Persistent Poverty and Lifetime Inequality: The Evidence

Proceedings from a workshop held at H M Treasury,
chaired by Professor John Hills,
Director of the ESRC Research Centre for Analysis of Social Exclusion, LSE

17th and 18th November 1998

CENTRE FOR ANALYSIS OF SOCIAL EXCLUSION
An ESRC Research Centre

CASEreport 5
March 1999
ISSN 1465-300 1

HM Treasury

Occasional paper no. 10

Centre for Analysis of Social Exclusion

The ESRC Research Centre for Analysis of Social Exclusion (CASE) was established in October 1997 with funding from the Economic and Social Research Council. It is located within the Suntory and Toyota International Centres for Economics and Related Disciplines (STICERD) at London School of Economics and Political Science, and benefits from support from STICERD. It is directed by Howard Glennerster, John Hills, Kathleen Kiernan, Julian Le Grand and Anne Power.

Our Discussion Papers series is available free of charge. We also produce summaries of our research in CASEbriefs. To subscribe to the series, or for further information on the work of the Centre and our seminar series, please contact the Centre Administrator, Jane Dickson, on:

Telephone:	+44 (0)171 955 6679
Fax:	+44 (0)171 242 2357
Email:	j.dickson@lse.ac.uk
Website:	sticerd.lse.ac.uk/case.htm

HMT Public Enquiry Unit:

Telephone:	+44 (0)171 270 4558
Fax:	+44 (0)171 270 5244

Background

This report summarises presentations and discussion at a workshop on 'Persistent Poverty and Lifetime Inequality' organised by HM Treasury and chaired by John Hills, Director of the ESRC Resarch Centre for Analysis of Social Exclusion at the London School of Economics. It took place on 17 and 18 November 1998. A list of presenters is included overleaf. The organisers are very grateful to all participants for their contributions to the debate summarised here.

The Treasury decided to hold this workshop to encourage debate and extend understanding of the causes of persistent poverty and inequality of opportunity, drawing on the large amount of new research using panel datasets*. These new datasets make it possible to move from a static analysis of poverty and inequality to a dynamic focus. Looking at the dynamics of poverty and inequality of opportunity enables us to pinpoint the processes and events which lead people to be at greater risk of low income and poorer life chances. These data provide a much firmer underpinning for policies which aim to tackle these problems at source.

* Several of the papers included in this volume report results drawn from datasets including the British Household Panel Survey, the National Child Development Study, the Labour Force Survey and others supplied by the Data Archive at Essex University, to whom the presenters and organisers are most grateful.

Contents **Page**

Session 1: Poverty and Inequality From a Dynamic Perspective

Session 2: Area and Multiple Deprivation

Session 3: Retirement and the Elderly

Session 4: Work and Poverty

Session 5: Childhood Poverty and Family Structure

Session 6: Education and Poverty

*Presented by Kathleen Kiernan in John Hobcraft's absence.

List of presenters

Professor John Hills
ESRC Research Centre for Analysis of Social Exclusion
London School of Economics

Professor Stephen Jenkins
ESRC Research Centre on Microsocial Changes
Institute of Social and Economic Research
University of Essex

Professor Robert Walker
Centre for Research in Social Policy
Department of Social Sciences
Loughborough University

Steve Machin
University College of London and CEP

Howard Oxley,
OECD

Sam Mason
Department of the Environment, Transport and Regions

Professor Anne Power
Department of Social Policy and Centre for Analysis of Social Exclusion
London School of Economics

Professor Michael Noble
Department of Applied Social Studies
Oxford University

Nigel Campbell
Cabinet Office

Professor Richard Disney
School of Economics
University of Nottingham

Dr Carl Emmerson
Institute of Fiscal Studies

Professor Mark Stewart
Economics Department
University of Warwick

Dr Richard Dickens
Centre for Economic Performance
London School of Economics

Rebecca Endean
Department of Social Security

Dr Paul Gregg
London School of Economics/HMT

Professor John Bynner
Centre of Longitudinal Studies Institute of Education

Professor Jane Waldfogel
Columbia University and Centre for Analysis of Social Exclusion
London School of Economics

Dr Kathleen Kiernan
Department of Social Policy and Centre for Analysis of Social Exclusion
London School of Economics

John Hobcraft
London School of Economics

Ralph Tabberer
Department for Education and Employment

David Soskice
No.10 Downing Street

Session 1: Poverty and Inequality from a Dynamic Perspective

Introduction: 'What do we mean by reducing lifetime inequality and increasing mobility?'

John Hills, Centre for Analysis of Social Exclusion

The title suggested by the conference organisers was an intriguing one, as answers to it affect what sort of issues we should be concentrating on in looking at the other papers in this collection. Perhaps more specifically, it could be rephrased as: 'Why – and in what ways – might policy focus on reducing lifetime inequality and increasing mobility?'

Why might policy focus on reducing lifetime inequality as opposed to just straight forward inequality? If the focus is purely on lifetime inequality, it implies that we prefer the distribution given by the trajectories shown in (a) rather than those in (b) in Figure 1. In other words, cross-sectional inequality is all right as long as it averages out in the end. 'We should take the rough with the smooth', and not fuss too much about short-term fluctuations. There is clearly some truth in this. But normally economists worry about risk aversion – people often are prepared to pay an insurance premium to reduce the chance of wobbles like those in trajectory (a).

Figure 1

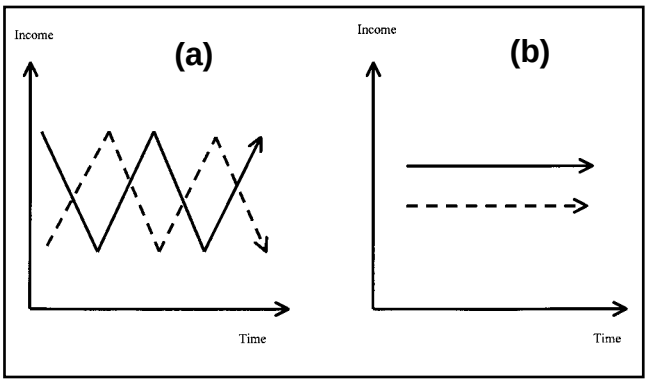
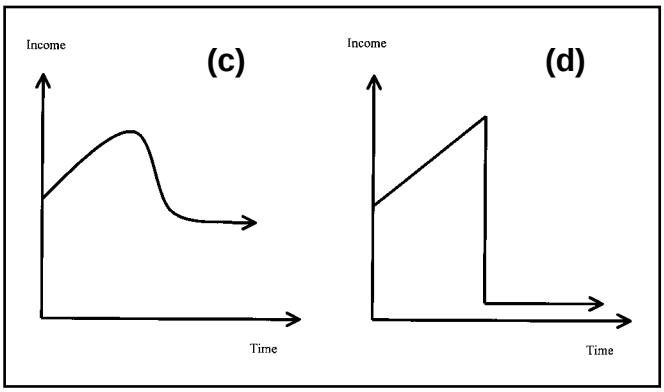


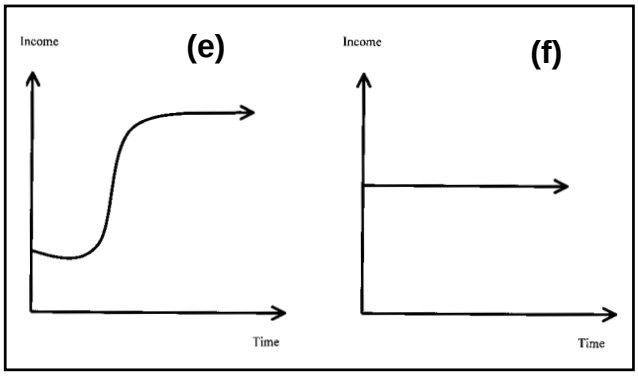
Figure 2



Such a focus only on lifetime totals also implies that we do not mind how people arrange their total resources over their lifetime. It is up to them if they want to be poor students for several years and earn more later, or if they want to take a career break financed from savings or borrowing. This seems fair enough. But we do appear to mind in other circumstances. We are, for instance, prepared to go to a lot of lengths to encourage – or even force – people's living standards to look like trajectory (c) rather than trajectory (d) in Figure 2, even if left to themselves they choose (d). We are not prepared to see the cross-sectional inequality implied by (d) even if it has no lifetime effect.

So a preference for lifetime inequality over cross-sectional inequality does not seem to be unambiguous. However, another reason for a focus on lifetime inequality rather than cross-sectional inequality is that it implies a concern with the longer-term effects of policy. We are prepared to go for trajectory (e) rather than trajectory (f) in Figure 3.

Figure 3



This kind of preference lies behind the 'hand-up' not 'hand-out' philosophy, and to welfare-to-work being preferred to all round benefit increases by the present Government, for instance. In other words, this suggests a preference for policies with persistent effects on later outcomes. These can perhaps be divided into two:

- Policies which change individual characteristics in a way which lasts, such as education or training.
- But also, if there is "state dependence" in the system, changing the right initial state has long term effect. Do jobs lead to jobs? Which parts of childhood disadvantage have knock-on effects into adulthood? At the other end of working lives, can you break the cycle of low skills leading to early retirement, leading in turn to low income in retirement?

There is another problem with 'reducing lifetime inequality' as a policy target: you cannot measure it. A few years ago, Jane Falkingham and I with other LSE colleagues carried out an exercise looking at this question, building a lifetime simulation

model, LIFEMOD[1]. In our hypothetical model of lives 'if they were all lived continuously in 1985' we found a Gini coefficient of 0.20 for lifetime equivalised net income compared to 0.30 for cross-sectional equivalised net income in the same model. But these are only results from an analytical model. The world will not ever look like LIFEMOD, because the world won't look like 1985 forever (perhaps luckily). And it is hard to see results from a model being very convincing to the electorate: 'You may think the country has become more unequal, but a computer model at LSE says that on a hypothetical lifetime basis, it has not…' Unfortunately, you have to wait a very long time to get actual lifetime inequality – even if the ESRC carries on funding the British Household Panel Survey for another 60 years. Even then, the observed lifetime totals would be the product of a whole series of different policy mixes and economic environments, which would make it hard to assess policy at one point even in the distant past.

So in operational terms, even if lifetime inequality is what you really care about, you will have to set targets in terms of things which contribute to lifetime inequality:

- This suggests the need to focus on identifying states with long term or persistent effects, and then trying to affect them.
- It also suggests a focus on groups affected by persistent poverty.

But it also implies a need to focus on recurrent poverty. It is all very well to say that we can worry less about poverty if it is transitional, but that does not help very much: only small minority of low cross-sectional income is not associated with nearby periods of low income[2]. The implication is that while this kind of focus helps, most of the things associated with cross-sectional inequality are also associated with lifetime inequality and long term poverty. Therefore you should not give up on the things you can measure.

The other part of the question in the title was about 'increasing mobility'. Should policy focus on increasing mobility? And if so, over what time scale:

- Short-term;
- Medium-term/life cycle;
- Intergenerational?

In other words, is mobility a 'good thing'? A lot of the way people talk about it assumes that it is. Most people seem to be in favour of upward mobility. We like the prospect of things getting better for ourselves and for our children. But we're not so keen on downward mobility. People worry about how people will cope with a drop below accustomed living standards. At the extreme, some prefer an immobile society where "everyone knows their place" and so on, but even without such strong views, others may be squeamish about people having to adjust to substantially reduced circumstances.

If we think that a pound is worth less to the rich than to the poor, we are prepared to use redistributive taxation, but it is not obvious that policy would be counted a success if everyone simply swapped places with their opposite numbers in the income distribution each year. This has implications for measurement. It means that we probably want measures which are not simply about rank. That is, we may want to promote positive trajectories relative to, say average income, rather than simply measuring positive trajectories in terms of movements between decile groups of the income distribution.

We are also worried about income risk, as mentioned before. Simple variability of income is not necessarily a good thing. So it is only certain kinds of mobility or trajectories which we want. None the less if there is going to be some poverty, we might prefer it was transitory, and so shared out as widely and briefly as possible, rather than concentrated on the same people. So in distributional terms we are interested in income averaged over longer than just one week and so on, but at the same time highly variable incomes are effectively worth less than consistent ones.

But perhaps the most important reason why we are interested in mobility is that lack of mobility across lifetime or between generations is a marker for lack of equality of opportunity. We may not be worried about intergenerational mobility per se, i.e. there is no particular gain from the wealth of parents being offset by the poverty of their children or vice versa. However, if we see that childhood poverty or growing up in a poor neighbourhood is associated with low education and lower later earnings because of this, then we certainly should be worried.

So the answer to my original question is that it is hard to focus on lifetime inequality per se, but it does make sense for policy to focus additionally on things which have long-term effects – and hence have most purchase on life time inequality – as well as focussing on short term distribution. It also makes sense to focus on things which promote certain kinds of mobility, but again not simply on promoting 'mobility' in aggregate.

The rest of the papers in this volume present a wide range of recent evidence on the factors and characteristics linked to different forms of mobility and immobility, crucial evidence in identifying policies with such effects.

---

[1] *The Dynamic of Welfare: The welfare state and the life cycle*, edited by Jane Falkingham and John Hills (Harvester Wheatsheaf, 1995)

[2] See Stephen Jenkins' contribution to this volume, or John Hills and Karen Gardiner, 'Policy implications of new data on income mobility' (*Economic Journal*, February 1999).

'Income dynamics in Britain 1991-6'[1]

Stephen P Jenkins, Institute for Social and Economic Research, University of Essex

1. Introduction

The aim of this chapter is to set out some of the basic facts about income dynamics in Britain during the first half of the 1990s. These descriptions provide some empirical background with which to help assess the normative issues raised by John Hills. Later chapters also do this and mine complements these in two principal ways. First, my focus is on household income rather than particular components of income and labour market earnings in particular (cf. Mark Stewart's and Richard Dickens's chapters). And I look at the experience of the population as a whole, including both adults and children, rather than, say, only male workers. Second, I look at income changes from one year to the next. By contrast Robert Walker discusses lifecycle trajectories and Steve Machin documents intergenerational associations.

The data set used throughout is the British Household Panel Survey, waves 1-6 (covering 1991-1996). In section 2, I briefly introduce these data and give the definitions of key variables such as income. In section 3, I demonstrate that, although there has been relative stability in the cross-section shape of the British income distribution during the 1990s, this disguises a large amount of longitudinal flux at the individual level. I also provide some information about how much inequality in income there is if one takes account of this year-to-year income mobility, and how many people are touched by low income over an interval of six years. Section 4 provides a first look at the factors which are associated with the movements in and out of low income. In particular it addresses the extent to which these people's transitions are associated with changes in their household's money incomes, especially labour earnings, or changes in the composition of the household itself.

The research reported here is drawn from a longer paper (Jenkins, 1998), which provides many more details. Further analysis of the same topics, albeit based on data for BHPS waves 1-4, can be found in Jarvis and Jenkins (1997, 1998).

2. The Data and the Definition of Income

The British Household Panel Survey (BHPS)

The data summarised here are drawn from interview waves 1-6 of the British Household Panel Survey (BHPS), covering the period 1991-6. The first wave of the BHPS was designed as a nationally representative sample of the population of Great Britain living in private households in 1991, and provided information about 10,000 adults in 5000 households. Subsequently these original sample respondents have been followed and they, and their co-residents, re-interviewed at approximately one year intervals in the Autumn of each year. Children are interviewed in their own right when they reach age 16. Six core topic areas are covered by the questionnaire each year: incomes, labour market activity, household demography and organisation, housing, health, and socio-economic and political values.

The definition of income

The income distributions used in this paper are defined in the same way as in the Department of Social Security's *Households Below Average Income* (HBAI) statistics: see for example, DSS (1998). These distributions have been specially created by Sarah Jarvis and myself and are available from the Data Archive as a supplement to the BHPS release files.

