerned are still on HB at 40 hours per week. The fact that so many do see their ATRs reduced is evidence of the increased number of hours of work required before the HB system is escaped, as shown in Table 5.3. Three-quarters of those with children, and three-quarters of those with an unwaged spouse, are predicted still to be on HB at 40 hours of work. On average, men in these groups would need to work 48 hours just to move out of the HB system — in other words, they would generally have to work implausibly long hours.
- *Unwaged women.* Two-thirds of unwaged women see their ATR for a 40-hours-per-week job fall in response to a reduction in the taper. The average reduction of 10 percentage points would be rather larger than that for men. For a 20-hours-per-week job (see Table G.3 in Appendix G), the corresponding figure is larger still — a 16 per cent average ATR reduction for 70 per cent of the sample. There is, though, a corresponding increase in the proportion who would still be on HB in work. Even at 40 hours, more than two-thirds of our sample are predicted still to be on HB. The very high hours indicated to escape HB show how difficult it would be for some women ever to move off the benefit system.

  Again, the main group that differs from the rest are those women with a husband in work. More than half would see their ATR increase. This is because they

TABLE 5.3

Results for unwaged at 40 hours per week: lower taper

		Percentage with lower ATR	*Average decrease in ATR*	*Percentage with higher ATR*	*Average increase in ATR*	*Percentage in work on HB*	*Hours of work to escape HB*	*Percentage with MTR > 60% in work*
Men	Single	23%	–5%	4%	1%	23%	34	6%
	Unwaged spouse	73%	–6%	4%	6%	74%	48	48%
	Waged spouse	18%	–5%	42%	5%	24%	25	5%
	No children	33%	–5%	15%	5%	35%	32	—
	With children	73%	–6%	10%	6%	75%	48	53%
	All men	52%	–6%	9%	5%	54%	41	31%
Women	Single, no children	50%	–7%	11%	4%	54%	41	—
	Unwaged spouse	85%	–10%	5%	6%	87%	66	70%
	Waged spouse	6%	–10%	56%	8%	14%	17	8%
	No children	50%	–8%	13%	4%	52%	37	19%
	With children	55%	–10%	29%	7%	59%	49	52%
	Lone parent	94%	–11%	2%	5%	94%	79	96%
	All women	67%	–10%	16%	7%	70%	57	58%

would now start work on the HB taper and therefore gain rather little for their first few hours of work. In other words, the cut in the taper would bring their spouse within the taper, so their own return to work would be reduced. Contrast this with the finding that nearly all lone parents would see reductions in their ATRs at 40 hours.

- *Employees.* Higher wages than those predicted for the unemployed mean that somewhat fewer current employees would see a fall in their ATRs, though it remains the case that more than half of men with unwaged spouses would see reductions in their ATRs. Consequently, more than half would still be on HB when in work. Again, a large proportion of women with waged spouses face reductions in their returns to work as a result of this policy. Of the 41 per cent whose ATRs rise, the average rise is 15 percentage points — for every gross pound earned currently, this reform would reduce the return by 15 pence on average. This might well provide an incentive for these individuals to leave work. But this group — with two earners — is, of course, the one whose members can be relatively sure of escaping the benefit system and high *marginal* tax rates.

  Because a 30 pence taper on HB implies a total MTR of 54 per cent for basic rate taxpayers on the taper — less than the 60 per cent cut-off in Table 5.4 — the overall effects on MTRs appear marginally positive. But it is the case that while 5 per cent of men and 12 per cent of women currently in employment have a reduction in their MTRs, 27 per cent of men and 20 per cent of women see their MTRs increase. Because it pulls more people into the means-tested benefit system, a reduction in the taper to 30 per cent causes more people to face higher MTRs than lower MTRs. As with the unemployed, there is a serious problem regarding the extent of HB under such a regime. Largely because

TABLE 5.4

Results for employed: lower taper

		Percentage with lower ATR	*Average decrease in ATR*	*Percentage with higher ATR*	*Average increase in ATR*	*Percentage in work on HB*	*Hours of work to escape HB*	*Percentage with MTR > 60% in work*
Men	Single	24%	–7%	1%	4%	33%	35	3%
	Unwaged spouse	53%	–8%	1%	1%	57%	49	32%
	Waged spouse	12%	–7%	44%	5%	18%	23	5%
	No children	14%	–6%	27%	5%	17%	21	2%
	With children	40%	–8%	25%	1%	46%	42	26%
	All men	29%	–7%	22%	5%	34%	34	14%
Women	Single, no children	36%	–10%	6%	8%	47%	36	6%
	Unwaged spouse	39%	–12%	10%	5%	75%	57	38%
	Waged spouse	5%	–16%	41%	15%	19%	11	5%
	No children	12%	–10%	28%	7%	25%	19	4%
	With children	15%	–14%	38%	8%	38%	26	22%
	Lone parent	42%	–11%	—	1%	93%	76	71%
	All women	22%	–11%	23%	13%	45%	34	21%

of the low wages of social tenants, most of those without working spouses would have to work very long hours to escape HB with a taper at this sort of level.

Housing benefit is a means-tested benefit, so an increase in its generosity is focused on those on low incomes. In contrast to this, a reduction in the rent level applies equally to all social renters. Indeed, the existence of HB means that the net gains from a rent reduction are greater for those on higher incomes and are greatest for those whose circumstances mean that they would not qualify for means-tested benefits.

Cutting the taper does have a substantial impact on the potential returns to work faced by many individuals, but it also leaves many stuck within the means-tested benefit system. While the returns to working 40 hours are increased, so are the returns to working many fewer hours, and the returns to each marginal hour are reduced for many people. The earnings and potential earnings of social tenants are low enough that, with a significantly lower taper, even finding full-time work would not be enough to pull the majority out of HB altogether.

5.3 Increasing Earnings Disregards

5.3.1 The reform

While lowering the HB taper might have a more targeted impact on labour supply than a reduction in rents, there are other means of reforming the HB system that might focus still more directly on the problem. One of these is to increase the earnings disregards. Currently, when assessing a person's income for HB, the first £5 of earnings per adult, or the first £25 for single parents, is ignored. At an initial cost of £1 billion, these disregards could be increased by £50 each. This would mean that a couple could earn £110 per week before any of this income would be counted in the formula for determining HB. The reason

this number is so large relative to the size of rent reduction that could be afforded at a similar cost is just that among all social renters — above and below pension age — only a small proportion are currently in work. And this is the only group on which more money would be spent in the first instance if earnings disregards were increased.

The effect is essentially to increase the range over which the person receives full HB. Consider the formula for calculating excess income:

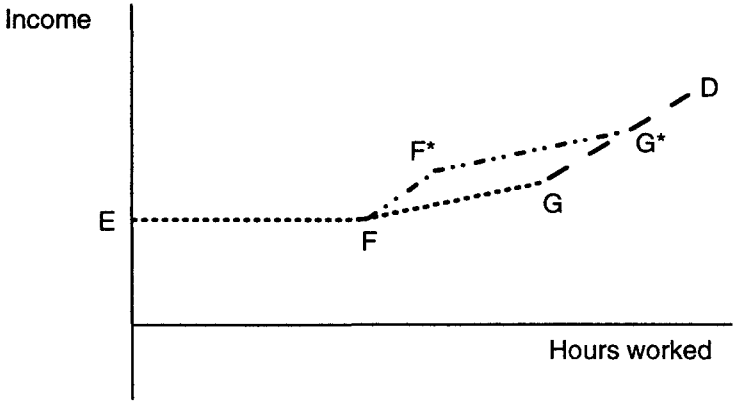
Excess income = (Earnings – Disregard) + Other income – Needs.

An increase in the disregard allows earnings to be higher before the person has positive excess income. This shifts the point at which the person's HB starts to be tapered. In terms of Figure 5.3, this can be interpreted as a shift in the line FG to F*G*. In the range FF*, people continue to receive full HB while their earnings rise. At F*, all of the increase in the disregard has been used up, and HB begins to be tapered until, at G*, it has all been tapered away.

The potential impacts are fairly clear. Again, more people will be brought within the HB system as more money needs to be earned in order to escape it. For those

FIGURE 5.3

Simplified impact of raising earnings disregards



working above G*, there is no effect on any of our measures. For those originally in the range FG, incomes in work, and therefore the return to work, will rise. MTRs will be reduced only for those in the range FF*. But note the shape of the new budget constraint. There is a major kink at F*. An incentive is certainly created for people to move from no work to this point. But an incentive is also created for movements down the budget constraint. The returns to working above F* are cut back significantly relative to F*.

Again, second earners are more likely to start on the HB taper as a result of this reform and their work incentives are therefore likely to be reduced.