More specifically the variable analysed is needs-adjusted household net income or simply 'income' for short:

$$\text{'Income'} = \text{needs-adjusted household net income} = \frac{\text{household money income}}{\text{household 'needs'}}$$

where household money income is the sum over all household members of: head's labour earnings, spouse's labour earnings, other labour earnings, investment income, private and occupational pension income, benefit income, private transfer income (e.g. maintenance) *minus* income taxes *minus* local taxes (currently the council tax). Household 'needs' are summarised by the McClements before-housing-costs equivalence scale rate. For instance the needs 'score' for a childless married couple is 1.0 and for a single householder, 0.61 (the scale rates also vary by children's age).

In common with all other British household surveys, the income reference period is the month round about the time of the annual BHPS interview or the most recent period (except for labour earnings which refer to 'usual' earnings and investment income which is annual). In short, we have a measure of current rather than annual income. All income values have been expressed in pounds per week at January 1997 prices.

The unit of analysis is the individual (adult or child) rather than the household. Each person is imputed with the needs-adjusted net income of the household to which they belong.

[1] Paper prepared for HM Treasury Workshop on "Persistent Poverty and Lifetime Inequality", November 1998. The research reported here forms part of the scientific programme of the Institute for Social and Economic Research, which receives core funding support from the Economic and Social Research Council and the University of Essex.

Analysis of transitions into and out of low income is predicated on having a income cut-off in order to distinguish between high and low incomes. I define a person to have low income if his or her income is less than half average wave 1 (1991) income.

3. Longitudinal flux amidst cross-sectional stability

Table 1 provides a standard cross-sectional view on the income distribution for each year between 1991 and 1996. One striking feature is the stability in the shape of the distribution over this period. The Gini coefficient, a measure of the degree of inequality, changed hardly at all, and nor did the proportion of the population with income below half the contemporary average income. (This is of course in great contrast to the 1980s when inequality and low income rose a lot.) Along with the stability in distribution shape, there was some increase in real income, as shown by the rise in mean income by about one-tenth between 1991 and 1996, and the decrease in number of persons with incomes below the fixed half-1991 mean cut-off (equal to about £130 per week).

There is a remarkable degree of longitudinal income mobility which co-exists with the cross-sectional stability in the shape of the income distribution: see Table 2. Each person has been classified into one of six income groups, from highest to lowest, according to their income 'this year' (wave *t*), and then classified again in the same way, but according to their income 'last year' (wave *t*-1). The table shows the outflow rates from each of last year's income groups to the six different income groups this year.

There is a lot of mobility because, for all but one income groups, the proportion of persons in last year's group who are in the same group this year is about one-half or less. For example, only about one half (54%) of those with incomes below the low income cut-off last year also have incomes below the same cut-off this year. (The exceptional group is the very richest one where the stayer proportion is nearer three quarters, suggesting that income mobility is less amongst the richest.) On the other hand, it is also clear that most year-to-year income mobility is short-range: observe the clustering of observations about the main diagonal of Table 2. For example, of those with incomes below the low income cut-off last year, 84% have incomes below 125% of the threshold income this year. This finding of 'much mobility but mostly short-range' is robust to the choice of income group category and income. For example it is also found if one uses deciles rather than fixed real income values to define the income groups (Jarvis and Jenkins, 1998).

The pattern of year-to-year mobility revealed in Table 2 (and other related work) can be summarised in terms of what I label the 'rubber band' model of income dynamics. One may think of each person's income fluctuating about a relatively fixed 'longer-term average'. This value is a tether on the income scale to which people are attached by a rubber band. They may move away from the tether from one year to the next, but not too far because of the band holding them. And they tend to rebound back towards and around the tether over a period of several years. Of course over a longer period the position of the tethers will move with secular income growth or career developments. Also rubber bands will break sometimes if 'stretched' too far by 'shocks'—perhaps negative ones such as death of a breadwinner or positive ones such a big lottery win—leading to long term changes in relative income position.

How much is inequality reduced if each person's income is smoothed longitudinally?

Not very much: see Table 3. The statistics in the first column refer to incomes for just one year, 1991; the second column refer to incomes longitudinally averaged over 1991 and 1992, and so on through to the last column, in which they refer to the six-year 1991-6 average. Inequality falls the more the income accounting period is extended—which is expected because the averaging smooths fluctuations—but the decrease levels off relatively quickly. The reduction in the Gini coefficient from six year smoothing is roughly equivalent to the redistributive effect of direct taxes, as measured by the difference between the pre- and post-tax income Gini coefficients. The second row of the table expresses the same information differently. Standardising the Gini coefficients by averaged cross-sectional inequality provides a natural measure of income immobility: the more incomes are longitudinally smoothed the less immobility there is. The statistic in the last column can be interpreted as saying that longer-term (six-year) income inequality is about 88% of inequality in an average year.

How many people experienced low income over a six year period?

Quite a lot, relative to the proportion poor in any single year (cf. Table 1). This is shown by Table 4. The first column shows that more than two-thirds of persons in the sample never had a low income at any of the six annual interviews during 1991-6, and under two percent (1.7%) had a low income at every interview. On the other hand, the second column indicates that almost one third (32%) had low income at least once during this six year period and almost one fifth (19.1%) had low income at least twice. And just as inequality does not disappear with longer-term income smoothing, nor does the incidence of low income. If incomes are averaged over six waves, then the proportion of persons with smoothed income below the low income threshold is about 8%.

The upshot is that many more people are affected by low income over an interval of several years than have low income at a point in time. This also means that the social security system helps a rather larger number of people than a focus on the current caseload would suggest.

4. What accounts for transitions in and out of low income from one year to the next?

I now turn to consider the factors associated with transitions into and out of low income, drawing on pioneering methods employed by Bane and Ellwood (1986). Recall that income (needs-adjusted household net income) is equal to household

money income divided by household 'needs'. Thus changes in net incomes can arise via changes in household money incomes ('income events') and changes in household composition ('demographic events'). I look at the correlates of low income transitions by examining the relative frequency of different event types.

The analysis is based on a classification of event types according to a mutually-exclusive heirachy. This was done using the definitions summarised in Figure 1. Table 5 summarises the relative frequency of the different event types for transitions out of low income and transitions into low income. Not all low income transitions were included in the analysis: some were excluded to mitigate against the impact of potential measurement error (see the note to Table 5).

The breakdowns suggest that income events are more important than demographic events for accounting for low income transitions, though demographic events are relatively more important for movements into low income than for movements out. More than four-fifths (82.3%) of transitions out of low income were income events of various kinds, which compares with about three-fifths (62.4%) of transitions into low income. A person's earnings can change because they get a different amount while staying in the same job, or because they get or lose a job altogether. Both are important. For example, amongst the persons for whom a rise in household head's labour earnings was the main event associated with a transition out of low income, the household head moved from not working to working in 51% of the cases. Amongst the persons for whom a fall in household head's labour earnings was the main event associated with a transition into low income, the household head moved from working to not working in 56% of the cases.

The breakdowns in Table 5 also draw attention to the relative importance of different types of income events. In particular they highlight the relevance of earnings changes for persons other than the head of household. For example, for movements out of low income, changes in the labour earnings of a spouse or other person in the household besides the household head are almost as important as changes for the head. Non-labour income changes also play an important role.

There are of course some variations in the relative importance of different types of events when one focuses on different subgroups of the population. For example, demographic rather than income events account for the majority of the low income entry transitions amongst those currently in lone parent households. However the broad conclusions drawn in the last paragraph are fairly robust across household types (Jenkins, 1998). The findings that demographic events and non-labour income dynamics play significant role for many echoes those reported by Bane and Ellwood (1986) for the US during the 1970s.

The results have an important implication for modelling income and poverty dynamics for the population as a whole. Even where earnings events and low income transitions are relatively closely associated, we need to recognise that earnings dynamics are often a mixture of earnings dynamics for several persons (note role of spouse's and others' earnings). A corollary of this is that a model of dynamics of a single income component (for example men's wages) is unlikely to explain well the income dynamics for any household type.

There are of course limitations to the Bane/Ellwood method used here. It is useful for identifying the salient facts to be explained but does not tell us about causation or provide a means for dynamic simulation for policy analysis. One specific limitation is that a hierarchical classification of events does not allow the unravelling of impact of simultaneous events. More sophisticated analysis requires multivariate models. These are of two basic types, each with complementary advantages and disadvantages (Jenkins, 1998). Top-down approaches include single equation models with low income status or income level as the dependent variable: see the Oxley and Antonin chapter for an example of this approach. Bottom-up approaches model the underlying dynamic economic processes such as labour market participation and household formation and dissolution, and their relationships with various income components. The implications for income dynamics are derived from these building blocks. See Burgess and Propper (1998) for an application to the US. Given the extent of persistent low income and longer-term inequality in Britain, developing better models of both types is a research priority.

References

Burgess S. and Propper C. (1998). 'An economic model of household income dynamics, with an application to poverty dynamics among American women', Discussion Paper No. 1830, Centre for Economic Policy Research, London.

Bane M.J. and Ellwood D.T. (1986). 'Slipping into and out of poverty: the dynamics of spells', Journal of Human Resources: 21, 1-23.

Department of Social Security (1998). Households Below Average Income 1979-1996/97, Corporate Document Services, London.

Jarvis S. and Jenkins S.P. (1997). 'Low income dynamics in 1990s Britain', Fiscal Studies 18: 1-20.

Jarvis S. and Jenkins S.P. (1998). 'How much income mobility is there in Britain?', Economic Journal 108: 428-443.

Jenkins S.P. (1998). 'Modelling household income dynamics', Working Paper 99-1, Institute for Social and Economic Research, University of Essex; Downloadable from http://www.iser.essex.ac.uk/pubs/workpaps/wp99-1.htm

Table 1
Trends in mean income, inequality and low income: 1991-6

	1991	1992	1993	1994	1995	1996
Mean income (£ p.w.)	259	269	272	274	288	290
Gini coefficient	0.31	0.31	0.31	0.31	0.32	0.32
Percentage below half contemporary mean	17.8	16.6	17.3	16.6	17.1	16.4
Percentage below half 1991 mean	17.8	15.3	15.1	14.1	12.4	12.0
Number of persons (unweighted)	11634	11001	10473	10476	10119	10511

Source: BHPS waves 1-6, data weighted using cross-section enumerated individual weights. Income is needs-adjusted household net income per person in January 1997 pounds per week.

Table 2
Outflow rates (%) from last year's income group origins to this year's income group destinations

Income group*, wave *t*-1	Income group*, wave *t*							
	< 0.5	0.5-0.75	0.75-1.0	1.0-1.25	1.25-1.5	≥ 1.5	All	(col. %)
< 0.5	54	30	9	4	2	2	100	(13)
0.5-0.75	15	56	21	5	1	2	100	(22)
0.75-1.0	5	19	48	20	5	3	100	(21)
1.0-1.25	3	6	20	44	20	7	100	(16)
1.25-1.5	2	3	8	25	35	27	100	(10)
≥ 1.5	1	2	4	6	12	75	100	(18)
All	12	22	20	17	10	19	100	(100)

*: Income is needs-adjusted household net income per person in January 1997 pounds per week. Persons classified into income groups according to the size of their income relative to fixed real income cut-offs equal to 0.5, 0.75, 1.0, 1.25, and 1.5 times mean Wave 1 income = £259 per week. Transition rates are average rates from pooled BHPS data, waves 1-6, subsample of 6821 persons present at each wave.

Table 3
Income mobility as reduction in inequality when the income accounting period is extended

	Income accounting period					
	1991	1991-2	1991-3	1991-4	1991-5	1991-6
Gini coefficient	0.30	0.29	0.28	0.27	0.27	0.27
Immobility index*	1.00	0.95	0.92	0.91	0.89	0.88

Source: BHPS waves 1-6, subsample of 6821 persons present at each wave. Income is needs-adjusted household net income per person in January 1997 pounds per week. * Immobility index = Gini coefficient of income cumulated *m* periods expressed relative to weighted average of Gini coefficients for income in each of the *m* periods.

Table 4
The prevalence of low income

m	Percentage of sample with low income at *m* interviews out of 6	Percentage of sample with low income at *m* or more interviews out of 6
0	68.0	100.0
1	12.9	32.0
2	8.0	19.1
3	3.9	11.1
4	2.7	7.2
5	2.8	4.5
6	1.7	1.7

Source: BHPS waves 1-6, subsample of 6821 persons present at each wave. Income is needs-adjusted household net income per person in January 1997 pounds per week. The low income threshold is £130 pounds per week (half 1991 average income).

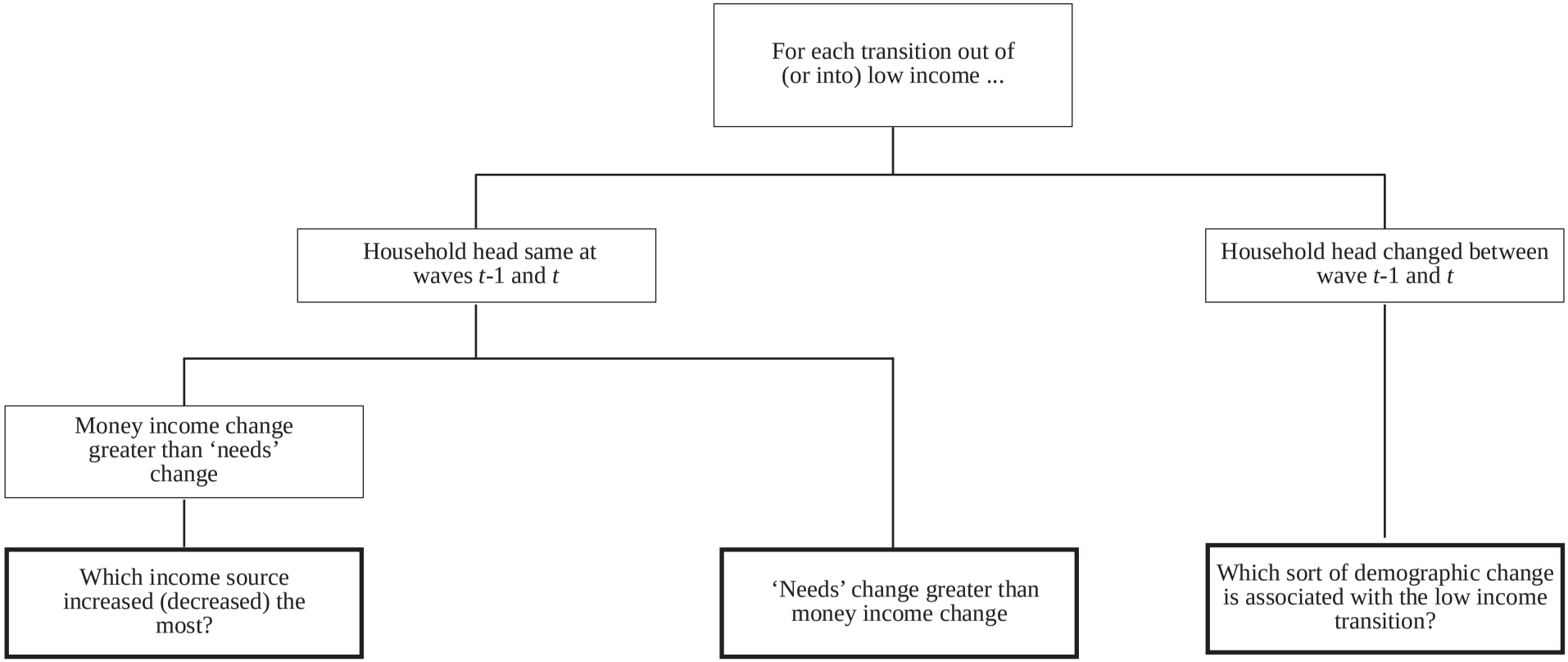
Table 5
Movements out of and into low income broken down by type of event (column percentages)

Main event associated with low income transition	Transitions out of low income	Transitions into low income
Household head's labour earnings change	33.6	31.0
Spouse's or other labour earnings change	28.5	15.9
Non-labour income change	20.2	15.5
Demographic event	17.7	37.7
All	100.0	100.0
Number of persons	1684	1475

Income changes are money income rises for movements out of low income and money income falls for movements into low income. Analysis based on net income transitions between one year and the following year, using pooled data for BHPS waves 1-6. Movements out of low income only included if net income rose to at least 10% above the low income threshold; and movements into low income only included if net income fell to at least 10% below the threshold. See earlier for definitions of income and low income threshold and of the hierarchy of event types.