5.3.2 Summary impact of the change

- *Unwaged men.* The increase in the earnings disregards would lower the ATRs of around 60 per cent of unwaged men if they were to work 40 hours per week. At 14 percentage points, the average reduction is significant. As with the lower taper, the disadvantage of such a policy is that it can only work because of the high level of benefit dependency that it engenders. Over 80 per cent of those with children or an unwaged spouse are predicted still to be on HB at 40 hours of work, with two-thirds facing MTRs of over 60 per cent. As we have noted, the modelling of these figures at 40 hours per week is possibly unhelpful in this case, since the real incentive will be to earn at the disregard. The fact that 60 per cent of men would still be on HB at 40 hours per week, though, is instructive in itself and another indication of the low wages they might expect in employment.
- *Unwaged women.* There are substantial reductions in the ATRs for women. When considering a 40-hours-per-week job, nearly all lone parents and 89 per cent of women in no-earner couples see their ATR fall, with

TABLE 5.5

Results for unwaged at 40 hours per week: higher disregard

		Percentage with lower ATR	*Average decrease in ATR*	*Percentage with higher ATR*	*Average increase in ATR*	*Percentage in work on HB*	*Hours of work to escape HB*	*Percentage with MTR > 60% in work*
Men	Single	18%	-7%	—	—	20%	32	18%
	Unwaged spouse	85%	-14%	—	—	85%	56	65%
	Waged spouse	33%	-10%	42%	11%	37%	33	33%
	No children	58%	-11%	9%	1%	58%	40	32%
	With children	82%	-15%	7%	1%	83%	56	68%
	All men	60%	-14%	6%	11%	61%	46	48%
Women	Single, no children	45%	-11%	—	—	46%	38	44%
	Unwaged spouse	89%	-19%	1%	9%	89%	76	77%
	Waged spouse	9%	-16%	67%	17%	21%	24	19%
	No children	55%	-16%	16%	—	55%	44	18%
	With children	57%	-20%	30%	11%	63%	58	63%
	Lone parent	95%	-19%	—	—	95%	72	98%
	All women	69%	-18%	16%	17%	72%	59	68%

TABLE 5.6

Results for employed: higher disregard

		Percentage with lower ATR	*Average decrease in ATR*	*Percentage with higher ATR*	*Average increase in ATR*	*Percentage in work on HB*	*Hours of work to escape HB*	*Percentage with MTR > 60% in work*
Men	Single	20%	-9%	—	—	28%	33	22%
	Unwaged spouse	63%	-14%	—	—	69%	57	53%
	Waged spouse	21%	-14%	49%	9%	29%	31	23%
	No children	21%	-13%	35%	3%	23%	28	13%
	With children	50%	-14%	25%	3%	60%	52	50%
	All men	35%	-14%	24%	10%	43%	41	33%
Women	Single, no children	34%	-18%	2%	6%	45%	34	28%
	Unwaged spouse	47%	-21%	—	—	78%	63	44%
	Waged spouse	7%	-23%	53%	25%	30%	18	23%
	No children	17%	-20%	36%	4%	30%	24	12%
	With children	18%	-23%	43%	11%	52%	35	43%
	Lone parent	44%	-19%	—	—	95%	71	68%
	All women	25%	-20%	27%	24%	51%	37	35%

average falls of 19 percentage points. But, for the reasons outlined above, two-thirds of women with waged spouses would see their ATRs rise.

- *Employees.* More than half of women with a spouse in work would face ATRs *increased* by this reform, and increased very dramatically, by an average of 25 percentage points. Many female second earners would face an incentive to give up employment. Among currently employed men, there would be a fivefold increase in the numbers entitled to HB. For those on the taper, the incentive to reduce hours to the disregard level could be substantial. For those with children or an unwaged spouse, very long hours would need to be worked to escape HB altogether.

An infinite disregard would, for working-age tenants, be largely equivalent to a universalisation of HB, or, by extension, a reduction in rents to zero. With disregards at reasonable levels, there remains, of course, a region over which the taper is effective. The effects of raising the disregard are greater than those seen from reducing rents across the board just because it does not affect pensioners or other non-workers. If one were not worried about high levels of benefit dependency *per se*, and one could set the disregard at such a level as not to worry about lack of incentives to work beyond that point, then this might be a plausible policy. But these might be considered rather severe conditions for supporting it.

5.4 Allowing Family Credit Needs in the Housing Benefit Calculation

5.4.1 The reform

As we showed earlier, one effect of HB is to limit the positive impact of family credit (FC) on work incentives. Since FC counts as income when assessing HB eligibility, much of the increase in net income when moving onto FC

can be lost in reduced HB payments. The reduction in the impact of FC as a result of HB payments has recently been recognised within government. In July 1995, FC payments were increased by £10 for claimants who were employed for more than 30 hours per week and a corresponding £10 premium was added to the HB needs assessment for FC recipients also receiving HB. This ensured that the increase in net income was £10 for recipients working over 30 hours per week and not £10 *minus* £6.50 in reduced HB.

In this reform, we propose to extend the principle of adjusting the HB needs assessment to add the FC needs assessment to the HB formula. To see how this would work, consider the formula (for positive HB and income greater than needs) currently used to calculate HB:

$$\mathbf{HB} = \mathbf{R} - T_{HB}\{(I_{HB} + \mathbf{FC}) - N_{HB}\}$$

where **HB** is the amount of HB received, **FC** is the amount of FC, **R** is the rent, T_{HB} is the HB taper, N_{HB} is the family's needs as assessed for HB, and I_{HB} is income as assessed for HB excluding FC payments. The formula for determining the level of FC (again where entitlement is positive and not at its maximum) is

$$\mathbf{FC} = N_{FC} - T_{FC}(I_{FC} - \mathbf{A})$$

where N_{FC} is the family's needs and I_{FC} is their income, both as assessed for FC. T_{FC} is the FC taper and **A** is the applicable amount, i.e. the taper threshold. If the family have income below **A**, then they will receive full FC, i.e. N_{FC}. From the first equation, we see that any FC receipt increases income for the HB formula and correspondingly reduces HB payments by $T_{HB} \times \mathbf{FC}$. To avoid this, we propose that the N_{FC} term should be added to the HB equation, which would then become

$$\mathbf{HB} = \mathbf{R} - T_{HB}\{(I_{HB} + \mathbf{FC}) - (N_{HB} + N_{FC})\}.$$

The N_{FC} term would always cancel out all or part of the **FC** term, leaving the family's entitlement to HB at the very least unaffected by the fact that they were receiving FC. Indeed, if the family were receiving less than the maximum FC and did not receive 100 per cent HB, this reform would increase their HB eligibility relative to not including FC in the HB calculation at all.

One effect will, of course, be to extend the reach of HB, since the HB needs amount is increased for those with entitlement to FC. So at the point at which FC becomes available, the jump in income will be larger than at present, implying that the distance over which the taper operates will be greater.

This appears to be, and is, a rather complex reform. Why, if we want to stop HB tapering away FC, do we not simply exclude FC from the HB formula? The answer is that if this were done, a family could face a MTR in excess of 100 per cent — that is, were they to earn more, their net income would actually fall. This is shown in Table 5.7 for an increase in earnings of £1 per week for a basic rate taxpayer.

If FC income is excluded from the HB calculation, income after tax and National Insurance is used to reduce

TABLE 5.7

Effects of excluding FC income from the HB means test

	Current HB system	*FC excluded from HB calculation*
Additional gross earnings	**£1.00**	**£1.00**
minus income tax	£0.24	£0.24
minus National Insurance	£0.10	£0.10
leaves	*£0.66*	*£0.66*
minus reduced family credit	0.7 × 66p = £0.46	0.7 × 66p = £0.46
leaves	*£0.20*	*£0.20*
minus reduced housing benefit	0.65 × 20p =£0.13	0.65 × 66p =£0.43
leaves **additional net income**	**£0.07**	**–£0.23**

both benefits. As the table shows, this would mean that if £1 extra were earned, £0.34 would be lost in tax and National Insurance. Family credit is reduced by 70 per cent of this, leaving only £0.20. Under the current system, where FC is included in the HB means test, the family lose an additional 65 per cent of the £0.20. But if FC were excluded from the HB means test, HB would be reduced by 65 per cent of £0.66, because HB would take no account of reduced FC entitlement. This would mean that the family would lose £0.43 HB and in total would be worse off from earning an extra pound. This would be highly undesirable and would reintroduce widespread MTRs in excess of 100 per cent, which were generally eliminated in the 1988 Fowler benefit reforms.

5.4.2 Summary impact of the change

- *Unwaged men.* This reform only has an impact on families with children. However, for these groups, the impacts are large. Over 80 per cent of men with children would see their ATRs fall were they offered employment for 40 hours per week. The average falls of 14 percentage points are also relatively large. By increasing the generosity of HB, the reform also increases the reach of HB for men eligible for FC. Relative to lower rents, the proportion of men on HB at 40 hours is similar to that for the lower taper and the earnings disregard reforms.
- *Unwaged women.* The impact of this reform is relatively more substantial for women with children. The majority would have lower ATRs at 40 hours of work and for these women the average reduction is 20 percentage points. On the other hand, substantially higher ATRs would be experienced by half of women with an employed spouse. The reasons are just the same as those discussed in the last two reforms.

TABLE 5.8

Results for unwaged at 40 hours per week: family credit reform

		Percentage with lower ATR	*Average decrease in ATR*	*Percentage with higher ATR*	*Average increase in ATR*	*Percentage in work on HB*	*Hours of work to escape HB*	*Percentage with MTR > 60% in work*
Men	Single	12%	–12%	—	—	12%	23	12%
	Unwaged spouse	69%	–14%	—	—	69%	49	68%
	Waged spouse	23%	–9%	28%	10%	27%	25	27%
	No children	—	—	—	—	—	19	—
	With children	82%	–14%	7%	1%	82%	53	81%
	All men	47%	–14%	4%	10%	48%	39	47%
Women	Single, no children	—	—	—	—	6%	22	6%
	Unwaged spouse	72%	–20%	—	—	81%	68	78%
	Waged spouse	9%	–15%	52%	16%	18%	20	18%
	No children	—	—	—	—	27%	22	27%
	With children	59%	–20%	26%	24%	64%	55	61%
	Lone parent	96%	–23%	—	—	97%	85	98%
	All women	59%	–21%	12%	16%	65%	58	64%

TABLE 5.9

Results for employed: family credit reform

		Percentage with lower ATR	*Average decrease in ATR*	*Percentage with higher ATR*	*Average increase in ATR*	*Percentage in work on HB*	*Hours of work to escape HB*	*Percentage with MTR > 60% in work*
Men	Single	3%	–21%	—	—	12%	22	6%
	Unwaged spouse	48%	–15%	—	—	52%	49	48%
	Waged spouse	13%	–12%	23%	9%	18%	22	16%
	No children	—	—	—	—	4%	11	3%
	With children	45%	–14%	23%	2%	51%	47	48%
	All men	23%	–15%	11%	9%	28%	31	25%
Women	Single, no children	—	—	—	—	19%	20	17%
	Unwaged spouse	20%	–22%	—	—	61%	48	51%
	Waged spouse	4%	–31%	29%	30%	19%	11	17%
	No children	—	—	—	—	12%	9	10%
	With children	16%	–26%	42%	12%	43%	31	40%
	Lone parent	44%	–22%	—	5%	96%	85	75%
	All women	13%	–24%	15%	30%	38%	30	32%

- *Employees.* Reduced ATRs improve the financial returns from remaining in the labour market for primary earners, as is shown by the reduced ATRs for 23 per cent of employed men and 44 per cent of female lone parents. Secondary earners again face the opposite incentives. Over 40 per cent of women with children and 29 per cent of all women with a waged partner would face significantly higher ATRs, which implies that many female second earners *with children* could face an incentive to give up employment. The large numbers on HB and with very high MTRs provide incentives for a reduction in the number of hours worked but not for leaving the labour market. While the higher earnings disregard provided incentives for people to work at the kink point on the budget constraint caused by the disregard, this reform gives people reason to work at 16 hours, the point at which FC becomes available.