Figure 1

Classification of 'income events' and 'demographic events' associated with a low income transition between last year and this year (after Bane and Ellwood, Journal of Human Resources, 1986)



'income events'

Changes in head's labour earnings, spouse's labour earnings, other labour earnings, non-labour income, etc.

'demographic events'

Additions to household, e.g. birth of child, partnership, other joining.
Losses from household, e.g. death of a spouse, partnership split, child leaving home, other leaving.

‘Lifetime poverty dynamics’

Robert Walker, Centre for Research in Social Policy, University of Loughborough

Seebohm Rowntree recognised a lifetime dynamic in the poverty experienced by labourers at the turn of the 20th Century (Rowntree, 1901). They were born poor into a household with only one earner. After a brief period of comparative prosperity, prior to and immediately after marriage, the burden of child rearing took its toll, both adding to the demands on the family budget and limiting the capacity to earn. Relative prosperity returned when the children began to earn and lasted after they left home, ending at such time as deteriorating health associated with increasing age reduced or eliminated the capacity to earn.

Table 1 Incidence of poverty in Britain, 1990’s

	% poor in 1991[1] (A)	% persistently poor[2] 1991-96	% permanently poor[3] 1991-96 (B)	permanently poor as a % of poor
Children	37	25	13	35
Single person without children	20	9	4	20
Couple without children	13	6	2	15
Single adult with child(ren)	64	53	29	45
Couple with child(ren)	29	17	8	28
Single pensioner	60	47	27	45
Pensioner couple	40	28	16	40

Source: Adapted from DSS based on the British Household Panel Survey.

[1] Bottom 30 per cent of equivalent household income before housing costs.
[2] In bottom 30 per cent in four of the six years including the first.
[3] In bottom 30 per cent in all six years.

This temporal pattern in the incidence of poverty is evident today (O’Higgins, Bradshaw and Walker, 1988). Poverty[1] is more prevalent among children, families with children and the elderly than it is among other age groups (Table 1). Couples with children are well over twice as likely to be poor than those without, while single pensioners are three times as prone to poverty as single people under retirement age.

However, one cannot be certain that this pattern replicates the sequence of poverty and relative affluence described by Rowntree. The reason is that, simulation studies apart (Falkingham and Hills, 1995), there are as yet no studies which systematically track the well-being of individuals from cradle to grave. It could be, for example, that the majority of people who are poor in childhood are economically successful and escape poverty in later life, their places being taken by the downwardly mobile who succumb to misfortune or indolence. While this may seem unlikely, it remains to be proved that the early experience of poverty imprints itself indelibly on future life-chances, although it is known that people who have suffered one spell of poverty are more likely than average to encounter another (Jarvis and Jenkins, 1997).

Despite the absence of adequate data, simply recognising the dynamics that may be inherent in poverty enhances understanding of the phenomenon and opens the way towards better targeted policies. Time is not simply the medium in which poverty occurs, it forges its very nature. A single transient spell of poverty is not the same as permanent poverty (Walker, 1994). Likewise, the occasional spell has different personal, social and political ramifications from prolonged, recurrent periods below the poverty threshold (Ashworth, Hill and Walker, 1994). While poverty in childhood may not always be a significant social problem, poverty throughout childhood most definitely is. Even the possibility that poverty at one stage in the life course begets poverty at later ones demands investigation with the prospect of taking preventative action (Leisering and Walker, 1998).

Making time explicit focuses attention on the three ‘T’s of poverty research:

- types of poverty;
- poverty trajectories;
- transitions and triggers.

Each is discussed below before briefly drawing some policy conclusions.

Types of poverty

Poverty has traditionally been conceptualised as both static and undifferentiated. A person has been counted as either poor or not poor. It has even been rare to distinguish different degrees of severity (measured as the shortfall in income in relation to

[1] Defined here, for convenience, as living in a household in the bottom third of the distribution of current income before housing costs.

the poverty threshold). However poverty should be differentiated and this can usefully be achieved in a number of ways. Two are introduced below:

Temporal patterns

It may well be appropriate to differentiate poverty according to its temporal patterning. For example, simply classifying poverty according to the number, periodicity and duration of spells reveals much about the aetiology of poverty. Table 2 summarises the experiences of the 38 per cent of Americans who experience poverty during childhood, while Figure 1 illustrates certain of the different socio-demographic correlates associated with each type of poverty. Most children who experienced poverty in the 1970's and 1980's suffered repeated spells – 46 per cent recurrent lengthy spells or almost unrelieved chronic poverty – although 27 per cent experienced a single transient episode. Moreover, while 13 per cent of the children who were in poverty at any one time were likely to remain below the poverty threshold throughout their childhood, only five per cent of all children who ever suffered poverty were permanently poor.

Table 2 Types of childhood poverty in the US, 1968-1987

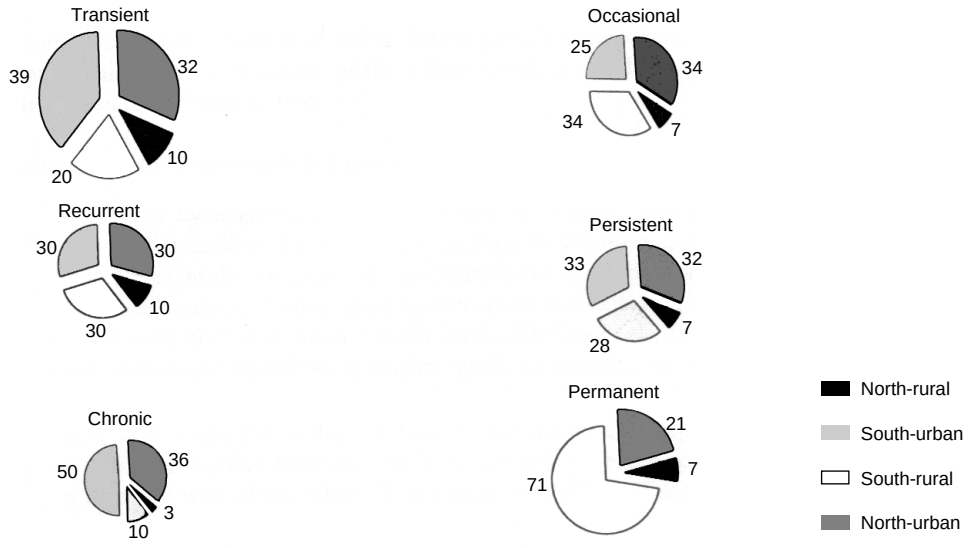
	% of all children	% of all children currently poor	% of children who ever experience poverty during childhood
No poverty	62	–	–
Transient[1]	10	27	5
Occasional[2]	3	8	4
Recurrent[3]	16	41	53
Persistent[4]	5	14	12
Chronic[5]	2	5	13
Permanent[6]	2	5	13
All	100	100	100

Children aged 0 to 15, poverty defined according to the PSID poverty threshold using equivalised annual income.
[1] Single one year spell.
[2] More than one spell, none lasting for more than one year.
[3] Repeated spells, some separated by more than one year, some exceeding one year.
[4] A single spell lasting between two and 13 years.
[5] Repeated spells never separated by more than one year.
[6] Continuous poverty.

Source: Walker 1994.

Figure 1 reveals that transient and occasional poverty were characteristic of poverty in the northern states of the USA whereas chronic and permanent poverty were largely confined to the South. Where permanent poverty existed in the North it was entirely an urban phenomenon whereas in the South it was predominately rural. Not shown in the figure, 94 per cent of transient spells were experienced by Caucasian American children, 76 per cent of permanent by Afro-Americans. All the Caucasian children afflicted by permanent poverty lived for a time with just one parent. Recurrent poverty, predominately the experience of Caucasian children even though black children were disproportionately at risk, was associated with parents in low paid jobs.

Figure 1 Childhood poverty in the US: type, region and rural and urban status of neighbourhood



Source: Walker (1994).

Returning to Britain and to the incidence of poverty across the life course, Table 1 reveals that the ratio of permanent poverty – measured over six years – to the annual incidence of poverty is greatest among single pensioners and among lone parents. Not only are these groups the most likely to be poor, they also confront the highest risk of being long term poor. On the other hand, the poverty experienced by childless people of working age is disproportionately short-lived. Old age and child-rearing, especially in the absence of one parent, not only continue to increase the risk of poverty, in the way that Rowntree observed, they also help to shape the kind of poverty experienced.

Dimensions of poverty

Poverty can also be effectively differentiated by the various dimensions of well or ill-being (Table 3)[2]. Individuals' location with respect to these dimensions may define whether someone is poor and the kind of poverty that they are currently experiencing and may be likely to suffer in the future.

The 'asset rich, income poor' status of some older owner-occupiers has long been recognised (Walker and Hardman, 1988). Likewise, the income poverty of certain women and children has been documented within ostensibly affluent households (Millar and Glendinning, 1992; Middleton et al., 1997). Such women may also suffer a loss of dignity and autonomy. Indeed, some may even consciously choose another form of poverty: leaving home, they forego common property income and assets, preferring such autonomy as is possible living in refuges and bed and breakfast accommodation supported by benefit income (Leeming, Unell and Walker, 1994). In other circumstances, people may seek to avoid income poverty through coping strategies, such as crime and prostitution, that serve to exclude them from society's social and moral framework (Kempson, Bryson and Rowlingson, 1994).

In sum, there is not one kind of poverty but many.

Trajectories

Common sense, supported by a growing body of evidence, suggests that people's future prospects are at least partly determined by their current location on the dimensions of well-being listed in Table 3. So, for example, someone who is unemployed and living on income-tested benefits but who has recent work experience, good qualifications and extensive social networks is likely rapidly to find work that pays above benefit levels (McKay et al., 1997; Walker and Shaw, 1998). Their chances of experiencing further spells of poverty, though greater than someone who has never suffered poverty, are also comparatively low and fall quickly as their spell of comparative affluence lengthens.

Alternatively someone in their late 50s, without skills or a fixed address, perhaps after spending years 'on the road', and who suffers from chronic ill-health will probably remain trapped in poverty, finding a changed way of life difficult to secure or sustain (Vincent, Deacon and Walker, 1995).

Individuals follow trajectories through different kinds of poverty that may alternate with periods of relative affluence. One downward trajectory finds people moving from income poverty to social exclusion, slipping from a point of keeping their heads above water, through 'sinking', to 'drowning' (Figure 2). This trajectory could be triggered by a breadwinner's loss of employment and compounded by structural factors. The chances of finding work, and hence of escaping poverty, might objectively be low: few qualifications, obsolete skills, slack labour demand. This fact may be understood by the family concerned, undermining morale and hope that are both essential if work is to be found and financial ends met. The family may, as a consequence, have no choice but to employ strategies at the socially unacceptable end of the list of available options and, hence, to step outside society's norms.

Even before this point the family may have begun to become detached from social institutions, and the multi-faceted nature of social exclusion become evident. Preventative health care may have been neglected. The demands of mutual reciprocity may have limited visits to all but closest kin, and stress and depression may have added impetus to this social retreat. Lack of finance may have prevented children from engaging in the full range of intra- and extra-curriculum educational activities with significant implications for their educational and social development. They may even have reacted negatively to inconsistent economic socialisation experienced in the home (Middleton et al., 1994). Confronted by the asocial behaviour to which the family has succumbed, the reaction of external agencies may confound attempts by the family to fight their social exclusion. Creditors may seek to repossess goods and landlords threaten eviction. Potential employers may be put-off by inadequate personal references and social welfare agencies may move to more coercive policies. The process of social exclusion will have become very hard to reverse.

Kempson et al. (1994) found that 12 out of 28 low-income families followed not dissimilar trajectories over a 24 month period.

Transitions and triggers

Progression along life course trajectories is punctuated by movement along the dimensions of well-being described in Table 3. These movements define transitions between levels of life quality, moves in and out of poverty, and between one kind of poverty and another. Such transitions are precipitated by triggers, the impact of which is mediated by interaction between individual attributes, including a person's location on the dimensions of well-being, and the opportunity sets determined by social institutions.

[2] The dimensions are further discussed in Walker and Park (1998).

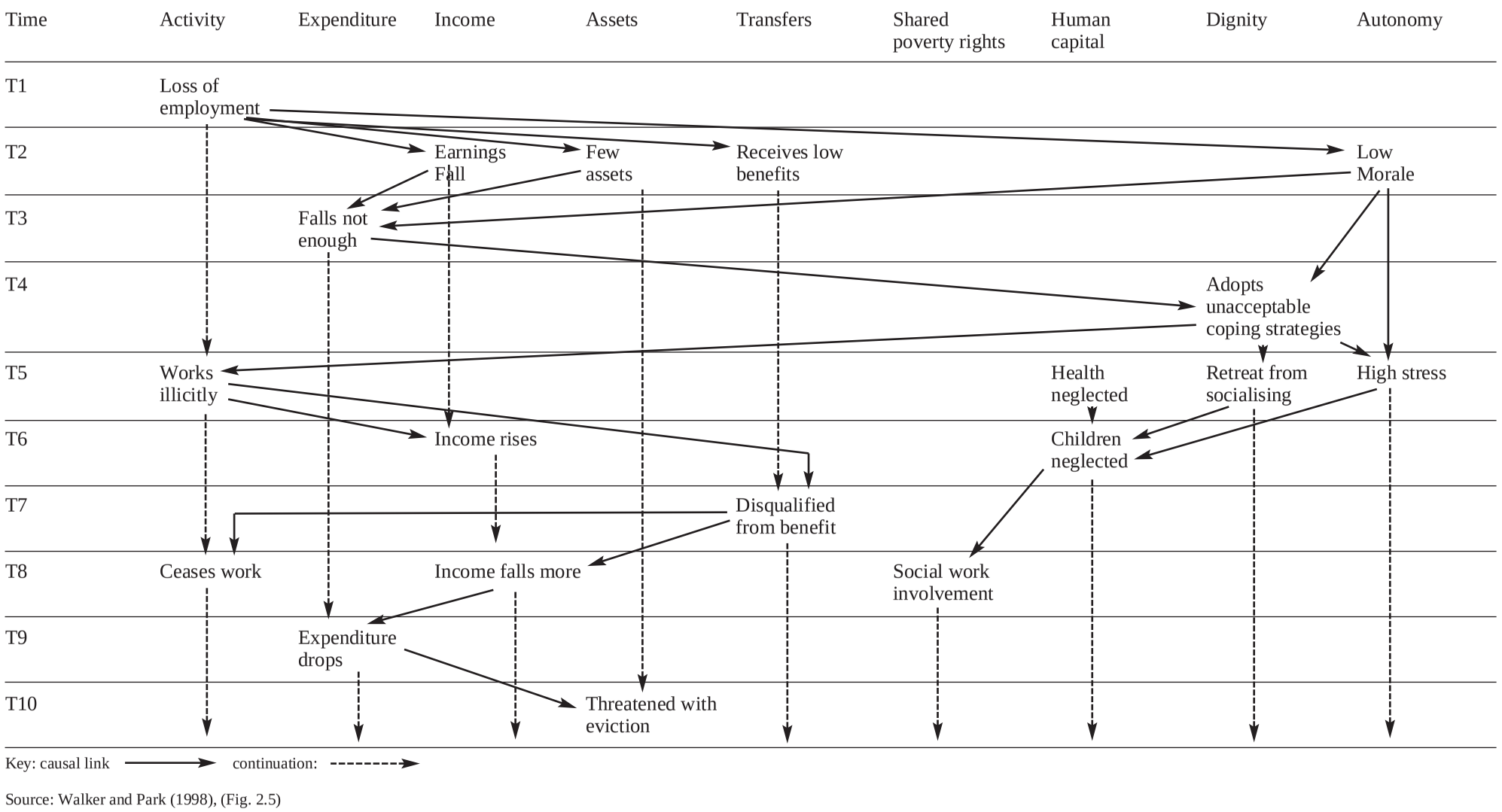
Table 3 Elucidating the dimensions of poverty

Labour market activity	**Income**[1]	**Expenditure**	**State transfers**[2]	**Assets**	**Shared property rights**[3]	**Human capital**	**Dignity**	**Autonomy**
Employed full-time	Employment income	Spending	Social security payments	Savings	Within household	Qualificaitons	Social status	External locus of control
Employed part-time	Interest/ dividends		Social assistance	Investments	As assets	Experience	Social Exclusion	Political exclusion
Self-employed	In kind		Concessions	Borrowings	Community	Health status		
Outside labour force: car sick				House(s)	Free/subsidised healthcare			
				Consumer durables Vehicle(s)	Free/subsidised education/ transport systems Police			

[1] Corresponds to private consumption in Baulch's pyramid.
[2] Relates to cash transfers through the social security and social assistance systems and corresponds to part of state provided commodities in Baulch's pyramid.
[3] Corresponds to common property rights in Baulch's pyramid. In personal correspondence Baulch explains that in societies of the South this refers to resources such as land held in common. He was unsure what might be the counterpart in the North. A distinction is made here between resources shared within a household and commodities provided by the state that are free at the point of consumption.