Introducing the needs level of FC into the HB calculation has a similar effect to increasing the HB earnings disregard — it shifts the point at which HB starts to be tapered further up the income distribution but this time by increasing the needs element in the HB formula rather than by reducing the income element. Thus we again find that the reform generally will improve incentives through decreased ATRs for primary workers as it increases in-work income, but worsens incentives for secondary earners by increasing out-of-work income and hence increasing ATRs. But the real incentive is again to move to the kink point at 16 hours of work, which could both bring people into the labour market and lead to a reduction in hours worked by those already there. The major difference from the earnings disregards route is that this reform benefits only families with children. Thus the exchequer cost is reduced compared with the earnings disregards reform, and the negative effects on work incentives for secondary earners are confined to couples with children.

5.5 Restricting Eligible Rent

5.5.1 The reform

The issue of benefit dependency is directly connected to the amount of benefit that families receive while out of work and whether and how it should be withdrawn as income increases. So far, we have looked at options that generally reduce the speed of withdrawal. First, we studied lower rent levels which increase the universal element of subsidy and reduce the reach of means-tested benefits as hours increase. Then we looked at three methods of increasing the generosity of HB, each of which increased the entitlements to HB in work. Each of these four reforms operates by reducing ATRs through increased in-work income.

This is not the only method of reducing ATRs. On the other side of the coin to increased in-work income, incentives (as measured by reduced ATRs) would also improve through reduced out-of-work income. In short, making it more unpleasant to be out of work would improve incentives to take low-paid work. One means by which this could be achieved would be to limit the proportion of rent that was eligible for HB. At present, 100 per cent of rent is covered by benefit for those entitled to full HB. Here, we examine the impact of reducing this to 75 per cent, with the remaining part of rent payments coming from other income received by the family.

Unlike the other reforms we have considered, this will, of course, reduce total public spending. One could reduce the adverse distributional impact of such a reform by spending the money saved on increasing levels of income support. This would also reduce the impact on our measures of the financial returns to work, though in a non-uniform fashion — those with lower rents would have reduced returns to working as their out-of-work income increased, with the opposite effect on those with higher-

than-average rents. Since we are really interested in this policy to illustrate the effects of different sorts of reforms, the results we present and discussion of the results focus just on a cut in eligibility without corresponding income support increases.

5.5.2 Summary impact of the change

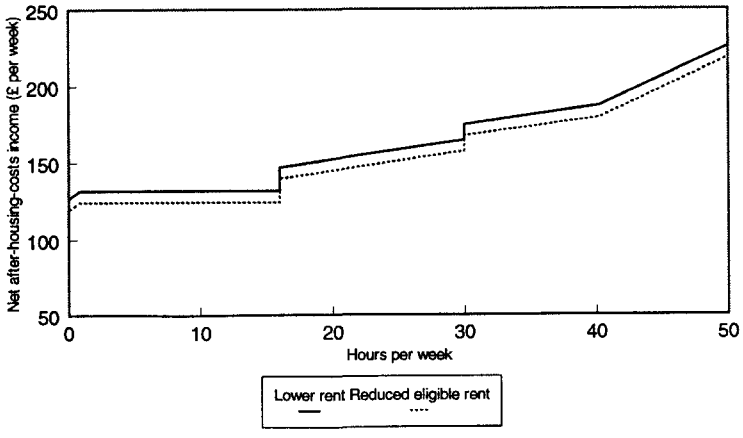
The effects of this reform on our summary measures are precisely the same as for the 25 per cent rent decrease. Readers are therefore referred to Tables 5.1 and 5.2 for a description of the results. This is not, of course, to say that the effects on individuals' incomes will be the same. While cutting rents leaves those on HB unaffected and those not on HB better off, this reform makes those on HB worse off and has no effect on those not on HB.

5.5.3 Understanding the results

Figure 5.4 shows the impact of both reforms on an example family. For ease of comprehension, this figure is somewhat different in style from those shown earlier but it demonstrates the same points. As before, hours of work

FIGURE 5.4

Impact of reducing eligible rent vs. lowering rent



are on the horizontal axis and net income is on the vertical. The lower line shows the effect of the lower eligibility, the higher line the effect of the lower rent. The difference between the two is simply that the net after-housing-costs income for restricted eligibility is £10[21] below that for reduced rent at all hours levels. In effect, the line has simply been shifted downward and ATRs are the same at every point. The ATR is the ratio of the change in net income to the change in gross income. As the lines have the same shape, the *difference* in net income between any two points will be the same even if the line is shifted downward.

The budget constraints have the same shape because HB is affected in the same way by the reforms. They both reduce the rent eligible for HB by 25 per cent, either by reducing gross rents by 25 per cent or, in this reform, simply deeming rents to be 25 per cent lower when they have not changed. Therefore the only change felt by households is that, in this reform, they will always have higher housing costs and hence lower incomes at all levels.

While ATRs and MTRs are the same under both reforms, we would not expect the labour supply responses to be necessarily identical. We have seen above that the difference in after-housing-costs income will be identical under each reform between any two hours points. However, in the case of lowering rent, this change is produced by an *increase* in after-housing-costs income when not on HB. For the restricted eligibility case, the difference is caused by a *fall* in after-housing-costs income while on HB. As additional income is more valuable when other income is lower, we would expect that restricting eligibility would therefore have a marginally greater effect on

[21] This is the amount by which the family's rent would be reduced — that is, £40×0.25.

incentives. But we would require a full labour supply model to quantify this.

Though this reform gives the same results as reducing rent, and saves the exchequer money, its costs are obvious. If the benefit system currently provides a minimum standard of living acceptable to society, restricting rent in HB will force living standards below this minimum.

5.6 Conclusions

What conclusions can we draw from this discussion of a range of possible policies? First, and most important, there are a number of trade-offs between the policies which make no one of them obviously superior to the others on all counts. The reforms increasing the generosity of housing benefit that we considered all have significantly positive effects on incentives to take work at some level, but they significantly increase dependency on means-tested benefits. The increased earnings disregards and the family credit reform both introduce incentives to work a certain number of hours and no more. These could actually result in total numbers of hours worked falling, even if total numbers of people working were to rise.

The reforms increasing the generosity of HB can also have perverse incentives for second earners. If they leave the first earner on HB, then the returns to work for the second will be much reduced, since high marginal tax rates bite immediately work is taken.

A cut in rent levels reduces actual and potential benefit dependency, but, on the work incentive front, the effects are smaller for a similar amount of money spent. If one could find a way of reducing rents only for people of working age, the return, in terms of work incentives, on each pound spent would be greater; though given that only just over a fifth of social tenants are of pensionable age, this effect would not be massive. Cutting the proportion of rent covered by HB would probably have similar effects

in terms of work incentives and at negative cost, but the distributional consequences might well be considered unacceptable.

So the policy prescriptions depend on priorities. If one sees lowering benefit dependency as a priority, even if work incentive effects might be modest, then reducing rents is the way to go. If one wants people to move into some amount of work, even if not full-time, then raised earnings disregards might be the option to consider, though targeting on the groups with the worst initial incentives — those with children — might incline one to ensure that family credit works as intended, by altering the HB formula to take account of it. The reduced taper option might be attractive if, while increased benefit dependency is considered acceptable, a significant incentive to work a specific number of hours and no more is not desired. In the cases of a lower taper, a higher earnings disregard and allowing family credit needs in the HB calculation, particular concern about work disincentives for secondary earners (mostly married women) would incline one against them.

All of this is, of course, intimately connected with the issue of the income levels enjoyed by social tenants discussed in Chapter 2. If they were higher, benefit dependency would be less of a problem; then again, lowering rents would be a less efficient use of money.

CHAPTER 6
Conclusions

The proportion of all families living in the social rented sector has declined from around a third of the population in the 1970s to less than a quarter by the mid-1990s. At the same time, the composition of the sector has changed dramatically. In the 1960s and 1970s, social tenants were not dramatically different from the rest of the population in their work patterns and family structures. By the 1990s, they have become more than twice as likely to be out of work than families in other tenures, and lone parents are almost three times as likely to be social tenants as to be living in other forms of accommodation.

These compositional changes reflect three separate things. First, 'right-to-buy' policies attracted many of the better-off out of the sector. We provided evidence of this from the Survey of English Housing. Second, we showed from the same source that new entrants to the sector are worse off than longer-term tenants. This reflects the increased difficulty associated with entering the sector which has rationed access to those most in need. Third, increased levels of unemployment have been experienced most severely by those with lower educational attainment and those with backgrounds in manual occupations. These are groups in which social renters are strongly represented.

Consequent upon these compositional factors, and the fact that those tenants in paid employment have substantially lower wages than occupants of other tenure groups, has been a concentration of social renters at and near the bottom of the income distribution.

These falling relative and absolute living standards have not been matched by falling housing costs. Indeed, rents for council and Housing Association tenants have roughly doubled in real terms since the end of the 1970s,

and so housing has become less 'affordable'. There has also, inevitably, been a much increased role for means-tested housing benefit and a growth in the proportion of social renters dependent on it.

These facts lead to the concerns discussed in Chapters 3, 4 and 5 — there has been a deterioration in the financial returns to employment faced by social tenants. An increasing dependence on means-tested benefits, rather than blanket 'bricks-and-mortar' subsidies, has increased out-of-work incomes relative to in-work incomes. With available wages for those in the sector being low, financial returns to employment are also low. This is reflected in the high average tax rates and replacement rates faced by these tenants which we described in Chapter 4.

Clearly, the problem, such as it is, would be ameliorated by significant wage increases, and we showed how wage increases would increase returns to work. But it is worth stressing that this does not imply that a minimum wage — set within any plausible bounds — would be likely to have a substantial effect. For many people, particularly those with children who face the lowest returns to work, wages of £3.50 or £4 per hour would not be adequate to increase their returns from working significantly. In anything other than the very long term, there is little one can do about the level of wages available.

If wages and family structure are relatively fixed and invariant to policy, then all we can do about low returns from working is to alter rent levels or the benefit system. Chapter 5 was devoted to examining these options. The reforms considered can be characterised as falling into two broad categories — those that have large immediate effects on average tax rates and those whose main effect is to reduce dependence on means-tested benefits.

Of the first sort, the reform to family credit, the reduced housing benefit taper and the increased earnings disregards for housing benefit significantly improve returns to employment but mean that moving off means-tested bene-

fits becomes virtually impossible for many social renters. The earnings disregard and family credit routes also mean that working a certain number of hours (16 in the family credit case) or earning a particular amount (at the earnings disregard) is very advantageous and the returns to working more than this are small. So if the main role of policy is seen as getting people into work at all, and worries about continual dependence on means-tested benefits are not considered decisive, then these sorts of policies might be appropriate. But these are strong conditions for supporting them.

If these conditions are considered too strong, then policies that have smaller immediate effects on financial returns to work but reduce the depth of benefit dependency should be considered. Such policies can be effective either by reducing the amount of money people have when they are out of work (reducing eligibility for housing benefit) or by increasing the universal element of subsidy by reducing rents. Doing this means that, unlike housing benefit, the subsidy is not lost when work is taken.

If these conclusions do not seem very strong, it is because the problems do not admit of obvious or easy answers. Where we are concerned to provide a minimum living standard for those who are not in work, and where available earnings are very low, then returns to work are likely to be low. It is difficult to find plausible reforms to the benefit system that will have significant effects unless we are willing to see people with little chance of escaping means-testing or we can spend really quite substantial amounts of money on reducing rents to very low levels.

APPENDIX A
Occupation of Social Renters and All Tenures

Percentage in each occupational category

Occupation[a]	1973		*1983*		*1993*	
	All tenures	Social renters	All tenures	Social renters	All tenures	Social renters
High non-manual	22	6	28	8	29	6
Low non-manual	14	9	16	12	22	16
Skilled manual	36	44	36	45	31	38
Semi-skilled manual	19	28	15	25	13	26
Unskilled manual	8	12	4	10	4	13
All[b]	100	100	100	100	100	100

[a]Occupational codings are not necessarily consistent over the period, due to a change in the coding frame used to classify occupation in the 1987 FES.

[b]Component parts do not add up to total exactly due to rounding and omission of HM Armed Forces occupations.

Source: Family Expenditure Survey, various years.

APPENDIX B
Probit Methodology and Results

B.1 Methods and Data

The model we have used to identify the determinants of social renting is the binomial probit model, which defines the probability of social renting as a function of a set of relevant contributory, or 'explanatory', factors. The factors that we have chosen as explanatory variables relate to family composition (for example, single person or couple, presence of dependent children), employment status, occupation, education, region and age. A model has been estimated for four separate time periods: 1961–67 (excluding 1964), 1971–75, 1981–85 and 1989–93. Table B.1 lists the means and standard errors of each of the variables used in our analysis, for all tenures and for social renters separately in the four periods under analysis.

All variables in Table B.1 are 0,1 dummies, constructed as follows:

social renter	= 1 if living in social rented housing, 0 otherwise;
snkemp	= 1 if single person, no children, employed or self-employed (full- or part-time);
snknemp	= 1 if single person, no children, not employed or self-employed;
sparemp	= 1 if single parent, employed or self-employed (full- or part-time);
sparnemp	= 1 if single parent, not employed or self-employed;
cnkemp	= 1 if a couple, no children, at least one employed or self-employed (full- or part-time);
cnknemp	= 1 if a couple, no children, no one employed or self-employed;
cparemp	= 1 if a couple, with children, at least one employed or self-employed (full- or part-time);
cparnemp	= 1 if a couple, with children, no one employed or self-employed;
age16_34	= 1 if head of household is aged between 16 and 34 inclusive;
age35_49	= 1 if head of household is aged between 35 and 49 inclusive;
age50_pen	= 1 if head of household is aged between 50 and pension age (59 for women, 64 for men) inclusive;
agepen_74	= 1 if head of household is aged between pension age and 74 inclusive;
age75plus	= 1 if head of household is 75 or older;
nonman	= 1 if main earner's occupation is classified as non-manual;

nmined = 1 if left school after minimum leaving age (14 prior to 1946, 15 until 1974 and 16 thereafter).

Regional dummies were also used in the analysis.

Family type and economic status are classified according to the definitions used by the Department of Social Security in its Households Below Average Income series.

The mean value of a 0,1 dummy variable represents the proportion of the sample reporting a positive value for this variable. For example, in the analysis for the 1960s, the mean value for the *dependent* variable, **social renter**, is 0.33, which implies that 33 per cent of the sample are social renters.

Manual work was included in the analysis to provide an indicator of low earnings potential. However, manual occupations are not necessarily the lowest-paid (consider, for example, a shop assistant). More appropriate measures might include social class (where unskilled occupations could be classed as lower-paid) and measures of experience and education. Unfortunately, the Family Expenditure Survey contains no explicit information on an individual's work experience. Questions about years of education were only introduced in 1978 and social class has only been included since 1987, rendering any comparison over time problematic. Furthermore, a more detailed breakdown of manual work into skilled, semi-skilled and unskilled for the earlier years of the survey is not available.

Another problem concerning the manual worker dummy results from the fact that the occupational classification used in the FES was changed in 1987 (in order to bring it into line with that used in other household surveys). Consequently, the substantial drop in the proportion of our sample who are manual workers in the 1990s will at least partly be a result of this definitional change. Whilst social renters seem to be affected to the same degree as other tenures by this adjustment, it is a factor

TABLE B.1

Mean values for probit variables: social renters vs. all tenures[a] (standard errors in parentheses)