Source: Walker and Park (1998) Fig. 2.2.

Figure 2 A trajectory from poverty to social inclusion



Source: Walker and Park (1998), (Fig. 2.5)

Table 4 illustrates these processes. Thirty per cent of individuals who began a spell of income poverty in the early 1990's did so coincident with the loss of employment by someone in their household.

Table 4 Events coincident with the beginning of a spell of poverty in Britain, 1990/01-1993/4

Household event	% of persons who become poor and experience event	% of persons experiencing event who become poor
Loss of earner (s)	30	27
Increase in number of earners	14	14
Loss of adult(s)	14	25
Addition of adult(s)	7	10
Loss of child(ren)	8	14
Addition of child(ren)	6	16

Source: Walker and Park, 1998 (Table 2.2).

About one in seven of those becoming poor lost an adult as the result of divorce, separation, death or some other reason. These same factors, together with the ending of entitlement to social insurance benefits, have been implicated as important triggers of poverty in other advanced western countries (Walker, 1997; Duncan et al., 1993).

However, neither the loss of a job or the departure of an adult from a household is either a necessary or a sufficient cause of poverty. About 73 per cent of individuals who either lost a job or lived in a household where someone else ceased employment escaped income poverty. So did 75 per cent of those experiencing the loss of an adult. These people must have been protected in some way from the worst consequences of events such as unemployment and relationship breakdown.

The source of such protection may on occasion be found among the other components of well-being. For example, poverty may be avoided in the event of unemployment by the provision of social security benefits. This is certainly the norm in much of continental Europe. In Britain, though, even before Jobseeker's Allowance further reduced the role of social insurance, insurance benefits prevented less than a fifth of unemployed persons from needing to claim social assistance (Walker and Ashworth, 1998). Nevertheless, a tenth of workers who became unemployed during the early 1990's recession made no claim on state benefits; some of these will have enjoyed the protection offered by redundancy pay, savings or a partner in paid employment[3].

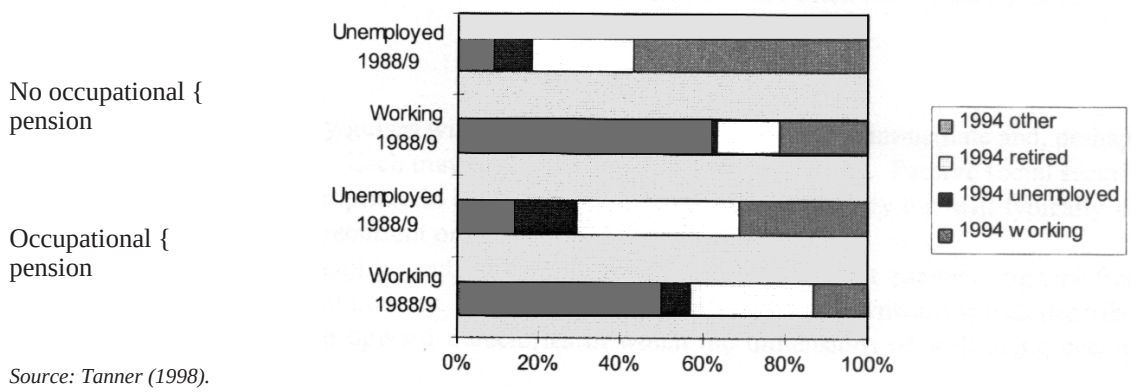
Lifelong consequences

As already noted, it is not yet possible to document life-time trajectories nor to offer a complete dossier of the factors that either provide protection against, or increase the likelihood of suffering, different kinds of poverty. Suffice to observe certain transitions in later life.

Figure 3 suggests that the employment trajectories of older men may well be influenced by whether or not people have an occupational pension. Whereas thirty per cent of men aged between 55 and 59 who were both working and belonged to an occupational pension scheme had retired within five years, just 18 per cent of those who had no pension had done so. The implication is that men with occupational pensions may be able to avoid the income poverty that might otherwise be associated with early retirement and thereby choose to retire.

The same study (Tanner, 1998) reveals that very few men who were unemployed when in their late 50's were back in work five years later (12 per cent). However, while 40 per cent of those with pensions had retired this was true of only 25 per cent of men without. Nevertheless, 82 per cent of the unemployed men without a pension left the labour market within five years, 57 per cent moving into economic inactivity mostly supported by disability benefits. Men with pensions were much less likely to follow this trajectory even when they had been unemployed in their late 50's.

Figure 3 Transitions in late working life (ages 55-59)



Source: Tanner (1998).

[3] Non take-up of benefits accounts for an unknown proportion of those not claiming benefits.

Figure 4 illustrates the pattern of protection afforded to women widowed in the early years of their partners' retirement. (It should be noted in passing that the pension and investment income of men who died prematurely was only 67 per cent of those who survived (Johnson *et al*., 1998)). Typically widowhood caused a fall in income[4], but one that was limited by pension rights inherited from the dead partner (60 per cent of women received an average of £27 per week. A small number of women (eight per cent) also benefited greatly (£65 per week) from the NI widows' benefits that are likely to be abolished after 2001 (Cm. 4104, 1998).

Figure 4 The impact of widowhood in retirement

Source: Johnson et al. (1998).

Limited though this evidence is, it illustrates that the risk of income poverty can be mediated by the other components of well-being listed in Table 3. Moreover, the decisions that determined the risk of poverty associated with transitions in later life were often taken many years earlier.

Policy imperatives

Poverty comes in many guises with different aetiologies and varying immediate and, perhaps, lifetime consequences. Each may demand a targeted policy response. Passive social security measures may be appropriate in the case of transient spells of poverty but will typically not suffice in the event of recurrent or permanent poverty.

Research needs to identify, and policy to address, the factors that prevent triggers from precipitating episodes of poverty. The aim must be to prevent the downward spirals described above and to stimulate upward trajectories in which the dimensions of well-being become mutually reinforcing.

At a time when family life and labour market circumstances may be increasing the risk of poverty (Beck, 1992; Leisering and Walker, 1998), individuals are being encouraged to take more personal financial responsibility for life-course contingencies: unemployment, ill-health and retirement (Cm. 3805, 1998). The quid pro quo is that government must help people to take on such responsibility:

- by offering timely and readily accessible advice ; and
- by providing or stimulating policy mechanisms that enable them to do so which are effective, cost efficient and risk free.

It is important that welfare provision should not become a gamble that further accentuates life's lottery.

[4] The decline in household income does not necessarily equate to a fall in living standard, which depends on the choice of equivalence scale.

References

Ashworth, K., Hill, M., and Walker, R., (1994), Patterns of childhood poverty: new challenges for policy, Journal of Policy Analysis and Management, 13, 4, pp658-680.
Cm 3805. (1998) New Ambitions for Our Country: A new contract for welfare, London: Stationary Office.
Cm 4104. (1998). 'A New Contract for Welfare: Support in bereavement', London. Stationary Office.
DSS (1998) Households Below Average Income 1979-1996/97, London: Department of Social Security.
Duncan, G. et al., (1993), 'Poverty dynamics in eight countries', Journal of Population Economics, 6, pp. 295-334.
Falkingham, J., and Hills, J., (1995), The Dynamic of Welfare, London: Harvester Wheatsheaf.
Jarvis, S. and Jenkins, S., (1996), Income Mobility in Britain 1991-94: A First Look, Colchester: ESRC Research Centre for Micro-Social Change, Mimeo.
Johnson, P., Stears, G., and Webb, S., (1998) 'The dynamics of incomes and occupational pensions after retirement', Fiscal Studies, 19, 2, 197-215.
Kempson, E., Bryson A., and Rowlingson, K., (1994), Hard Times, London: Policy Studies Institue.
Leeming, A., Unell, J. and Walker, R., (1994), Lone mothers coping with the consequences of separation, London: HMSO, Department of Social Security Research Report, 30.
Leisering, L. and Walker, R., (1998) 'Making the future: from dynamics to policy agendas', pp265-286 in L. Leisering and R. Walker (eds), The Dynamics of Modern Society, Bristol: Policy Press.
McKay, S., Walker, R., and Youngs, R., (1997), Unemployment and Jobseeking Before Jobseeker's Allowance, London: Stationery Office, DSS Research Report 73.
Middleton, S., Ashworth, K. and Walker, R., (eds), (1994), Family Fortunes: Pressures on parents and children in the 1990's, pp. 159. London: CPAG.
Millar, J., and Glendinning, C., (1992), Women and Poverty in Britain: the 1990's, London: Harvester Wheatsheaf.
O'Higgins, M. Bradshaw, J., and Walker, R., (1998), 'Income distribution over the life-cycle', pp. 227-255 in R. Walker and G. Parker (eds) Money Matters, London: Sage.
Rowntree, S., (1901), Poverty: A Study of Town Lofe, London, Macmillan.
Tanner, S., (1998) 'The dynamics of male retirement', Fiscal Studies, 19, 2, 175-196.
Walker, R., (1994), Poverty Dynamics: Issues and Examples, Aldershot: Avebury.
Walker, R. and Hardman, G., (1988), 'The financial resources of the elderly or paying your own way in old age', pp. 45-73 in S. Baldwin, G. Parker and R. Walker (eds) Social Security and Community Care, Aldershot: Avebury.
Walker, R. and Park, J., (1998), 'Unpicking poverty', pp. 29-51 in C. Oppenheim (ed) An Inclusive Society, London: IPPR.

‘Childhood Disadvantage and Intergenerational Transmissions of Economic Status’

Stephen Machin[1], Department of Economics, University College London and Centre for Economic Performance, London School of Economics

Introduction

Many people are interested in the extent to which inequalities persist across generations. It is straightforward to establish why one should care about the extent of intergenerational transmission. For an offspring to be in an advantageous or disadvantageous position simply because of their parents’ achievement has a distinct feel of unfairness to it, particularly from an equality of opportunity perspective. Many individuals across the political spectrum would champion the cause of equality of opportunity and this is why accurately measuring the extent of intergenerational transmission is important. In the same way, pinning down the transmission mechanisms that underlie intergenerational transmissions is important, especially those associated with childhood disadvantage.

Recent estimates of the extent of intergenerational transmission of economic status

Economists have typically considered intergenerational mobility in terms of earnings, income or education in two, rather simple, ways. The first uses a tool commonly utilised in economics, regression analysis, whilst the second considers movements up or down a distribution of interest. I therefore begin by summarising work on intergenerational earnings mobility that uses these approaches before turning to consider intergenerational transmissions of other measures of economic status.

The Regression Based Approach

The regression based approach typically specifies an earnings equation for members of family i of the form

(1) $$y_i^{child} = \alpha + ß\, y_i^{parent} + u_i$$

where y is earnings and u an error term.

In terms of equation (1) one can assess the extent of intergenerational mobility (or immobility) from estimates of ß: ß = 0 implies complete mobility as child earnings are independent of those of their parents; ß = 1 implies complete immobility as child earnings are fully determined by the parental earnings.

Most early studies in economics adopted this approach. The survey of this early work by Becker and Tomes (1986) states that ß was generally estimated at around 0.2, leading them to conclude that “aside from families victimized by discrimination, regression to the mean in earnings in the United States and other rich countries appears to be rapid” [Becker and Tomes, 1986, p. S32]. However, more recent estimates have strongly challenged this view and pointed out serious methodological problems with the early work (see Solon, 1992, Zimmerman, 1992, and Dearden, Machin and Reed, 1997, for more details on these problems). The following table summarises some of the more recent estimates, all of which show estimates of ß that tend to lie some way above the 0.2 “consensus” estimates described by Becker and Tomes. They all seem to imply a significant degree of immobility that violates the equality of opportunity characteristic of complete intergenerational mobility. For example, the ‘typical’ father-son ß estimate in the Dearden, Machin and Reed (1997) study suggests that a son from a family (say family 1) with father’s earnings twice that of a father in another family (say family 2) earns 40-60% more than the son from family 2.

The Transition Matrix Approach

Author	Data	Estimate of ß
Becker and Tomes (1986)	“Consensus” estimates from early (mainly US) studies	About .200
Atkinson (1981) and Atkinson et al. (1983)	UK data on 307 father-son pairs with sons subsequently traced (in the late 1970s) from 1950 Rowntree survey in York	0.36 – 0.43
Solon (1992)	US panel data from the Panel Survey of Income Dynamics on about 300 father-son pairs	0.39 – 0.53
Zimmerman (1992)	US panel data from the National Longitudinal Survey of Youth on 876 father-son pairs (but most estimates based on less than 300)	0.25 – 0.54
Dearden, Machin and Reed (1997)	UK panel data from the National Child Development Study (a cohort of all children born in a week of March 1958) using earnings data for cohort members in 1991 and parents in 1974 – 1565 father-son pairs, 747 father-daughter pairs	Sons: 0.4 – 0.6 Daughters: 0.5 – 0.7

[1] This article is an updated version of my paper that appeared in CASEpaper 4: A B Atkinson and John Hills (editors) “Exclusion, Employment and Opportunity’, January 1998.

Of course the single number ß estimates given above are simply average estimates of the degree of intergenerational mobility. There may be important variations around this average. So the second commonly used approach for ascertaining the extent of intergenerational mobility uses transition matrices which split the parental distribution of economic status into a certain number of equal sized intervals (maybe quartiles, quintiles, or deciles) and then examines how many of their offspring remain in the same interval or move elsewhere. An example, in terms of quartile transmissions (where one splits the parental earnings distribution into four equal parts) based on data taken from the Dearden, Machin and Reed (1997) study is given below:

1565 Father-Son Pairs	Son's Quartile			
Father's Quartile	Bottom	2nd	3rd	Top
Bottom	.338 (.024)	.297 (.023)	.238 (.022)	.128 (.017)
2nd	.294 (.023)	.312 (.023)	.253 (.022)	.140 (.018)
3rd	.304 (.023)	.243 (.022)	.243 (.022)	.209 (.021)
Top	.064 (.012)	.148 (.018)	.266 (.022)	.522 (.025)
747 Father-Daughter Pairs	Daughter's Quartile			
Father's Quartile	Bottom	2nd	3rd	Top
Bottom	.366 (.035)	.321 (.034)	.193 (.029)	.118 (.024)
2nd	.274 (.033)	.305 (.034)	.262 (.032)	.160 (.027)
3rd	.231 (.031)	.219 (.030)	.305 (.034)	.246 (.032)
Top	.129 (.025)	.155 (.027)	.241 (.031)	.476 (.037)

The table shows, from looking at the leading diagonal, that the biggest proportion of sons who remain in the same quartile as their fathers is in the top (i.e. highest earning) quartile. This is very marked with 52 percent of sons remaining in the top earnings quartile if their fathers were in that top quartile (for daughters the analogous percentage is 48 percent). The table demonstrates an important asymmetry in mobility with upward mobility from the bottom of the distribution being more likely than downward mobility from the top.