Dep. variable:	*1960s*		*1970s*		*1980s*		*1990s*	
social renter	0.33		0.35		0.32		0.24	
	(0.0028)		(0.0023)		(0.0022)		(0.0021)	
Explanatory variables	*Social renters*	*All tenures*	*Social renters*	*All tenures*	*Social renters*	*All tenures*	*Social renters*	*All tenures*
snkemp	0.1593	0.1387	0.1376	0.1175	0.1166	0.1246	0.0889	0.1166
	(0.0039)	(0.0021)	(0.0028)	(0.0015)	(0.0026)	(0.0015)	(0.0028)	(0.0016)
snknemp	0.0244	0.0242	0.0292	0.0253	0.0809	0.0561	0.0919	0.0557
	(0.0016)	(0.0009)	(0.0013)	(0.0007)	(0.0022)	(0.0011)	(0.0028)	(0.0011)
sparemp	0.0183	0.0135	0.0228	0.0168	0.0303	0.0194	0.0382	0.0245
	(0.0014)	(0.0007)	(0.0012)	(0.0006)	(0.0014)	(0.0006)	(0.0019)	(0.0008)
sparnemp	0.0199	0.0125	0.0338	0.0176	0.0595	0.0250	0.1220	0.0397
	(0.0015)	(0.0007)	(0.0014)	(0.0006)	(0.0019)	(0.0007)	(0.0032)	(0.0010)
cnkemp	0.1702	0.2107	0.1695	0.2000	0.1059	0.1617	0.0773	0.1884
	(0.0040)	(0.0025)	(0.0030)	(0.0019)	(0.0025)	(0.0017)	(0.0026)	(0.0019)
cknemp	0.0129	0.0146	0.0179	0.0160	0.0393	0.0273	0.0386	0.0312
	(0.0012)	(0.0007)	(0.0011)	(0.0006)	(0.0016)	(0.0008)	(0.0019)	(0.0009)
cparemp	0.4595	0.4283	0.3955	0.4292	0.2609	0.3711	0.2039	0.3318
	(0.0053)	(0.0030)	(0.0039)	(0.0023)	(0.0035)	(0.0023)	(0.0039)	(0.0023)
cparnemp	0.0358	0.0214	0.0443	0.0252	0.0984	0.0469	0.1108	0.0413
	(0.0020)	(0.0009)	(0.0017)	(0.0007)	(0.0024)	(0.0010)	(0.0031)	(0.0010)
age16_34	0.3136	0.3116	0.3317	0.3379	0.3733	0.3516	0.3943	0.3430
	(0.0049)	(0.0028)	(0.0038)	(0.0022)	(0.0039)	(0.0022)	(0.0048)	(0.0023)
age35_49	0.3906	0.3336	0.3024	0.3048	0.2388	0.3043	0.2386	0.3162
	(0.0052)	(0.0028)	(0.0037)	(0.0022)	(0.0034)	(0.0021)	(0.0042)	(0.0023)
age50_pen	0.1961	0.2187	0.2165	0.2050	0.1799	0.1761	0.1388	0.1700
	(0.0042)	(0.0025)	(0.0033)	(0.0019)	(0.0031)	(0.0018)	(0.0034)	(0.0018)
agepen_74	0.0736	0.0934	0.1072	0.1074	0.1327	0.1069	0.1348	0.1036
	(0.0028)	(0.0017)	(0.0025)	(0.0015)	(0.0027)	(0.0014)	(0.0033)	(0.0015)
age75plus	0.0261	0.0427	0.0422	0.0449	0.0754	0.0609	0.0935	0.0672
	(0.0017)	(0.0012)	(0.0016)	(0.0010)	(0.0021)	(0.0011)	(0.0028)	(0.0012)
south, not london	0.1844	0.2129	0.2190	0.2751	0.2233	0.2912	0.2265	0.3110
	(0.0041)	(0.0025)	(0.0033)	(0.0021)	(0.0033)	(0.0021)	(0.0041)	(0.0023)
london	0.1200	0.1643	0.1046	0.1163	0.1006	0.1021	0.1130	0.1014
	(0.0035)	(0.0022)	(0.0025)	(0.0015)	(0.0024)	(0.0014)	(0.0031)	(0.0015)
northern	0.2803	0.2871	0.2685	0.2777	0.2857	0.2710	0.2780	0.2617
	(0.0048)	(0.0027)	(0.0036)	(0.0021)	(0.0036)	(0.0021)	(0.0044)	(0.0022)
midlands	0.1652	0.1551	0.1541	0.1579	0.1550	0.1709	0.1531	0.1655
	(0.0040)	(0.0022)	(0.0029)	(0.0017)	(0.0029)	(0.0018)	(0.0035)	(0.0018)
wales	0.0429	0.0557	0.0478	0.0502	0.0501	0.0555	0.0461	0.0491
	(0.0022)	(0.0014)	(0.0017)	(0.0010)	(0.0017)	(0.0011)	(0.0020)	(0.0011)
scotland	0.1856	0.1004	0.1778	0.0985	0.1587	0.0880	0.1529	0.0879
	(0.0041)	(0.0018)	(0.0031)	(0.0014)	(0.0029)	(0.0013)	(0.0035)	(0.0014)
nireland	0.0203	0.0239	0.0282	0.0244	0.0265	0.0212	0.0304	0.0234
	(0.0015)	(0.0009)	(0.0013)	(0.0007)	(0.0013)	(0.0007)	(0.0017)	(0.0007)
nonman	0.7619	0.8180	0.3626	0.4799	0.5827	0.6242	0.7783	0.8039
	(0.0045)	(0.0023)	(0.0039)	(0.0024)	(0.0040)	(0.0023)	(0.0040)	(0.0020)
nmined	—	—	—	—	0.1679	0.3636	0.1863	0.4059
					(0.0030)	(0.0023)	(0.0038)	(0.0024)

[a]All variables weighted to correct for non-response bias.

that should be taken into account when interpreting the results of our analysis.

Table B.1 illustrates how the social renting sector has declined over the past 30 years or so, with the size of this tenure falling from 35 per cent of all families in the early 1970s to just under 25 per cent today. The figures reported in the table also broadly confirm our earlier findings on the demographic structure of social renting households and how this has changed over time. For example, unemployed households and single parents have become far more prevalent amongst social renters than the rest of the population. In addition, the very oldest age-groups (consisting largely of single pensioners) have become more and more concentrated in social rented housing. At the same time, the proportion of social renters who are of 'prime' working age (that is, aged between 35 and 49) has fallen quite sharply since the 1960s (from almost 40 per cent to less than one-quarter), whilst this group has remained fairly stable as a proportion of the *total* UK population over the same period. Finally, manual work has become far less widespread since its rapid growth in the late 1960s and early 1970s, but is still more common amongst social renters than amongst the rest of the population, on average.

B.2 Results

The results of our probit analysis for our chosen model are presented in Table B.2. Coefficient estimates for the 1980s and the 1990s are presented excluding the education dummy from the analysis, in order to be comparable with earlier years. Table B.3 provides a comparison of the coefficients for these two periods using both the education-exclusive and education-inclusive models. The constant term incorporates our 'reference family', which is defined on the basis of the following characteristics:

- a couple with children ...

TABLE B.2

Probit results
(standard errors in parentheses)

Variable	*1960s*	*1970s*	*1980s (no educ.)*	*1990s (no educ.)*
constant	–0.1122	–0.3317	–0.5181	–0.6403
	(0.0279)	(0.0187)	(0.0207)	(0.0266)
snkemp	0.1764	0.4185	0.3009	0.1571
	(0.0237)	(0.0197)	(0.0217)	(0.0255)
snknemp	0.0895	0.7384	1.0892	0.9949
	(0.0415)	(0.0337)	(0.0281)	(0.0294)
sparemp	0.2914	0.4930	0.9319	0.8263
	(0.0776)	(0.0544)	(0.0507)	(0.0487)
sparnemp	0.4885	1.4125	1.9353	1.8805
	(0.0920)	(0.0587)	(0.0508)	(0.0434)
cnkemp	–0.1433	–0.0627	–0.1549	–0.3133
	(0.0269)	(0.0222)	(0.0249)	(0.0299)
cnknemp	–0.0174^{NS}	0.6773	0.9649	0.6527
	(0.0760)	(0.0561)	(0.0438)	(0.0477)
cparnemp	0.4393	1.1642	1.6401	1.6190
	(0.0742)	(0.0543)	(0.0423)	(0.0471)
age16_34	–0.0964	–0.0484	0.0645	0.0040^{NS}
	(0.0231)	(0.0187)	(0.0195)	(0.0212)
age50_pen	–0.1448	0.0741	0.2846	0.1290
	(0.0263)	(0.0221)	(0.0236)	(0.0267)
agepen_74	–0.2150	0.5187	1.0266	0.8617
	(0.0293)	(0.0239)	(0.0254)	(0.0274)
age75plus	–0.3753	0.5637	1.0632	0.9110
	(0.0391)	(0.0302)	(0.0292)	(0.0300)
south, not london	–0.1272	–0.1561	–0.2077	–0.2234
	(0.0232)	(0.0173)	(0.0173)	(0.0194)
london	–0.2493	–0.0489	–0.0065^{NS}	0.0778
	(0.0252)	(0.0218)	(0.0227)	(0.0254)
midlands	0.0590	0.0065^{NS}	–0.1135	–0.0934
	(0.0251)	(0.0198)	(0.0197)	(0.0223)
wales	–0.2435	–0.0446^{NS}	–0.1776	–0.1720
	(0.0384)	(0.0307)	(0.0299)	(0.0350)
scotland	0.7318	0.7382	0.6740	0.5289
	(0.0286)	(0.0229)	(0.0240)	(0.0255)
nireland	–0.2747	0.0663	0.0509^{NS}	0.1055
	(0.0576)	(0.0412)	(0.0453)	(0.0509)
nonman	–0.3387	–0.7189	–0.7561	–0.6402
	(0.0221)	(0.0158)	(0.0172)	(0.0206)
No. of observations[a]	27,485	44,350	45,661	41,387
Pseudo R^2	0.0569	0.0797	0.1158	0.1381
Log likelihood	–16251.7	–26447.4	–25854.5	–20228.3

^{NS} = Insignificant at the 10 per cent level.

[a]The number of observations is lower for the 1960s than for other periods due to much smaller sample sizes in the Family Expenditure Survey, despite including extra years of data.

- in the prime age-group (aged 35 to 49) ...
- where at least one person is in employment ...
- doing manual work ...
- living in the north of England ...

and (for the 1980s and 1990s only) ...

- left education at or before the minimum school-leaving age.

One of the first things to note from Table B.2 is that the 'pseudo' R^2 has almost trebled over the period. Whilst this measure is not strictly analogous to the 'goodness-of-fit' measure, R^2, in conventional regression analysis, a comparison of this pseudo measure over the different time periods does provide some insight into how the importance of demographic factors has changed in determining the probability of living in social rented accommodation. As is the case with the conventional R^2 measure, smaller values represent a poorer-fitting model. In our analysis, the pseudo R^2 increases from just under 0.06 in the 1960s to almost 0.17 in the 1990s, rising steadily in each time period. However, the higher values recorded for the models for the 1980s and 1990s partly stem from the inclusion of an education dummy (Table B.3), which could not be constructed for earlier years due to the lack of information on education history in the FES prior to 1978. However, even when the probit is run for the 1980s and 1990s excluding the education dummy, the pseudo R^2 still increases to 0.12 and 0.14, respectively. This suggests that family circumstances now have a greater impact on the probability of social renting than was true in earlier periods.

Throughout the analysis, most of the explanatory variables proved significant, except for some of the regional dummies, the **age16_34** dummy in the education-exclusive model for the 1990s, and **cnknemp** in the model for the 1960s.