Intergenerational Transmissions of Unemployment

Whilst most work on intergenerational mobility has looked at transmission in terms of earnings, income or educational attainment, some work has looked at the unemployment status of sons and how it relates to unemployment experiences of their fathers. In their analysis of National Child Development Study (NCDS) data Johnson and Reed (1996) report that 9.9 percent of sons had been unemployed for a year or more in the decade preceding 1991 (when they were aged 33). However, 19.1 percent of sons whose fathers were unemployed at (child) age 16 experienced at least a year of unemployment between 1981 and 1991.

Intergenerational Transmissions of Early Parenthood

Again using NCDS data Kiernan (1995) considers intergenerational transmission of teenage motherhood by looking at the extent to which young parents also had young parents themselves. A strong pattern is found with 26 percent of the cohort's teenage mothers also having a teenage mother, as compared to 10 percent of the cohort's mothers who gave birth at the age of 20 or after.

Summary

The research discussed in this section shows that an important part of an individual's economic and social status is shaped by the economic and social status of their parents. In the next section I go on to discuss work that tries to get into the 'black box' of transmission to see what factors may underpin the strong intergenerational correlations depicted in the studies discussed above.

Childhood disadvantage as a transmission mechanism

The principal impact of parents on their children is shaped in the childhood years of growing up. The most natural question to ask is then: how important is childhood advantage or disadvantage as a transmission mechanism underpinning intergenerational mobility and how do they impinge on success or failure in economic and social terms in adulthood?

Ability in the Early Childhood Years and Parental Economic Status

In its strongest form (abstracting away from debates about genetic transmission) perfect mobility ought to suggest little relation between child ability and economic status. If a relation is uncovered one could think of this as being part of the transmission mechanism underpinning transmissions of economic status across generations. The following regression (taken from Machin, 1997) considers this question by relating the test scores of NCDS cohort members' sons and daughters (aged 6-8) to parental earnings (in 1991)[2]:

619 (Maths) / 617 (Reading) Child and Cohort Member Pairs (standard errors in brackets)

Child's Maths Test Score Percentile	=	6.932 ln(Parent's Earnings) (1.939)
Child's Reading Test Score Percentile	=	4.720 ln(Parent's Earnings) (1.903)

There is a strong relationship. A 50 percent higher level of log(parental earnings) suggests that a child would be around 3.5 percentile points higher in the age 6-8 maths test score distribution and 2.5 percentile points higher in the reading score distribution. To the extent that these test scores are positively correlated with subsequent economic success (and quite a lot of evidence says they are), then growing up in a family where father's labour market earnings are high seems to be an important stepping stone to having higher earnings later in life.

Childhood Disadvantage and Success or Failure in the Labour Market

So, how do early life factors like childhood poverty or social disadvantage influence individuals' achievements in adulthood? In particular, how does growing up in a disadvantaged environment influence subsequent success or failure in the labour market? Gregg and Machin (1998) have considered this question in some detail by analysing data from the National Child Development Study (NCDS).

To understand how disadvantage transmits itself into adult life it is necessary to separate out the effects of childhood poverty from parental factors or innate child ability. Gregg and Machin do this by using the extremely rich NCDS data source[3] to model economic and social outcomes in the earlier years of adulthood as a function of childrens' development through environmental, parental and individual specific factors. By following people through childhood and into the adult labour market this enables one to focus on the effects of factors like financial distress in the childhood years[4] or measures of social dislocation (e.g. contact with the police or truancy) after controlling for the early age ability of children (via test scores at age 7) and other factors like parental education. The Gregg and Machin analysis of NCDS has uncovered important patterns that demonstrate a strong effect of childhood disadvantage on adult economic and social outcomes even once one nets out these factors.

At age 16 the main results are as follows:

- staying on at school, better school attendance and reduced contact with the police are more likely for children with higher age 7 maths and reading ability, for children with more educated parents and for children who grew up in families that did not face financial difficulties in the years in which children grew up;

- the impact of family financial difficulties is more important than family structure (whether the father was ever unemployed, or living in a lone mother family);

- if children were ever placed in care during their childhood this massively increased their chances of contact with the police.

In terms of acting as a transmission mechanism underpinning intergenerational mobility, probably the key question concerns the extent to which these factors impact on later economic and social success or failure. To investigate this, Gregg and Machin considered the relationship between economic and social outcomes at ages 23 and 33 and an array of measures of disadvantage in the childhood years.

Not unsurprisingly the educational attainment of the disadvantaged is considerably lower: for example, only 1 percent of boys who had school attendance less than 75% or who had been in contact with the police went on to get a degree (or higher) by age 23; this compares to 13 percent of the other NCDS boys. Figures for girls are 1 percent and 11 percent respectively. In terms of family disadvantage only 4 percent of boys (3 percent of girls) who were ever placed in care or lived in a family facing financial difficulties went on to degree level as compared to 13 percent of boys (11 percent of girls) who were not in such a situation in their childhood years.

---

[2] The regressions are based on children aged 6 years 0 months to 8 years 11 months at the time of the test and include a constant and controls for sex of the child and the cohort member parent.

[3] The NCDS data covers all individuals born in a week of March 1958 and the cohort members (and in some years their parents and schools) have so far been interviewed at ages 7, 16, 23 and 33 in 1965, 1974, 1981 and 1991.

[4] The measure of financial distress used in this work closely corresponds to data on child poverty rates computed from Family Expenditure Survey data (see Gregg, Harkness and Machin, 1998).

At the other end of the education spectrum the disadvantaged are heavily over-represented in the part of the population that have no educational qualifications. For example, 53 percent of boys (62 percent of girls) with school attendance less than 75% or who had been in contact with the police left school with no educational qualifications. This compares to 19 percent of boys and 25 percent of girls with better attendance and no police contact.

Because of these striking differences in educational attainment the research then considers whether the effect of disadvantage works primarily through the fact that disadvantaged children have lower education levels or whether any effect still persists once one nets out the effect of education differences between those who are stylised as the disadvantaged and the other children in the sample.

The age 23 economic and social outcomes looked at were: hourly wages; months spent in unemployment since age 16; whether in a job at age 23; whether boys experienced any spell in prison or borstal since age 16; whether girls became lone parents by 23. The age 33 outcomes looked at are wages and job status at 33.

The results demonstrate a strong link between poor economic and social outcomes at 23 or 33 and childhood disadvantage. Whilst part of the link is explained by the inferior education of the disadvantaged this is clearly not the whole story: even once one nets out the effect of education differences the individuals characterised by disadvantage have significantly worse wages, unemployment time, employment and worse social outcomes (i.e. more likelihood of a prison spell for young men and of lone parenthood for young women). The key factors associated with disadvantage are both family based (growing up in a family facing financial difficulties, ever being placed in care in the childhood years) and child specific (low school attendance, contact with the police).

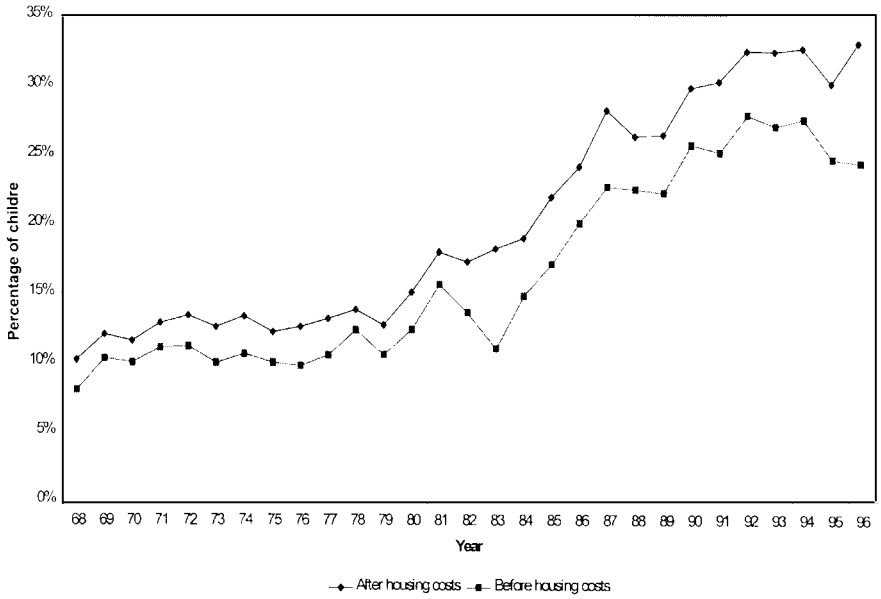
All in all these results are strong evidence that childhood social disadvantage factors have an important impact on age 23 and 33 outcomes. Even after netting out a variety of pre-labour market factors and educational attainment the less advantaged individuals in the NCDS cohort are much less likely to be employed, to have experienced longer unemployment spells and/or detrimental social experiences. Indices of childhood disadvantage like family poverty, family dislocations resulting in children being placed in care, poor school attendance and contact with the police seem to be important factors that underpin the transmission of economic and social status across generations.

Trends in Child Poverty

One of the key findings of the Gregg and Machin work is that family financial distress during the childhood years displays an important association with subsequent economic success or failure, and that this is a key factor underpinning intergenerational transmissions of economic status. This becomes of even more concern when one considers what has happened to child poverty rates in recent years.

Figure 1 based upon Family Expenditure Survey (FES) data and taken from Gregg, Harkness and Machin (1998), shows that child poverty rates have risen very fast in the last thirty years. Between 1968 and 1995/6 the FES data shows that, for income after housing costs, the number of children living in poor households increased from 1.4 to 4.3 million (households are defined as poor if their equivalised income is below half the national average).[5] The proportion of children living in poverty rose from about 1 in 10 in 1968 to just under 1 in 3 by 1995/6. Based on income before housing costs, the number of children in poor households rose from 1.1 million to 3.2 million (or from 8 to 24 percent) between 1968 and 1995/6. Both measures therefore show a striking increase, with child poverty tripling over this time period.

Figure 1. Percentage of children living in poverty



Note: The poverty line is defined as half average equivalised income in each year.

[5] This includes all dependent children of school-age.

To the extent that the NCDS findings discussed above remain valid for more recent cohorts of individuals, these trends in child poverty do not paint a promising picture for the evolution of economic inequalities in future. At the very least the results from this research suggest that child poverty should be on the policy agenda not only because of its increased incidence, but also because of its potentially important impact on the future economic and social fortunes of adults who grow up in poor households.

Conclusions

Accurately measuring the extent of intergenerational mobility and understanding the factors that underpin such mobility or immobility is important, especially when one bears in mind the rapid expansion in inequality that has occurred in Britain in the last couple of decades. The policy implications of this rise become all the more important for future generations if there is not much mobility in economic status across generations. The results reported here suggest that, on the basis of study of quite large samples of parents and children, the extent of mobility is limited in terms of earnings and education. Regression estimates point to an intergenerational mobility parameter (ß) of the order of .40 to .60 for men and .45 to .70 for women. Furthermore, from considering transition matrices, there is strong evidence of an asymmetry such that upward mobility from the bottom of the earnings distribution is more likely than downward mobility from the top. In the same vein, the early age cognitive achievement of children is significantly related to the labour market earnings of their parents and to their parents' maths and reading abilities. All this points to an important degree of persistence in economic success or failure across generations, central to which is the ability of individuals to achieve higher earnings in the labour market.

Furthermore, factors associated with growing up seem to represent an important transmission mechanism that maintains this persistence of economic success or failure across generations. Research based on the unique cohort data bases available in the UK shows that disadvantage in the childhood years has effects long into the adult life and there are often detrimental effects that spillover to the next generation. Having parents with low income or earnings during the years of growing up is a strong disadvantage in terms of labour market success and can contribute importantly to factors like adult joblessness and participation in crime. The fact that these childhood disadvantages underpin the persistence of economic and social stature across generations needs to be borne in mind by policymakers when designing policies that affect labour market outcomes in the longer term.

References

Atkinson, A. (1981). 'On Intergenerational Income Mobility in Britain', Journal of Post Keynesian Economics, 3, 194-218.

Atkinson, A, Maynard, A. and Trinder, C. (1983), 'Parents and Children: Incomes in Two Generations', London, Heinemann.

Becker, G. and Tomes, N. (1986), 'Human Capital and the Rise and Fall of Families', Journal of Labor Economics, 107, 123-150.

Dearden, L., Machin, S. and Reed, H. (1997). Intergenerational Mobility in Britain, Economic Journal, 107, 47-64.

Gregg, P., Harkness, S. and Machin, S. (1998). Child Development and Family Income, Forthcoming Joseph Rowntree Foundation report.

Gregg, P., and Machin, S. (1998). Childhood disadvantage and success or failure in the youth labour market, Centre for Economic Performance Discussion Paper 397.

Johnson, P., and Reed, H. (1996). Intergnerational mobility among the rich and the poor: Results from the National Child Development Survey, Oxford Review of Economic Policy, 7, 127-42.

Kiernan, K. (1995). Transition to parenthood. Young mothers, young fathers – associated factors and later life experiences, STICERD Welfare State Programme Discussion Paper 113.

Machin, S. (1997). Intergenerational transmissions of economic status, in P. Gregg (ed.) Jobs, Wages and Poverty: Patterns of Persistence and Mobility in the New Flexible Labour Market, Centre for Economic Performance Volume.

Solon, G. (1989). Biases in the Estimation of Intergenerational Earnings Correlations. Review of Economics and Statistics, 71, 172-4.

Solon, G. (1992). Intergenerational Income Mobility in the United States. American Economic Review, 82, 393-408.

Zimmerman, D. (1992). Regression Toward Mediocrity in Economic Stature. American Economic Review, 82, 409-429.

‘Poverty dynamics in four OECD countries’

Howard Oxley, OECD[1]

Introduction

The OECD has recently examined poverty dynamics for four OECD countries (Canada, Germany, the United Kingdom and the United States) using longitudinal data sets which follow individuals over time and a common methodology. Longitudinal data sets enable flows into and out of poverty and the length of stay in poverty to be estimated, and allows identification of which types of individual stay longest below the poverty threshold and whether certain changes in household status – such as getting or losing a job or experiencing divorce – are associated with transitions into or out of poverty. The poverty line was defined as annual incomes falling below 50 per cent of the median of household disposable income adjusted for household size.

Because of differences in data sources, time periods and in the income concept used, one should be cautious about drawing too strong conclusions from cross-country differences. Nonetheless, results point to a number of common features about poverty dynamics across the four countries:

- Between 20 and just under 40 per cent of the population were poor at least one year over a six-year period. Within this group, however, the majority had short spells;
- People experiencing longer spells have a lower probability of exit and the chances of exiting also fall with previous experiences in poverty. At the same time, there is a high probability of falling back below the poverty threshold. Thus, for those remaining poor over a longer period, low probability of exit and high probability of re-entry tend to reinforce each other;
- A small group of the population remains poor for longer periods of time with, apparently, very low chances of exit: people in poverty for six or more years typically make up 2 to 6 per cent of the population. However, because of their long stays in poverty they represent from around one quarter to just over a third of the total time all individuals spend below the poverty threshold (from 30 to just over 50 per cent if five or more years are considered);
- The tax-and-transfer system sharply reduces the share of the poor, particularly among those poor for longer periods, and shortens the length of poverty spells;
- For three of the four countries, the characteristics of households experiencing shorter poverty spells tend to be different from those with longer-term spells. Some groups appear to be over-represented among those experiencing longer-term poverty, in particular women, lone parents and elderly single individuals, and the sick and disabled. A significant share of these have jobs;
- Obtaining or losing employment and improving earnings is particularly important for transitions across the poverty threshold. A large share of transitions occur when there are employment/earnings-related “events” (e.g. getting or losing a job), particularly in the case of exits from poverty and this includes lone-parent households. Households with more than one worker are better protected from becoming poor and have shorter poverty spells when they do. Increased employment or hours worked by other household members is an important source of poverty exit and households which get a second job appear to shorten their spells by more than households which obtain a first job.

Poverty dynamics over a six-year period

Broad patterns of poverty dynamics

The poverty situation is both better and worse than the “static” poverty rates suggest (Figure 1). On the one hand, the share of individuals who are poor throughout the period is low (in the range of 2 to 6 per cent of the population); on the other, the share of the population who were poor at least once over the six-year period is large (between 19.5 and 38.4 per cent of the population). Indeed, the latter indicator is much higher than the “static” poverty rate, reflecting considerable turnover among those below the threshold[2].

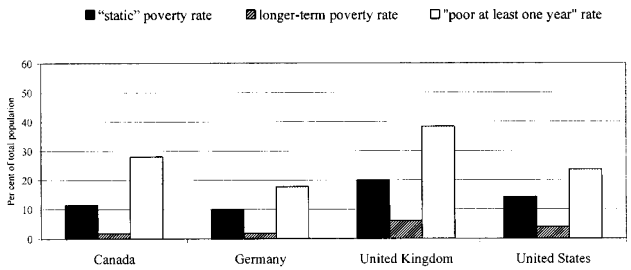


Table 1 (top panel) breaks down the share of individuals touched by poverty over the six-year period on the basis of the number of years spent in poverty, including repeat spells[3]. In Germany, just over 46 per cent experienced poverty for only one year, which is higher than for Canada, the United Kingdom and the United States (25 to 35 per cent). The opposite is the case for those poor for five+ periods which make up 25 to 30 per cent of those touched by poverty for the latter two countries, compared with only around 15 per cent for Canada and Germany.

[1] Howard Oxley is a member of the Resource Allocation Division, Economics Department at the OECD. This work has been prepared by Howard Oxley, Pablo Antolin and Thai-Thai Dang with support from Ross Finnie and Roger Sceviour for the Canadian data. The opinions expressed in this report reflect those of the authors and not necessarily those of the OECD.

[2] The “static” poverty rate is calculated as the share of the poor in the total population in each year and then averaged over the period. The poverty rate is the share of individuals in the total population who were poor in every year through the six-year period. The rate of those in poverty at least once is the share of individuals in the total population who were poor at least once through the period.

[3] In the table, 5+ is the sum of five and six years or more spent in poverty.

Table 1: Time spent in poverty over a six-year period[a]

Share of individuals in poverty for 1 to 5+ years[b] (%)

Post-tax and transfers

		1 year	*2 years*	*3 years*	*4 years*	*5+ years*	*Average number of years in poverty*
Canada	1990-95	35.9	27.0	14.4	9.2	13.5	2.4
Germany	1991-96	45.6	19.4	12.0	7.6	15.5	2.4
United Kingdom	1991-96	26.0	19.3	13.6	13.2	27.9	3.1
United States	1989-93	33.0	18.5	11.2	10.1	27.3	3.0

Share of total time spent in poverty[c] (%)

Post-tax and transfers

		1 year	*2 years*	*3 years*	*4 years*	*5+ years*	
Canada	1990-95	14.8	22.1	17.7	15.2	30.3	–
Germany	1991-96	19.2	16.3	15.2	12.8	36.4	–
United Kingdom	1991-96	8.3	12.3	13.0	16.9	49.6	–
United States	1989-93	11.1	12.4	11.2	13.5	51.8	–

a) The sample used includes all those individuals interviewed in each of the six years who have experienced at least one year in poverty.

b) The share of individuals spending one to five+ years in poverty as a share of all individuals touched by poverty over the period. For example, 35.9 per cent of those poor during the six-year period in Canada were poor for one year and 13.5 per cent for five years or more.

c) The following steps were used to calculate the values in each column. First, the values in each of the columns of the top panel were multiplied (weighted) by the number of years spent in poverty shown in the heading (distinguishing between five years and six+ years). A weight of six was given to groups which have six or more years in poverty, thus biasing downward the last column in the bottom panel. Second, these weighted values were then summed to estimate the total number of years spent in poverty by the total population. Finally, the values in the columns of the bottom panel are the results of the first step divided by the total calculated in the second step.

Source: OECD Secretariat.

An estimate of the share each of these group in the total time spent in poverty[4] (bottom panel) indicates why the longer-term poor are central to policy: semi-permanent poverty is a more pressing social concern than transitory poverty because these groups account for a large share of the total time spent in poverty; indeed, those in poverty at least five years make up as much as 50 per cent (the United Kingdom and the United States) of the total time the whole population spent in poverty over the period.

Estimates of "hazard" rates for poverty exit (which indicate likelihood that people exit as a function of the time spent in poverty) (Table 2, top panel) indicate that most individuals have short spells but that re-entry into poverty is also frequent (bottom panel). The decline in the "hazard" rates as the length of the spell increases indicates that the longer people remain poor the more difficult time they have exiting[5]. On the other side of the coin, the longer the time since exit from poverty, the smaller the likelihood of falling back in. Both patterns confirm recent research.

Table 2: Poverty dynamics: "hazard rates"[a]

Probability of exiting poverty after[b]: (rate *100)

Post-tax and transfers

		1 year	2 years	3 years	4 years
Canada	1990-95	55.7	41.3	38.8	35.4
Germany	1991-96	52.7	42.7	32.0	19.1
United Kingdom	1991-96	45.4	37.0	32.3	25.8
United States	1989-93	45.6	31.9	23.1	20.2

Probability of re-entering poverty after[c]: (rate *100)

Post-tax and transfers

		1 year	2 years	3 years	4 years
Canada	1990-95	16.7	9.7	7.9	7.1
Germany	1991-96	25.6	13.0	17.5	15.5
United Kingdom	1991-96	32.8	18.2	11.0	10.0
United States	1989-93	31.8	21.5	18.3	18.6

a) Latest available six-year period. Includes all poverty spells or spells above the threshold where the beginning of the spell can be observed.

b) This is calculated as the ratio of those individuals, having just fallen below the threshold, who exit before the end of one, two, three or four years in poverty relative to those still poor at the beginning of each successive period. For example, in Canada, 55.7 per cent leave before the end of the first year and, of the 44.3 per cent who remain, 41.3 per cent leave between the first and second year.

c) The sample includes all those spells above the poverty threshold, conditional on the individual having exited poverty immediately before. The re-entry hazard is calculated as the ratio of those individuals observed to fall back below the threshold before one, two, three or four years above the poverty line over the population at risk. For example, of those who moved above the threshold and are still above the poverty line after one year, 9.7 per cent will fall back below the threshold in Canada between first and second years.

Source: OECD Secretariat.

[4] An estimate of the total time spent in poverty by group, obtained by weighting the shares in the columns of the top panel by the length of time each spends below the poverty threshold (one to six years) and, then, divided by the total number of years spent in poverty by the whole population (the sum of the weighed values). (Table 1, top panel.)

[5] This can reflect either a declining probability of exit because of feedback effects (such as the wastage of their human capital), or a sorting process in which those with the best chances of exiting leave first.

The characteristics of the poor by length of spell

A comparison of the family and labour-market characteristics depending on the time spent below the poverty threshold (Table 3) (persons poor only one year and poor through the period compared with the non-poor), indicates a number of similarities across countries although they do not apply to all countries in all cases[6] (Table 4).

- The longer-term poor tend to be generally concentrated among those living in female-headed households, in lone-parent households, in single-adult households of retirement age[7], in households where the head has lower education, and where there is no worker (Canada tends to be different). Nonetheless, a significant share of the longer-term poor work in all countries, although this is less so in the United Kingdom;

- Again excepting Canada, the patterns for those poor only one year are less concentrated among households which are headed by women, single adults, lone parents and the less educated than the longer-term poor and, in some dimensions, appear closer to the non-poor. Employment status differs significantly between the two groups;

- These results are supported by econometric tests of the factors affecting the length of stay in poverty (Oxley, Antolin and Dang, forthcoming[8]).

Factors associated with poverty transitions

"Events" and transitions

Transitions into and out of poverty can be linked to certain employment or family-related "events" which can propel households to below the poverty threshold or permit them to rise above it. Although it is conceptually difficult to categorise "events" cleanly into one category or another – because family-related and employment-related "events" are often intertwined – the total number of transitions is broken down into three broad categories (Table 4):

- Transitions which occurred when there were employment/earnings-related "events" including changes in employment status, hours and wage rates[9];

- Transitions associated with family-structure-related "events"– mainly cases related to separation/divorce, partnerships/ marriage, as well as children or other family members forming new households;

- Transitions with "other events" – which covers all transitions where there were no changes in either employment/earnings or family structure. These were mainly cases where there were large changes in transfer payments.

Focusing on the working-age population, the importance of employment/earnings-related "events" is high (although less so for Canada and the United Kingdom) and is even more marked for exits where they make up around 45 to 55 per cent (Canada, Germany, the United Kingdom) to over 60 per cent (the United States). In contrast, family-status-related "events" – which supplementary analysis shows are relatively more concentrated among poor single-adult and lone-parent households – are more important for entries than for exits. Other events – which are largely transfer-income related – are more prevalent in Canada and the United Kingdom.

The frequencies shown in Table 4 do not show whether those experiencing an "event" are more likely to enter or exit poverty. To clarify this, further tests were carried out to see the effects of certain "events" on the *chances* of entry and exit. To this end, Table 5 indicates by how much the probability of falling below or rising above the threshold changes if selected "events" occur.

Such tests of the correlation between "events" and transitions suggest that:

- For employment-related "events", the probability of becoming poor increases the most where households lose all jobs or experience a fall in hours, family situation held constant. In contrast, it is second workers (or an increase in hours in a household with only one worker) which increase the probability of exit from poverty the most. For exits, a second earner increases the probability of exit by more than getting a first job[10];

- The risk of poverty when an employment-related "event" occurs is lower if there is a stable household environment: the increased probability of entry from separations and divorce rises sharply when they occur at the same time as employment-related changes.

---

6 Indeed, Canada appears to be quite different from the other three countries.

7 Result based on supplementary information.

8 Oxley, H., P. Antolin and T-T. Dang (forthcoming), "Poverty dynamics in selected OECD countries", *OECD Economics Department Working Papers.*

9 Certain cases where employment changes occurred at the same time as changes in household needs are also included in this sub-category. These tend to be small in number and reallocating them to another category does not change the conclusions.

10 It should be noted, however, that a significant share of all employment/earnings-related "events" shown in Table 4 concern workers who transit because their earnings increase. This indicates that upward earnings mobility of those in jobs is also an important channel for exit.

Table 3: Characteristics of individuals above and below the poverty threshold
Per cent share of persons with a specified characteristic in each group

Household characteristics	Total population[a]	Above threshold[a]	Poor for 1 year[b]	Always poor[a]
CANADA				
Head gender				
Head male	83.7	87.9	70.6	72.4
Head female	16.3	12.1	29.4	27.6
Employment status				
No worker	18.3	13.6	45.3	36.4
One worker	31.2	27.9	42.3	43.9
Two workers	39.0	44.3	11.3	17.9
More than two workers	11.5	14.2	1.1	1.8
Family type				
Single adult, no children	19.4	16.1	34.3	24.9
Two adults, no children	30.1	32.4	15.5	26.7
Single adult, children	4.4	2.1	11.3	11.6
Two adults, children	31.5	32.4	33.2	29.2
Large families	14.6	16.9	5.7	7.6
Age of household head[c]				
Young-age head	28.3	25.0	38.2	28.6
Prime-age head	34.0	35.7	34.8	33.4
Older-working-age head	21.8	22.6	21.6	22.0
Retirement-age head	15.9	16.7	5.4	16.0
Education level[d]				
Low education	–	–	–	–
Middle education	–	–	–	–
Higher education	–	–	–	–
GERMANY				
Head gender				
Head male	75.2	79.1	53.1	16.7
Head female	24.8	20.9	46.9	83.3
Employment status				
No worker	18.5	14.9	49.4	71.8
One worker	39.4	37.6	44.1	28.2
Two workers	34.8	39.4	2.5	0.0
More than two workers	7.3	8.1	4.0	0.0
Family type				
Single adult, no children	14.4	12.3	27.6	34.2
Two adults, no children	40.9	43.2	31.7	14.9
Single adult, children	2.8	1.3	15.5	32.1
Two adults, children	33.6	34.7	19.0	16.7
Large families	8.4	8.4	6.2	2.2
Age of household head[c]				
Young-age head	12.8	10.1	24.9	31.0
Prime-age head	45.8	47.8	40.4	31.5
Older-working-age head	26.6	27.7	17.2	10.7
Retirement-age head	14.8	14.4	17.5	26.8
Education level[d]				
Low education	28.0	26.0	29.6	30.5
Middle education	52.3	52.7	60.9	63.0
Higher education	19.7	21.4	9.5	6.6
UNITED KINGDOM				
Head gender				
Head male	67.7	74.3	53.7	38.4
Head female	32.3	25.8	46.3	61.6
Employment status				
No worker	25.0	10.7	42.7	91.0
One worker	27.2	26.6	33.9	9.0
Two workers	36.1	46.4	19.6	0.0
More than two workers	11.7	16.3	3.8	0.0
Family type				
Single adult, no children	10.9	6.2	18.1	40.5
Two adults, no children	42.8	49.9	43.2	14.6
Single adult, children	4.6	1.1	6.1	21.7
Two adults, children	32.4	35.3	21.3	17.3
Large families	9.2	7.6	11.3	6.0
Age of household head[c]				
Young-age head	15.5	13.3	17.6	23.5
Prime-age head	47.7	53.6	39.9	23.4
Older-working-age head	20.4	22.0	23.0	11.6
Retirement-age head	16.4	11.1	19.2	41.5

Table 3 (cont'd): Characteristics of individuals above and below the poverty threshold
Per cent share of persons with a specified characteristic in each group

Household characteristics	Total population[a]	Above threshold[a]	Poor for 1 year[b]	Always poor[a]
UNITED KINGDOM *cont'd*				
Education level[d]				
Low education	33.1	24.4	34.7	63.9
Middle education	36.9	38.0	38.9	29.1
Higher education	30.0	37.6	26.4	7.0
UNITED STATES				
Head gender				
Head male	79.5	86.8	70.4	26.9
Head female	20.5	13.2	29.7	73.1
Employment status				
No worker	10.7	6.6	17.9	51.3
One worker	32.3	29.0	52.6	40.3
Two workers	42.4	47.6	25.6	7.0
More than two workers	14.6	16.8	3.9	1.4
Family type				
Single adult, no children	12.3	10.6	20.0	21.5
Two adults, no children	29.8	34.3	21.6	8.4
Single adult, children	8.1	3.8	12.3	44.5
Two adults, children	35.5	37.7	29.8	14.4
Large families	14.3	13.6	16.4	11.3
Age of household head[c]				
Young-age head	19.7	16.0	33.3	37.1
Prime-age head	51.7	55.1	41.6	35.5
Older-working-age head	19.1	20.6	15.8	12.1
Retirement-age head	9.4	8.3	9.3	15.3
Education level[d]				
Low education	18.9	12.2	24.9	57.4
Middle education	36.9	35.6	43.2	31.6
Higher education	44.2	52.2	31.8	11.1

Note: Includes corrected values which differ from those found in *Economic Outlook 64*, Table VI.3. For definitions see Oxley, Antolin and Dang (*op. cit.*). Characteristics refer to the household head.

a) Characteristics defined at the beginning of the period.
b) Individuals who are poor only one year over the period, excluding spells occurring in the first and last year of the six-year period.
c) Young, prime-age, older-working-age, and retirement-age refer, respectively, to households with a head below 30, between 30 and below 50, between 50 and 65, and above 65 years old.
d) Low education is less than high-school; middle is completed high-school and higher is more than high-school education.

Source: OECD Secretariat.