TABLE B.3

Impact on coefficients of incorporating the education dummy (standard errors in parentheses)

Variable	*1980s (no educ.)*	*1980s (with educ.)*	*1990s (no educ.)*	*1990s (with educ.)*
constant	–0.5181	–0.4050	–0.6403	–0.4803
	(0.0207)	(0.0212)	(0.0266)	(0.0273)
snkemp	0.3009	0.2518	0.1571	0.1880
	(0.0217)	(0.0221)	(0.0255)	(0.0259)
snknemp	1.0892	0.8600	0.9949	0.8917
	(0.0281)	(0.0290)	(0.0294)	(0.0300)
sparemp	0.9319	0.9284	0.8263	0.8150
	(0.0507)	(0.0517)	(0.0487)	(0.0494)
sparnemp	1.9353	1.7291	1.8805	1.7835
	(0.0508)	(0.0519)	(0.0434)	(0.0441)
cnkemp	–0.1549	–0.1938	–0.3133	–0.3434
	(0.0249)	(0.0254)	(0.0299)	(0.0306)
cnknemp	0.9649	0.7801	0.6527	0.5443
	(0.0438)	(0.0448)	(0.0477)	(0.0488)
cparnemp	1.6401	1.4455	1.6190	1.4951
	(0.0423)	(0.0433)	(0.0471)	(0.0478)
age16_34	0.0645	0.1066	0.0040^{NS}	–0.1008
	(0.0195)	(0.0199)	(0.0212)	(0.0218)
age50_pen	0.2846	0.2687	0.1290	0.0443
	(0.0236)	(0.0239)	(0.0267)	(0.0272)
agepen_74	1.0266	0.8512	0.8617	0.6972
	(0.0254)	(0.0262)	(0.0274)	(0.0283)
age75plus	1.0632	0.8322	0.9110	0.7176
	(0.0292)	(0.0302)	(0.0300)	(0.0310)
south, not london	–0.2077	–0.1518	–0.2234	–0.1709
	(0.0173)	(0.0176)	(0.0194)	(0.0198)
london	–0.0065^{NS}	0.0787	0.0778	0.1801
	(0.0227)	(0.0232)	(0.0254)	(0.0260)
midlands	–0.1135	–0.1089	–0.0934	–0.0840
	(0.0197)	(0.0199)	(0.0223)	(0.0226)
wales	–0.1776	–0.1455	–0.1720	–0.1574
	(0.0299)	(0.0303)	(0.0350)	(0.0355)
scotland	0.6740	0.7089	0.5289	0.5595
	(0.0240)	(0.0244)	(0.0255)	(0.0260)
nireland	0.0509^{NS}	0.0789	0.1055	0.1549
	(0.0453)	(0.0244)	(0.0509)	(0.0212)
nonman	–0.7561	–0.5552	–0.6402	–0.4936
	(0.0172)	(0.0182)	(0.0206)	(0.0212)
nmined	—	–0.6382	—	–0.6068
		(0.0156)		(0.0168)
Pseudo R^2	0.1158	0.1455	0.1381	0.1670
Log likelihood	–25854.5	–24984.7	–20228.3	–19549.2

^{NS} = Insignificant at the 10 per cent level.

TABLE B.4

The predictive power of our probit model

	Predicted probability of social renting		
	(1) *Social tenants*	*(2)* *Families in other tenures*	*(1)/(2)* *Relative probability*
1960s	0.37	0.30	1.2
1970s	0.41	0.32	1.3
1980s[a]	0.43	0.29	1.5
1990s[a]	0.37	0.21	1.7

[a]Excluding the education dummy.

Apart from our pseudo R^2 measure, one way to assess the performance of our model is to compare the predicted probability of social renting for actual social tenants and for families living in other tenures. Table B.4 reports these predicted probabilities for each of the four periods under analysis.

It is evident from Table B.4 that the predictive power of our model — in terms of correctly estimating the probability of social renting — is considerably higher for the 1980s and 1990s than for earlier periods. Actual social tenants are predicted to have a much higher probability of living in LA or HA housing in these latter periods *relative* to non-social tenants than is true for the models based on data from the 1960s and 1970s. This is consistent with our general finding that employment status and family composition are far more highly correlated with the likelihood of living in the social sector today than they were 20 or 30 years ago. Indeed, demographic and economic circumstances have become more important even since the early 1980s. These results are still more clearly apparent when the education dummy is included for the latter two periods under analysis. In the 1990s, for example, the probability of social renting for actual social tenants is practically double that for families currently living in other tenures.

B.3 Marginal Effects

The probit coefficients reported in Tables B.2 and B.3 do not represent the 'marginal effects' of the explanatory variables on the probability of social renting. Marginal effects are reported in Section 2.2.3 of the main body of this report, and are calculated as follows. The probability of social renting, given that all dummy variables are set to zero, is calculated by evaluating the standard normal cumulative distribution function for the value of the coefficient on the constant term only. This returns the probability that our 'reference family' (see above), contained in the constant term of our probit equation, lives in council or Housing Association accommodation. The marginal effect of each of the explanatory variables is then calculated by evaluating the standard normal cumulative distribution function for the value of the sum of the constant term *plus* the coefficient on the relevant dummy variable, and then subtracting from this the probability of social renting when all the dummy variables are zero.

APPENDIX C
Marginal Effects of Demographics: The Impact of Including the Education Dummy

Per cent

Explanatory variable	*1980s (no educ.)*	*1980s (with educ.)*	*1990s (no educ.)*	*1990s (with educ.)*
Constant	30.2	34.3	26.1	31.5
Single, no children, employed or self-employed	11.1	9.6	5.3	7.0
Single, no children, not employed or self-employed	41.4	33.3	37.8	34.4
Single parent, employed or self-employed	35.8	35.7	31.3	31.6
Single parent, not employed or self-employed	62.0	56.4	63.2	58.8
Couple, no children, employed or self-employed	–5.2	–6.8	–9.1	–11.0
Couple, no children, not employed or self-employed	37.0	30.3	24.4	21.0
Couple with children, not employed or self-employed	56.7	50.8	57.5	52.9
Household head aged 16–34	2.3	4.0	0.1	–3.5
Household head 50 to pension age	10.6	10.3	4.4	1.6
Household head pension age to 74	39.2	33.0	32.7	27.0
Household head 75 or older	40.5	32.3	34.6	27.8
Main earner is non-manual	–20.1	–17.4	–16.1	–15.0
London	–0.2	2.9	2.6	6.6
Southern England, not London	–6.8	–5.4	–6.7	–5.8
Midlands	–3.8	–3.9	–2.9	–2.9
Wales	–5.9	–5.2	–5.3	–5.4
Scotland	26.0	27.7	19.5	21.6
Northern Ireland	1.8	2.9	3.5	5.7
Left education after minimum school-leaving age	—	–19.4	—	–17.7

APPENDIX D
Calculation of HB-Exclusive Income

D.1 Introduction

There are many circumstances in which it is useful, or indeed necessary, to analyse levels of household income *before* housing costs have been met. Using a housing-cost-exclusive measure of income also requires a deduction to be made for any part of income that is received specifically for help with payment of housing costs. For our purposes, income *before housing costs* (as used in the official Households Below Average Income statistics) and net of any housing benefit payments is a very useful measure, as it will enable us to consider the impact of varying rent levels and / or alternative housing benefit systems on the distribution of income between the different tenures and within the social renting sector in particular.

However, a difficulty arises when we consider income levels for tenants prior to 1983, when help with rent payments was largely provided through the supplementary benefit (SB) system. As such, it is rather difficult to identify separately the housing benefits received by many tenants before this date.

We have developed a very simple rule by which it is possible to separate out the housing benefit and income supplement elements of supplementary benefit before the 1983 reforms were introduced. This is described below.

D.2 The Housing Benefit System

Prior to 1983, help with housing costs was obtained through supplementary benefit (National Assistance before 1966) and rent rebates / allowances and rate rebates. Housing costs (rent, mortgage interest payments, repairs, insurance, etc.) were taken into account when calculating an individual's entitlement to SB.

Those tenants whose income for SB purposes was less than their assessed requirements before adding in housing costs received 100 per cent of their rent in benefit. People for whom income was above requirements excluding housing costs, but otherwise eligible to apply for SB, received a reduced amount of benefit. Total rent eligible for benefit was sometimes reduced (and still is under the current system) to take account of contributions towards housing costs by non-dependants[22] or because the accommodation in which claimants were living was deemed too large or too expensive.

The two separate schemes that existed for providing help with rent payments were amalgamated in 1983 with the introduction of unified housing benefit, on which the current housing benefit system is based.[23] Rent and general rates were removed from the SB assessment so that individuals could not qualify for SB simply because of their housing costs. Those people who were eligible for SB under the new rules still received 100 per cent help towards their allowed housing costs, if their income fell short of their assessed requirements before housing costs. This was the 'certificated housing benefit' scheme. For those people no longer eligible for SB, 'standard housing benefit' was introduced. This was very similar to the old rent rebate / allowance and rate rebate schemes, with payment of benefit depending upon gross income (less disregards), eligible rent and / or rates, a needs allowance and any relevant non-dependant deductions. Compensation was provided for those individuals who lost out under

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[22] A non-dependant is someone who is not part of the claimant's 'family' who is assumed to contribute (whether or not they actually do) towards the costs of the accommodation in which the claimant lives.

[23] Mortgage interest for low-income households is still paid through the SB (now income support) system.

the new system in the form of a transitional benefit, housing benefit supplement.

D.3 A Method for Estimating Housing Benefit Payments

The method utilised here, to calculate the housing benefit element of SB prior to 1983, is simply an interpretation of the rules that existed for calculating total SB entitlement during this period. If SB exceeds gross rent, then housing benefit is assumed to equal total rent, as individuals who qualified for SB (before housing costs are taken into account) had their full housing costs paid. If, however, gross rent equals SB or is greater than SB income, then we assume that all of SB is meant to help with housing costs. In such cases, housing benefit equals SB. This is not unrealistic, given the way that the system used to work, with some people eligible for SB solely because of their housing costs.

It might be argued that this method provides an over-estimation of housing benefit payments in many cases. For example, it does not take account of reduced eligible rent on grounds of excessive housing costs, nor are non-dependant deductions taken into consideration. However, estimating these deductions for each and every household would be an extremely complex exercise and would not necessarily provide estimates any more accurate than those derived using the proposed methodology.

Table D.1 provides estimates of housing benefit for all tenants, and for social renters and other tenants separately, in 1981 and 1982.

In order to test the accuracy of our estimates, the method outlined above has been applied to 1984 and 1985 data and compared with *actual* housing benefit payments for individual households in these years. The results are also presented in Table D.1. (It would not be appropriate to use the 1983 data to evaluate the robustness of our

TABLE D.1

Average estimated and actual housing benefits

Pounds per week, January 1996 prices

	Estimated housing benefit (non-zeros)[a]	*Actual housing benefit (non-zeros)*[a]	*Mean error*
1981			
All tenants	21.52	—	—
Social renters	21.74	—	—
Other tenants	19.39	—	—
1982			
All tenants	23.66	—	—
Social renters	24.07	—	—
Other tenants	19.56	—	—
1984			
All tenants	21.33	20.11	1.22 (6%)[b]
Social renters	21.64	20.36	1.28
Other tenants	18.24	17.49	0.75
1985			
All tenants	22.68	21.51	1.17 (6%)[b]
Social renters	22.76	21.66	1.10
Other tenants	21.88	20.11	1.77

[a]Non-zeros refer to estimated housing benefit recipients for 1981 and 1982, and to actual housing benefit recipients for 1984 and 1985.

[b]Figures in parentheses refer to the percentage of those households receiving housing benefit for which the difference between actual and estimated housing benefit payments is larger than the average for actual recipients in each year.

estimates, given the uncertainty that exists during the transitional period of any benefit reform.)

From Table D.1, it is clear that our estimated figures provide very close approximations to actual housing benefit payments, on average. The mean error is a little over £1 per week for both 1984 and 1985, and does not differ significantly across the different tenures. The maximum error is around £30 and £40 per week for 1984 and 1985,

respectively (presumably due to the factors outlined above, i.e. non-dependant deductions or excessive housing costs).

Our results also suggest that we are slightly overestimating the total number of recipients of housing benefit, but only by approximately 8 per cent. The errors in estimating HB payments are more significant for these cases, but this does not seem to be because we have not considered non-dependant deductions (there is no particular relationship between the size of the error and the number of benefit units in a household). It is more likely that the problem is due to misreporting of benefit receipt in the FES or to non-take-up of housing benefit.

D.4 Conclusion

For the purpose of our research into the incomes of tenants living in social rented accommodation, it is desirable to use a measure of income that is exclusive of any deductions for housing costs and additions for housing benefits. Prior to the 1983 housing benefit reforms, it was not possible to separate all housing benefits from total supplementary benefit payments. The estimates provided in Table D.1 utilise a simple algorithm to calculate these benefits for tenants in the years up to 1983. The results are not significantly different from actual benefit levels, except in a very small number of cases, and the number of estimated housing benefit recipients is very close to the actual recipient population.

APPENDIX E
Mean Equivalised Incomes and Standard Errors by Tenure for Selected Years
(standard errors in parentheses)

Pounds per week, January 1996 prices

Tenure	*1963*	*1973*	*1983*	*1993*
Social renters	135	165	147	153
	(1.633)	(1.212)	(1.195)	(1.864)
LA tenants	135	165	147	151
	(1.633)	(1.212)	(1.210)	(1.964)
HA tenants	—	—	156	161
			(6.492)	(5.674)
Other tenures	163	209	224	307
	(1.714)	(1.505)	(1.587)	(2.926)
Private unfurnished tenants	142	174	177	211
	(2.239)	(2.694)	(4.658)	(8.795)
Private furnished tenants	170	205	185	256
	(8.378)	(5.820)	(6.013)	(11.324)
Mortgagers	178	223	240	333
	(2.722)	(2.253)	(2.142)	(3.958)
Outright owners	171	205	202	265
	(4.309)	(3.012)	(2.749)	(4.863)
All	154	194	200	271
	(1.300)	(1.096)	(1.207)	(2.382)

Source: Family Expenditure Survey, various years.

APPENDIX F
Income Information in the 1993–94 Survey of English Housing

Whilst the Survey of English Housing is extremely useful for our purposes in terms of identifying the compositional effects of the right to buy and the characteristics of families moving into and out of social rented housing, as far as income information is concerned the survey is far from ideal. Whilst the 1993–94 SEH did ask very detailed questions about the incomes of private renters (data on income from various sources and for every household member were collected), for other tenures all the income data that we have are total gross income for the household head and their spouse. Moreover, these income data are only available in banded form.

In order to tease out the most accurate picture of income levels possible from the SEH, we have utilised a number of the different income variables available. For all *non*-private renters, we have made use of the income variable with the smallest band widths (**NJOINT** or **NGROSS**, depending on whether there is any income from a spouse), taking the mid-point of each band to represent the income of each household. We then made use of the period codes available in the SEH to identify whether the resulting income is on an annual, a monthly or a weekly basis, and converted all amounts to a weekly figure. Any households with dubious income estimates were dropped from the analysis. These income estimates were then combined with the detailed income data available for private renters (using the variables **PGROSHOH** and **PJNTINC**) to obtain a full set of average weekly incomes for households in all tenures. We have omitted households inhabited by more than one family unit (family groupings are defined so as to be the same as those derived from the Family

Expenditure Survey), due to the absence of information on the income of any household members other than the head and spouse for all tenures except private tenants.

All results have been adjusted to take account of non-response bias, on the basis of the grossing factors used in official low income statistics (see Goodman and Webb (1994, Section 1.2) for a description of the grossing-up procedure). The smallest weights have been given to pensioner households, which seem to have been over-sampled by the SEH, and the largest weights to young childless single people, who appear to have been significantly undersampled. Furthermore, results have been 'equivalised' to take account of household size, using the McClements (1977) equivalence scale.

Table F.1 reports median incomes by tenure, comparing results from the 1993–94 SEH and the 1993 FES. All income is a weekly household amount and is inflated to January 1996 prices. The largest differences are evident for private tenants, with the SEH reporting much higher incomes for private unfurnished tenants and much lower incomes for private furnished tenants than the FES. The FES seems to have undersampled private tenants, so that the discrepancy might partly be due to problems with the FES income data reported for households in this tenure.

A great deal of the divergence will be attributable to differences in the average incomes of different family types and the family composition of different tenures. For example, the grossed-up SEH data report a much larger group of single parents in the private furnished housing tenure than the FES does. This helps to explain why average incomes for private furnished tenants seem so much lower in the SEH data. In addition, income for non-working households is underestimated in the SEH, which we might expect from a survey that does not ask everyone detailed questions about benefit income. Hence, the SEH income data do exhibit some considerable differences from the FES; however, we have assumed that the

TABLE F.1

A comparison of SEH and FES reported median income levels

Pounds per week, January 1996 prices

	SEH 1993–94	*FES 1993*	*Difference (SEH – FES)*
All	212	222	–10
By tenure:			
LA tenants	114	117	–3
HA tenants	113	125	–12
Private unfurnished tenants	203	153	50
Private furnished tenants	181	222	–41
Motgagers	288	291	–3
Outright owners	198	213	–15
By family type:			
Couple pensioner	159	183	–24
Single pensioner	131	134	–3
Couple with children	222	230	–8
Couple, no children	328	331	–3
Single with children	91	106	–15
Single, no children	243	270	–27
By number of workers:			
At least one	277	275	2
None	113	121	–8

SEH is consistent across tenures in terms of the accuracy of its own income data, so that distributional analysis is possible (see Section 2.3.3 of the main body of this report).

APPENDIX G
Results for Unwaged at Part-Time Hours Levels (20 hours per week)

See tables on following pages

TABLE G.1

Current system

		Average replacement rate	*Average level of ATR*	*Percentage with ATR > 60%*	*Percentage with MTR > 60%*	*Percentage in work on HB*	*Hours of work to escape HB*
Men	Single	66%	75%	41%	43%	35%	19
	Unwaged spouse	87%	83%	88%	87%	69%	26
	Waged spouse	78%	65%	33%	35%	16%	10
	No children	78%	75%	58%	51%	58%	20
	With children	88%	82%	85%	86%	60%	25
	All men	80%	79%	68%	68%	53%	22
Women	Single, no children	74%	76%	62%	63%	66%	22
	Unwaged spouse	90%	80%	86%	76%	81%	36
	Waged spouse	78%	31%	15%	16%	6%	4
	No children	86%	63%	50%	22%	56%	23
	With children	85%	60%	59%	60%	50%	23
	Lone parent	72%	47%	52%	96%	83%	37
	All women	80%	57%	56%	68%	63%	27

TABLE G.2

Lower rent

		Percentage with lower ATR	*Average decrease in ATR*	*Percentage with higher ATR*	*Average increase in ATR*	*Percentage in work on HB*	*Hours of work to escape HB*	*Percentage with MTR > 60% in work*
Men	Single	82%	–5%	—	—	13%	15	25%
	Unwaged spouse	55%	–5%	—	1%	40%	20	83%
	Waged spouse	57%	–6%	—	—	5%	7	31%
	No children	37%	–6%	1%	5%	45%	17	38%
	With children	62%	–5%	—	—	30%	18	86%
	All men	63%	–5%	—	6%	28%	17	61%
Women	Single, no children	46%	–7%	—	—	47%	18	45%
	Unwaged spouse	30%	–6%	—	—	63%	26	67%
	Waged spouse	18%	–10%	—	7%	4%	2	15%
	No children	9%	–7%	—	—	52%	20	19%
	With children	29%	–7%	—	2%	36%	16	53%
	Lone parent	41%	–6%	—	—	56%	25	86%
	All women	33%	–7%	—	8%	46%	19	59%