Table 4: Frequency of "events" associated with poverty transitions
Per cent share of total transitions

	Entries		Exits	
	Total population	Household with working-age head[a]	Total population	Household with working-age head[a]
Canada				
Transitions by type[b]:				
Employment/earnings-related	26.1	28.1	38.4	44.4
Family-structure-related	19.0	20.4	16.1	28.1
Other factors[c]	37.9	33.7	28.2	19.7
Germany				
Transitions by type[b]:				
Employment/earnings-related	47.1	51.5	50.1	55.0
Family structure-related	24.7	25.2	8.9	9.5
Other factors[c]	23.4	17.9	33.3	27.1
United Kingdom				
Transitions by type[b]:				
Employment/earnings-related	27.5	34.2	41.2	51.6
Family structure-related	26.4	28.5	9.1	10.2
Other factors[c]	35.4	23.4	40.5	26.6
United States				
Transitions by type[b]:				
Employment/earnings-related	57.4	61.5	62.1	64.9
Family structure-related	19.0	20.1	12.8	13.9
Other factors[c]	13.8	8.2	11.2	7.5

Note: See Oxley, Antolin and Dang (forthcoming) for description. Covers most recent six-year period of available data.

a) Refers to individuals in households with a working-age head.
b) The per cent shares do not sum to 100 per cent. The remainder includes cases which could not be classified.
c) Households which were either employed or unemployed in both periods and where income changes were not dominated by movements in earnings. Largely transfer-related.

Source: OECD Secretariat.

Selected policy lessons

Briefly some main policy points are:

- Dynamic labour markets permitting good access to jobs are fundamental, permitting a rapid exit out of poverty for most of those falling below the threshold;

- In considering ways to reduce the number of poor individuals, governments may need to pay greater attention to the distribution of earnings across households: reducing the number of no-earner households and increasing the number of two-earner households. Removing tax and labour-market disincentives to second earners may need to be considered;

- Specific help aimed at the longer-term poor is likely to be necessary as these groups often face a number of specific problems which prevent labour-market entry;

- The fact that a fair share of the longer-term poor work suggests that systems to support low earners may need to be introduced or strengthened. Careful design of these programmes is necessary.

Table 5: Changes in probability of entry and exit when an "event" occurs
Changes in probability points

	Canada[a]	Germany	United Kingdom	United States
Poverty entry[b]				
Change in employment status only				
Loss of all workers	0.26	0.41	0.28	0.37
Loss of some but not all workers	0.05	0.04	-0.01	0.08
One worker, fall in hours	–	0.15	0.12	0.22
More than one worker, fall in hours	–	0.00	-0.04	0.01
Change in family structure only				
Separations/divorce (spouse becomes head)	0.36	0.14	0.06	0.08
Child becomes head	–	0.09	0.09	0.16
Concomitant changes in employment and family status				
Separations/divorce (spouse becomes head)				
Loss of all workers	0.72	0.82	0.49	0.62
Loss of some but not all workers	0.47	0.31	0.05	0.25
One worker, fall in hours	–	0.58	0.28	0.45
Child becomes head				
Loss of all workers	–	0.75	0.55	0.73
Loss of some but not all workers	–	0.23	0.07	0.38
One worker, fall in hours	–	0.48	0.34	0.59
Poverty exit[b]				
Change in employment status only				
From zero to at least one worker	0.17	0.20	0.19	0.08
Additional workers in working households	0.03	0.40	0.36	0.37
One worker, increase in hours	–	0.43	0.08	0.34
More than one worker, increase in hours	–	–	0.30	0.47
Change in family structure only				
Marriage/partnership (head becomes spouse)	0.36	0.11	0.00	0.39
Child becomes spouse	–	–	0.12	0.37
Concomitant changes in employment and family status				
Marriage/partnership (head becomes spouse)				
From zero to at least one worker	0.44	0.30	0.19	0.46
Additional workers in working households	0.37	0.46	0.36	0.63
One worker, increase in hours	–	0.49	0.08	0.62
Child becomes head				
From zero to at least one worker	–	–	0.30	0.45
Additional workers in working households	–	–	0.45	0.62
One worker, increase in hours	–	–	0.20	0.61

a) Results for the Canadian data are less comparable to the other countries because information on labour-market and family status is more limited and some results may be affected by breaks in the data.
b) Changes in probability points are defined relative to a baseline which is, essentially, the probability of transiting when there is no change either in family or employment status.
Source: OECD Secretariat.

Session 1: Poverty and inequality from a dynamic perspective: Discussion

The main points from the presentations were:

- short term poverty is fairly widespread – lots of people could expect to experience short term poverty at some point in their lives;
- but that persistent poverty is more concentrated;
- however, repeat spells of poverty are again fairly common;
- income mobility – there is a lot but most of it is short ranged;
- international comparisons are rather alarming – the UK has higher entry rates and lower exit rates;
- the evidence on inter-generational impacts was particularly startling – in particular the evidence that poverty and inequality are not random events;
- the evidence that there are certain key events which make the experience of poverty much more likely – in particular losing a job and family change are significant factors in causing people to move into poverty.

The discussant raised the question of why we should adopt a dynamic approach when examining poverty. She argued that it comes down to fairness. If poverty is concentrated and persistent we are more concerned than if it were random and short lived. Also, if childhood poverty and inter-generational transmission has future effects we should be more concerned – because we are concerned about inequality of opportunity. And we want to understand the dynamics of poverty – to understand is causes and how people move out of poverty, so government can devise policy to change people's lives.

Issues raised in discussion included:

Measures of persitent poverty

If we are concerned about persistent poverty, why do we have no concerted policy measures against it? It is not simply down to lack of data – perhaps it is because the problem is too complex, or that it is easy to avoid the blame for persistent poverty.

The data

There were some arguments that it might be better to concentrate on simple sources of data ie this would give a clearer picture of the problem. For example, there is lots of administrative data on lone parents, the long-term sick and disabled – groups we know from elsewhere experience long-term poverty.

Focus on causes of success rather than failure

It was suggested that it might be more profitable to analyse what allows people to escape poverty to find out what characteristics are needed – for example, housing tenure is particularly important (both as a cause and effect) – it is evident that people are more likely to exit from poverty if they own their own home.

Arguments in favour of a dynamic approach

Cross-sectional data can provide interesting snap-shot analysis, but it is more useful in policy terms to analyse the same people over time. For example, people who are poor in their working lives will end up being poor pensioners – cross-sectional data will not illustrate the mechanisms which cause people to live in poverty.

However, need to be careful when using data from the British Household Panel Survey for six years and calling it "long-term" – but it does give us a handle on causality which cross-sectional data does not.

Other issues raised:

- the importance of family events – one in six families having children move into poverty – would be useful to have more information about this to develop policies to support family transitions;
- health inequalities – evidence which shows that the size of health inequalities is unrelated to income inequality and may in fact be greater;
- the importance of inter-generational effects.

Session 2: Area and Multiple Deprivation

'Patterns of area deprivation'

Sam Mason, Research, Analysis and Evaluation Division, Department of the Environment, Transport and Regions

Introduction

This paper first of all briefly discusses what are generally thought of as deprived areas, then goes on to describe DETR's Index of Local Deprivation (ILD) and the patterns of area deprivation shown by this. It finishes up with a description of the changes in patterns of area deprivation between 1991 and 1996.

What is a multiply deprived area?

Before looking at patterns of deprivation it is useful to try to sketch out what is generally thought of as a 'deprived area'. The main features of a deprived area are:

- a defined area which contains a high level or proportion of individuals or households who are experiencing a whole range of negative or undesirable circumstances, either singularly or in combination, which significantly reduce their overall well being. e.g. low income, unemployment, crime, poor health, bad housing conditions and poor education;
- the concentration of these 'deprived' households and individuals in an area coupled with the undesirable aspects of the area – poor environment, poor housing, neglected open spaces, abandoned shops and houses, high crime levels, lack of services, lack of job opportunities to name but a few, act to reinforce the level of deprivation experienced by the community in that area;
- but it is important to recognise that most people in a deprived area will not experience all the factors of deprivation and some people will suffer none of them. However, a significant number will experience many problems whilst many others will experience one or two problems. Also different groups of people will experience different combinations of problems;

It is also necessary to recognise that not all deprived people live in deprived areas:

- only 38% of all the unemployed lived in the 44 most deprived local authority districts as identified by the 1998 ILD and 50% in the worst 65 LAs with similar figures evident for income support recipients.

Identifying multiply deprived areas

It has long been recognised that poverty and deprivation is more concentrated in some areas more than others and since the 1960s policies have been developed with the objective of addressing the multiple problems of 'deprived' areas. In order to know which areas these policies should be targeted on it has been necessary to develop measures which identify the areas experiencing the highest levels of multiple deprivation.

As it is the concentration of many different problems which leads to area deprivation it is necessary to devise a measure that captures this multiplicity rather than just single issues such as unemployment or low income. This has traditionally been done through indices of deprivation or disadvantage which combine a range of cross-sectional indicators into an overall 'deprivation' score for an area and allow areas to be ranked relative to one another. Such indices have traditionally relied on small area data from the population censuses . DETR have produced indices of deprivation based on both the 1981 and 1991 censuses which it has used to inform the targeting of its regeneration policies.

The DETR indices are only a small subset of the many different indices of deprivation, disadvantage and poverty that are in existence. There are many others, all which have been designed with a slightly different purpose in mind and so all use different indicators and different methods. For example, the Jarman Index was designed to help identify areas with the highest demand for GP services whilst the Townsend Index was designed as an index of poverty. There is no single 'right' index, different ones will suit different purposes better than others. In general though, at the local authority district level it tends to be the same authorities, albeit in a slightly a different order, that are consistently identified as the most deprived.

A further important feature of indices of area deprivation, DETR's included, is they are measures of relative rather than absolute deprivation.

Deprived people or deprived areas?

As virtually all the data currently available for small areas is cross sectional, indices of area deprivation identify as many individuals or households in a particular area that are experiencing at least one of the selected deprivation factors rather than the number of individuals or households experiencing all or many of the problems simultaneously. So although an area can have high levels on say eight different indicators of deprivation it doesn't mean that any individuals or households in that area

will actually experience all those problems simultaneously. Indeed the principle of not using highly correlated indicators in indices of area deprivation means that the impact of individuals or households with multiple problems on the results are reduced in favour of those with just one problem.

Individuals or households experiencing multiple problems are obviously one of the most disadvantaged groups that social and economic welfare policy needs to address. Although we know from other types of analyses[1] that such groups are concentrated in the most deprived areas, it is perhaps desirable to start thinking about how indices of deprivation can be made more sophisticated so that they more explicitly identify areas with high concentrations of people with multiple problems as well as multiply deprived areas per se. The availability of data for small areas is slowly improving and in the forthcoming review of the ILD (see below) we will be considering how the concept of multiply deprived people in multiply deprived areas can be more fully reflected in DETR's Index of Deprivation.

DETR's Indices of Local Deprivation

The Department of the Environment, Transport and the Regions' latest index of multiple deprivation is known as the 1998 Index of Local Deprivation (ILD). This had its origins in 1991 census data, when an index known as the Index of Local Conditions (ILC) was developed for what was then the Department of the Environment by Professor Brian Robson of the University of Manchester.

The Index of Local Conditions

The ILC was produced at three spatial scales; local authority district, ward and enumeration district (ED). It contained 6 indicators at the ED level and 7 at the ward, which were all taken from the 1991 census whilst a further 6 indicators from non-census sources were added at the district level to give a total of 13 indicators.

Table 1

Included at all three levels:
- Unemployment
- Overcrowded households
- Children in low earning households
- No car households
- Households lacking basic amenities
- Children living in unsuitable accommodation (flats and temporary)

Included at the ward and LA District level only:
- 17 year olds no longer in full time education

All from the 1991 Census

Included at the LA District level only:
- Income support recipients
- 15 year olds with low grade GCSEs
- Derelict land
- Household insurance premiums (as a proxy for crime)
- Standardised mortality rates
- Male long term unemployment

The indicators were standardised, transformed and combined into a single score for each local authority district, ward and ED in England which could then be ranked relative to one another.

Spatial deprivation can manifest itself in many different ways and often its identification is highly dependent on the spatial scale at which it is measured. To help ensure that different spatial patterns of area deprivation were picked up the results of the ILC were presented at local authority level in four different ways:

- the district 'degree' score – this is the LA district score based on all 13 indicators. It identifies the level of deprivation in the area as a whole;

- the ward intensity score – this is the average index score of the worst 3 wards in the local authority and identifies areas with severe pockets of deprivation;

- ward extent – this is based on the percentage of the LA's population that lives within wards that are amongst the most deprived 10% in the country. Again, this identifies areas with pockets of deprivation;

- ED extent – this is the proportion of an LA's EDs that are amongst the most deprived 7% of all EDs in England. This measure identifies areas with small pockets of deprivation.

[1] Analysis of the Sample of Anonymised Records from the 1991 Census of Population for DETR showed that $^{2}/_{3}$ of children in Tower Hamlets, one of the most deprived boroughs on the ILD, were experiencing multiple problems in that they were living in no or low income households and at least two of overcrowded households, households lacking amenities or households with no car.

1998 Index of Local Deprivation

By 1997 the ILC was becoming increasingly out of date as it was based primarily on 1991 data. At the national level there had been significant changes since 1991 in the numbers experiencing some of the problems, e.g. unemployment. This out of dateness coupled with the Government's increasing emphasis on directing policies towards those individuals and areas in greatest need encouraged DETR to try and update its index of deprivation.

So, in February 1997 DETR recommissioned the University of Manchester to update the 6 non-census indicators in the district level Index. As well as doing this, Professor Robson also recommended that some of the district level indicators from the census were replaced with more up to date substitute indicators that measured the same aspect of deprivation as the original census indicators. He also recommended that one of the census indicators; children in unsuitable accommodation, was dropped from the index altogether as it wasn't regarded a sensitive enough measure of the type of deprivation it was intended to capture. For three of the census indicators it wasn't possible to find suitable substitute indicators so the 1991 census data was retained. In all it was possible to update or replace 9 of the indicators with data from around 1996. These, along with the 3 retained census indicators gave a total of 12 indicators to make up the 1998 Index of Local Deprivation.

Table 2

Updated indicators:

- Income support recipients
- 15 year olds with no or low grade GCSEs
- Standardised mortality rates for under 75s
- Non income support recipients of council tax benefit
- Unemployment
- Male long term unemployment
- Derelict land
- Household insurance premiums (as a proxy for crime)
- Children in households receiving income support

1991 census indicators:

- Overcrowded households
- Households lacking basic amenities
- 17 year olds no longer in full time education

There is very little data for small areas available from non-census sources (although this has got slightly better in the last few years) which meant it wasn't possible to update the ward and ED level components of the index. So, in the 1998 ILD these remain based on 1991 census data although the children in unsuitable accommodation indicator was dropped to maintain consistency with the district level index.

Table 3

Ward and ED Level:

- Unemployment
- Overcrowded households
- Children in low earning households
- No car households
- Households lacking basic amenities

Ward level only:

- 17 year olds no longer in full time education

All from the 1991 Census

Patterns of Deprivation in 1996

Table 4 shows the 100 most deprived areas on the 1998 Index of Local Deprivation 'district' score. The most deprived areas are:

- the major cities and Inner London boroughs;
- closely followed by the metropolitan districts;
- the smaller industrial towns and cities;
- and some outer London boroughs.

Southern towns and cities, and resorts, start to appear after about rank 50 on the index e.g. Blackpool, Brighton and Hove, Norwich, Bristol, Thanet, Luton with the highest ranked rural authority being Penwith in Cornwall at 77. Resort and rural areas tend to score more highly on the three pockets of deprivation measures than on the district level index as the smaller area based favours the identification of deprivation in these areas, e.g. Blackpool is ranked 53 on the district level index but 23 on the ward intensity measure.