TABLE G.3

Lower taper

		Percentage with lower ATR	*Average decrease in ATR*	*Percentage with higher ATR*	*Average increase in ATR*	*Percentage in work on HB*	*Hours of work to escape HB*	*Percentage with MTR > 60% in work*
Men	Single	87%	–11%	2%	4%	87%	34	16%
	Unwaged spouse	89%	–12%	3%	8%	93%	49	84%
	Waged spouse	46%	–10%	25%	9%	59%	25	31%
	No children	66%	–7%	11%	7%	77%	33	41%
	With children	86%	–13%	6%	8%	90%	48	86%
	All men	83%	–11%	6%	8%	87%	42	59%
Women	Single, no children	83%	–12%	7%	10%	85%	41	21%
	Unwaged spouse	80%	–14%	4%	9%	93%	67	43%
	Waged spouse	13%	–13%	52%	13%	31%	17	14%
	No children	25%	–9%	12%	2%	61%	38	4%
	With children	60%	–15%	26%	10%	70%	49	39%
	Lone parent	95%	–18%	1%	11%	96%	79	51%
	All women	70%	–16%	14%	12%	79%	57	37%

TABLE G.4

Higher disregard

		Percentage with lower ATR	*Average decrease in ATR*	*Percentage with higher ATR*	*Average increase in ATR*	*Percentage in work on HB*	*Hours of work to escape HB*	*Percentage with MTR > 60% in work*
Men	Single	91%	-20%	—	—	91%	32	64%
	Unwaged spouse	93%	-23%	—	—	95%	57	75%
	Waged spouse	54%	-20%	27%	16%	73%	33	51%
	No children	76%	-16%	10%	1%	87%	41	12%
	With children	89%	-24%	3%	2%	92%	56	90%
	All men	87%	-22%	3%	15%	91%	47	69%
Women	Single, no children	87%	-21%	—	—	89%	38	28%
	Unwaged spouse	82%	-28%	1%	18%	93%	76	42%
	Waged spouse	17%	-20%	53%	28%	46%	24	39%
	No children	27%	-22%	15%	1%	65%	45	5%
	With children	64%	-28%	24%	21%	77%	58	50%
	Lone parent	97%	-32%	—	—	97%	72	45%
	All women	73%	-28%	13%	27%	83%	59	41%

TABLE G.5

Family credit reform

		Percentage with lower ATR	*Average decrease in ATR*	*Percentage with higher ATR*	*Average increase in ATR*	*Percentage in work on HB*	*Hours of work to escape HB*	*Percentage with MTR > 60% in work*
Men	Single	13%	–24%	—	—	43%	23	43%
	Unwaged spouse	73%	–24%	—	—	90%	49	89%
	Waged spouse	41%	–20%	16%	14%	60%	25	57%
	No children	—	—	—	—	58%	20	51%
	With children	90%	–24%	4%	2%	93%	53	94%
	All men	53%	–24%	2%	14%	73%	39	73%
Women	Single, no children	—	—	—	—	66%	22	63%
	Unwaged spouse	73%	–29%	—	—	92%	68	50%
	Waged spouse	16%	–19%	41%	28%	38%	20	34%
	No children	—	—	—	—	56%	23	22%
	With children	64%	–28%	21%	8%	75%	56	49%
	Lone parent	97%	–33%	—	—	97%	85	50%
	All women	62%	–31%	10%	28%	79%	59	47%

TABLE G.6

Reduced eligibility

		Percentage with lower ATR	*Average decrease in ATR*	*Percentage with higher ATR*	*Average increase in ATR*	*Percentage in work on HB*	*Hours of work to escape HB*	*Percentage with MTR > 60% in work*
Men	Single	82%	–5%	—	—	13%	15	25%
	Unwaged spouse	55%	–5%	—	1%	40%	20	83%
	Waged spouse	57%	–6%	—	—	5%	7	31%
	No children	37%	–6%	1%	5%	45%	17	38%
	With children	62%	–5%	—	—	30%	18	86%
	All men	63%	–5%	—	6%	28%	17	61%
Women	Single, no children	46%	–7%	—	—	47%	18	45%
	Unwaged spouse	30%	–6%	—	—	63%	26	67%
	Waged spouse	18%	–10%		7%	4%	2	15%
	No children	9%	–7%	—	—	52%	20	19%
	With children	29%	–7%	—	2%	36%	16	53%
	Lone parent	41%	–6%	—	—	56%	25	86%
	All women	33%	–7%	—	8%	46%	19	59%

APPENDIX H
Estimating Wages for Unwaged Social Renters

The wage levels of the unwaged were estimated using an ordinary least squares (OLS) regression of the wages of individuals in work from the Family Expenditure Survey. This regression should be viewed more as an exercise in data description than as a definitive econometric model of the process of wage determination. We simply estimate the wages of the unwaged by taking the observed characteristics of those who are employed and assuming that our unwaged sample with similar characteristics would receive similar wages. A major restriction is that we do not observe in the FES all the characteristics that we would like to include in a wage equation, in particular a measure of ability or motivation. Our main explanatory variables are simply age, the age at which full-time education ceased and region.

The implicit assumption in these estimates is that two people of identical characteristics would be offered the same wage even if the first person is currently employed while the second person is currently unemployed. We attempted to estimate wages using a two-step estimator, which allows for differences between our in-sample estimates and our out-of-sample predictions. Our identifying variable was family composition. However, the selection terms in these equations did not prove significant. This result is probably due to the lack of information in the FES, rather than to lack of difference in the real labour force.

Tables H.1 to H.5 show the coefficients and standard errors of our OLS regressions. We estimated separate equations for single men without children, men with a partner, single women without children, women with a partner and lone parents. The dependent variable in all

cases is log(wage). The precise definitions of the explanatory variables are given in Table H.6.

TABLE H.1

Wage equation for single men without children

Variable	*Coefficient*	*Standard error*
constant	–0.687	0.104
age	0.103	0.005
sage2	–0.001	0.000
ageced	0.046	0.004
reg1	–0.233	0.049
reg2	–0.224	0.041
reg3	–0.214	0.040
reg4	–0.185	0.045
reg5	–0.287	0.041
reg6	–0.203	0.052
reg8	–0.081	0.035
reg9	–0.215	0.044
reg10	–0.356	0.053
reg11	–0.195	0.042
reg12	–0.365	0.079
y91	0.065	0.023
y92	0.006	0.023
socrent	–0.165	0.025

TABLE H.2

Wage equation for men with a partner

Variable	*Coefficient*	*Standard error*
constant	0.635	0.191
age	0.056	0.006
sage2	–0.000	0.000
ageced	0.008	0.009
age_ed	0.001	0.000
reg1	–0.198	0.029
reg2	–0.202	0.026
reg3	–0.177	0.025
reg4	–0.205	0.027
reg5	–0.220	0.026
reg6	–0.201	0.033
reg8	–0.025	0.022
reg9	–0.160	0.026
reg10	–0.235	0.032
reg11	–0.114	0.026
reg12	–0.257	0.044
y91	0.052	0.014
y92	0.034	0.014
socrent	–0.319	0.018

TABLE H.3

Wage equation for single women without children

Variable	*Coefficient*	*Standard error*
constant	–1.072	0.119
age	0.111	0.006
sage2	–0.001	0.000
ageced	0.060	0.005
reg1	–0.332	0.047
reg2	–0.250	0.043
reg3	–0.277	0.040
reg4	–0.216	0.049
reg5	–0.308	0.042
reg6	–0.200	0.062
reg8	–0.144	0.035
reg9	–0.281	0.044
reg10	–0.377	0.058
reg11	–0.242	0.041
reg12	–0.397	0.073
y91	0.068	0.025
y92	0.014	0.024
socrent	–0.209	0.026

TABLE H.4

Wage equation for women with a partner

Variable	*Coefficient*	*Standard error*
constant	0.630	0.237
age	0.007	0.008
sage2	–0.000	0.000
ageced	0.055	0.012
age_ed	0.000	0.000
reg1	–0.281	0.032
reg2	–0.304	0.028
reg3	–0.272	0.027
reg4	–0.300	0.029
reg5	–0.292	0.029
reg6	–0.301	0.036
reg8	–0.203	0.024
reg9	–0.301	0.028
reg10	–0.336	0.035
reg11	–0.244	0.029
reg12	–0.350	0.048
y91	0.003	0.015
y92	–0.015	0.015
socrent	–0.233	0.020

TABLE H.5

Wage equation for lone parents

Variable	*Coefficient*	*Standard error*
constant	0.471	1.091
age	0.028	0.032
sage2	–0.000	0.000
ageced	0.036	0.064
age_ed	0.001	0.002
reg1	–0.274	0.106
reg2	–0.231	0.100
reg3	–0.101	0.088
reg4	–0.163	0.103
reg5	–0.137	0.095
reg6	–0.118	0.119
reg8	–0.042	0.085
reg9	–0.283	0.102
reg10	–0.307	0.109
reg11	–0.061	0.095
reg12	–0.389	0.174
female	–0.401	0.076
y91	0.040	0.055
y92	–0.063	0.050
socrent	–0.197	0.048

TABLE H.6

Definition of explanatory variables

Variable name	*Definition*
Continuous variables	
age	Age of person
sage2	Age of person squared
ageced	Age at which person ceased full-time education
age_ed	Age of person × Age at which they ceased full-time education
Region dummies	Base region is Greater London
reg1	Northern England
reg2	Yorkshire and Humberside
reg3	North Western England
reg4	East Midlands
reg5	West Midlands
reg6	East Anglia
reg8	South East
reg9	South West
reg10	Wales
reg11	Scotland
reg12	Northern Ireland
Year dummies	Base is interviewed in 1993
y91	Interviewed in 1991
y92	Interviewed in 1992
female	Dummy for whether person is female
socrent	Dummy for social renters

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