In some regions high levels of deprivation cover large parts of the region: all of the local authorities in Merseyside are within the worst 50 in the country as are 11 of the 14 Inner London Boroughs. 15 out of the 18 districts identified as predominantly port and industry (defined using the ONS classification of districts) are within the worst 50 and, 21 out of 25 coalfield districts are within the worst 100 ranked authorities.

Table 4: 100 Most Deprived Local Authorities on the 1998 Index of Local Deprivation

Liverpool	40.07	1	Blackpool	20.14	51
Newham	38.55	2	Easington	19.97	52
Manchester	36.33	3	Tameside	19.78	53
Hackney	35.21	4	Sefton	19.41	54
Birmingham	34.67	5	Barrow-in-Furness	19.38	55
Tower Hamlets	34.30	6	Leeds	19.06	56
Sandwell	33.78	7	Westminster	19.05	57
Southwark	33.74	8	Wansbeck	18.94	58
Knowsley	33.69	9	Hounslow	18.89	59
Islington	32.21	10	Brighton and Hove	18.75	60
Greenwich	31.58	11	Wear Valley	18.67	61
Lambeth	31.57	12	North Tyneside	18.67	62
Haringey	31.53	13	Kensington and Chelsea	18.54	63
Lewisham	29.44	14	Thanet	18.08	64
Barking and Dagenham	28.69	15	Burnley	17.31	65
Nottingham	28.44	16	Norwich	17.31	66
Camden	28.23	17	Mansfield	17.30	67
Hammersmith and Fulham	28.19	18	Preston	17.13	68
Newcastle	27.95	19	Bristol	17.11	69
Brent	26.95	20	Enfield	16.65	70
Sunderland	26.90	21	Derby	16.37	71
Waltham Forest	26.68	22	Luton	16.34	72
Salford	26.64	23	North East Lincs.	16.20	73
Middlesbrough	26.41	24	Wakefield	16.00	74
Sheffield	26.09	25	Portsmouth	15.86	75
Hull	26.06	26	Hyndburn	15.84	76
Wolverhampton	25.94	27	Penwith	15.78	77
Bradford	25.94	28	Southampton	15.70	78
Rochdale	25.13	29	Derwentside	15.26	79
Wandsworth	25.05	30	Kirklees	15.23	80
Walsall	25.02	31	Hastings	15.22	81
Leicester	24.95	32	Great Yarmouth	14.72	82
Oldham	24.82	33	Plymouth	13.86	83
Halton	24.69	34	Harlow	13.50	84
Gateshead	24.58	35	Wigan	13.47	85
Ealing	24.48	36	Bolsover	13.42	86
Hartlepool	23.72	37	Kerrier	13.32	87
South Tyneside	23.67	38	Croydon	13.12	88
Doncaster	23.60	39	Ipswich	12.80	89
Coventry	23.48	40	Redbridge	12.80	90
Blackburn with Darwen	23.04	41	Chesterfield	12.58	91
Barnsley	22.30	42	The Wrekin	12.41	92
Redcar and Cleveland	21.54	43	Ashfield	12.25	93
Wirral	21.25	44	Blyth Valley	12.14	94
St.Helens	20.98	45	Thurrock	12.11	95
Lincoln	20.70	46	Calderdale	12.04	96
Bolton	20.66	47	Torbay	11.86	97
Stoke-on-Trent	20.61	48	IOW	11.85	98
Stockton-on-Tees	20.41	49	Pendle	11.81	99
Rotherham	20.23	50	Slough	11.75	100

However, as highlighted above it is also necessary to look at the ward and ED based measures when examining patterns of deprivation. Table 5 shows the 15 worst authorities on the 4 different measures and some interesting patterns are evident:

- Bradford and Leeds are ranked very high on the on ward intensity measure although they are much lower on the district level index;
- Westminster scores highly on ward extent, ward intensity and ED extent measures but less highly on the overall district score;
- Middlesbrough and Hartlepool are ranked in the worst 15 on the ED extent measure but not on the other three;
- Barking and Dagenham scores highly on the district 'degree' measure but not on the 'pockets' measures.

Table 5

	Degree Rank	Ward Intensity Rank	Ward Extent Rank	ED Extent Rank
Liverpool	1	2	11	6
Newham	2	10	2	3
Manchester	3	4	8	8
Hackney	4	8	1	1
Birmingham	5	1	15	11
Tower Hamlets	6	5	4	2
Sandwell	7	29	19	40
Southwark	8	14	6	4
Knowsley	9	15	10	5
Islington	10	22	3	10
Greenwich	11	45	16	26
Lambeth	12	9	5	7
Haringey	13	12	7	9
Lewisham	14	19	17	20
Barking and Dagenham	15	65	22	89
Bradford	28	3	27	13
Sheffield	25	6	36	32
Leeds	56	7	40	49
Kingston upon Hull	26	11	24	22
Waltham Forest	22	13	12	25
Camden	17	32	9	23
City of Westminster	57	20	13	21
Hammersmith and Fulham	18	17	14	16
Middlesbrough	24	37	18	12
Brent	20	16	21	14
Hartlepool	37	47	25	15

Groups of deprived areas

One of the main uses of the ILD in DETR is to identify groups of most deprived local authority districts which are in turn used to guide resource allocation. For example, 80% of Single Regeneration Budget Round 5 resources will be targeted on the 65 most deprived authorities. These 65 authorities are those local authorities that are ranked within the top 50 on any one of the four ILD measures. Analysis in the recent Social Exclusion Unit report 'Bringing Britain Together' used a similar approach to produce a list of 44 'most deprived' authorities (by taking the top 30 on any one measure) whilst the 17 local authority districts eligible to bid for New Deal for Communities pathfinder status were also selected on the basis of the ILD although a regional dimension was also factored in. Because of it relativity there is no one way of using the Index to produce groups of deprived areas. Different uses will require different methods.

Changes in Deprivation between 1991 and 1998

While the purpose of the ILD is as a measure of relative deprivation at a certain point in time it is also desirable to look at changes in patterns of area deprivation.

Table 6 shows the fifteen most deprived local authorities on both the 1991 ILC and on the 1998 ILD. It can be seen that in

general the places that were most deprived in 1991 remain the most deprived in 1998. In the 1998 index Barking and Dagenham replaces Camden as the 15 the most deprived authority in England but the remaining 14 authorities stay the same, although there is some switching round in their rank position. Furthermore, although the ILC and ILD are very different to the 1981 Index of Deprivation the same authorities were in general also ranked the highest in 1981.

Table 6

1991 ILC		**1998 ILD**	
Newham	1	Liverpool	1
Southwark	2	Newham	2
Hackney	3	Manchester	3
Islington	4	Hackney	4
Birmingham	5	Birmingham	5
Liverpool	6	Tower Hamlets	6
Tower Hamlets	7	Sandwell	7
Lambeth	8	Southwark	8
Sandwell	9	Knowsley	9
Haringey	10	Islington	10
Lewisham	11	Greenwich	11
Knowsley	12	Lambeth	12
Manchester	13	Haringey	13
Greenwich	14	Lewisham	14
Camden	15	Barking and Dagenham	15

However, due to the changes in the indicators and methodology used to produce the 1991 and 1998 indices, it isn't strictly accurate to compare the 1991 ILC and the 1998 ILD. Therefore, as part of the contract to update the index Professor Robson also re-calculated a 1991 index using the 1998 indicators and methodology in order to examine the patterns of change between the two dates. Changes in the availability and definition of data between the 1991 and 1996/8 meant that it wasn't possible to recalculate an identical 1991 index. Even so, some tentative findings can be drawn on changes in relative area deprivation between 1991 and 1996.

Description of 1991-1996 change

At the top end of the scale the pattern is one of relative stability. Of the worst 50 local authorities in 1998 no fewer than 46 of these had been in the worst 50 in 1991 although again there was some switching around of positions. Lower down the rankings however, there is some evidence that certain types of area got worse between 1991 and 1996. Some geographically peripheral areas such as East Kent, West Cumbria and Coastal East Anglia, got considerably more deprived between 1991 and 1996 as did much of Outer London.

East Kent

- Dover was ranked 195 on the revised 1991 index but deteriorated to 103 in 1998;
- Thanet was ranked 76 in 1991 and rose to 64 in 1998;
- Hastings was ranked 110 and rose to 81, and
- Swale from 140 to 109.

Cumbria

- Allerdale was ranked 135 on the revised 1991 index and 102 on the 1998 ILD;
- Barrow-in-Furness was ranked 73 in 1991 and 55 in 1996.

Outer London

13 out of the 19 Outer London boroughs deteriorated between 1991 and 1996, many of them significantly:

- Hounslow jumped from 79 on the revised 1991 index to 59 on the 1998 ILD;
- Ealing went from 52 to 36;
- Brent went from 59 to 20 and was the LA which deteriorated the most between 1991 and 1996;
- Barking and Dagenham went from 35 to 15;

- Croydon from 111 to 88;
- Enfield from 94 to 70.

But some of the most deteriorating authorities were still the worst LAs – Tower Hamlets, Southwark and Greenwich all got relatively worse over the period.

At the other extreme, some LAs did improve significantly between 1991 and 1996. Although there is no clear pattern to which authorities got better and which got worse many of the most improving authorities were northern towns and cities and metropolitan districts (although it is necessary to bear in mind that they still remain some of the most deprived LAs in the country).

- Oldham improved from rank 11 in 1991 to rank 33 in 1996;
- Salford from 10 to 23;
- Bradford from 14 to 28;
- Leeds from 46 to 56;
- Barnsley from 32 to 42.

The major cities in the North; Manchester, Liverpool, Sheffield and Newcastle, remained in broadly similar positions, at the most only getting very slightly worse or very slightly better over the period. Liverpool was ranked the most deprived authority on the recalculated 1991 Index and again on the 1996/8 ILD.

It should be stressed that these findings should be treated with caution as the changes may be the result of a change on just one or two indicators. Likewise, it is necessary to recognise that the improvements and deteriorations are relative rather than absolute.

Small area deprivation

The construction of area-based indices is dependent upon the statistics that are available for small areas which, realistically are standard administrative and census areas. This means that indices artificially define the boundaries of deprived areas. The ILD results described above are all at a fairly large spatial scale and in reality area deprivation is likely to be much more unevenly distributed across an area than these imply. Presenting the index in different ways obviously goes some way to capturing such differences but up to date data at the ward and ED level is minimal which limits the effectiveness of these.

As it currently stands the ILD is most useful for identifying generally deprived local authority districts. This is sufficient for Government policy makers to use to draw up broad lists of the most deprived areas for targeting purposes, but is less useful for identifying small deprived communities. Local authorities and other local institutions tend to have access to more and better small area data for their own areas than is available nationally and are often is a better position to 'map' local level deprivation in their areas. It is therefore, important that these different sources are examined to obtain a full picture of deprivation in a particular area.

ILD Review

Recently, however, more small area data has become available at the national level and it is hoped that these can be incorporated into the ILD so that it will be more reliable for identifying deprivation in smaller areas as well as at the macro scale. DETR are undertaking a further review of the ILD, of which one of the main aims is to try and improve the sub-district level elements of the Index. The review will also look at the indicators that make up the ILD and the methodology used to construct it. It is hoped to commission an independent contractor to undertake the review by the end of December 1998 with the results available in autumn 1999.

References

1991 Deprivation Index: A review of Approaches and a Matrix of Results, HMSO, 1995
1998 Index of Local Deprivation: A Summary of Results, DETR, June 1998.
Robson, B., Bradford, M., Tomlinson, R. Updating and Revising the Index of Local Deprivation. DETR, October 1998.

Further Details

Further information on the DETR Index of Local Deprivation is available on the DETR Website at www.regeneration.detr.gov.uk or from Dorrett Annon, Fax 0171 890 3529, e-mail dorrett_amon@DETR.gsi.gov.uk

'Area Problems and Multiple Deprivation'

Anne Power, Department of Social Policy and Centre for Analysis of Social Exclusion, London School of Economics

Introduction

Areas are made up of individuals grouped together, and like individuals they reflect a range of characteristics. These area characteristics both help determine and derive from the individuals who make up a local area or community. The physical area and the residents of an area are inseparable parts of the same neighbourhood and lend each other identity.

Most areas have a mix of types of people and incomes within a range that gives them identity. Most areas have both significant stability and mobility. Over a lifetime most people move several times within and across types of area. Areas act as both a "sieve" and a "bucket" for people who move or stay. But some areas have a much narrower mix of people than average and much higher mobility – Mayfair at one extreme, Spitalfields at the other. This discussion concentrates on areas of low social or income mix at the bottom of the hierarchy. These areas tend to have high mobility.

Understanding area conditions and people

There are several questions: Do people at the bottom move around within poor areas, or do they gradually move up through a hierarchy of areas? What causes people to move up or stay at the bottom? Who moves into the spaces created at the bottom as some people filter out? Do the worst areas attract people with ever more concentrated problems leading to ever more marginal areas at the bottom? How can we measure an area's position or area progress – through area change such as conditions, the value of property, the composition of population, or through the progress of individual people? Most area studies focus on area conditions and the people who live there, rather than on individual progress within and through areas (Power, 1997). The most basic question is whether objective area conditions affect people directly or does the type of people living in an area determine its conditions?

In America, progress is measured in individual success rather than area change, with the consequent tolerance of appalling conditions in inner city ghettos, and many human casualties (Wilson, 1996). In Europe, including Britain, success is more commonly measured by area improvement alongside individual progress. Arguably this is a more logical approach since there is little doubt that areas affect people and people affect areas. The strongest and simplest proof of this lies in the cash value that attaches to near-identical properties in different areas. For property values are dictated by neighbours and neighbourhoods – in other words, area conditions.

In this brief discussion of problematic areas, I aim to show the interaction of 'people' and 'area' problems in acute urban decline, the evidence of incipient abandonment in the most extreme areas, and the implications for policy initiatives such as New Deal for Communities. The findings are based on CASE's[1] study of 12 high poverty areas and LSE Housing's study for the Joseph Rowntree Foundation, of incipient area abandonment in Manchester and Newcastle.

Concentrated poverty and clustering

The concentration of disadvantage in key regions, cities and neighbourhoods is significant. Taking wards (with an average population of 5,000) as the most easily measurable (but inexact) proxy for neighbourhoods, we found a large gap between the 5% poorest wards and the average for England and Wales (Glennerster *et al*, 1999).

We defined *poverty wards* as those within both the 5% of wards with highest proportion of people of working age not working, studying or training and the 5% with the highest concentration of deprived households (using the Breadline Britain Index). These two measures are not identical but together they identify the poorest areas in Britain (see Glennerster *et al*, for fuller discussion)

Table 1 showing % of population not working, studying or training and % in deprived* households in the poorest wards compared and England and Wales as a whole.

	Poorest wards	England & Wales
% of working age population not working, not studying, not on a government training scheme	45%	24%
% of households deprived*	38%	18%

*according to Breadline Britain Index

There are sharp regional differences in the concentrations of poverty as Table 2 shows. The extremely low figure for the Eastern Region underlines the contrast between regions with the lowest and highest concentrations of deprivation.

[1] Centre for Analysis of Social Exclusion.

Table 2 The percentage of the regional population living in poverty wards

Merseyside	26%
North East	18%
North West	8%
Yorks and Humberside	6%
West Midlands	5%
Wales	5%
London	4%
Eastern	0.1%

Source: CASE Area Strand, 1998.

Even more stark is the high concentration of poverty wards in some local authorities and the clustering of poverty wards within these poorest local authorities forming large continuous areas of concentrated poverty. A poverty cluster describes an area where at least two high poverty wards are contiguous. Clustering is by definition an urban problem. Table 3 illustrates this:

Table 3 Local authorities with high % of population in poverty wards and large clusters of poverty wards in continuous tracts

	% of LA population in poverty wards	Number of wards in largest poverty cluster	Population of largest poverty cluster in LA
1. Liverpool *	49%	26	259,000
Knowsley	54%		
2. Manchester *	38%	16	175,000
3. Tower Hamlets *	57%	8	67,000
4. Middlesbrough *	46%	8	44,000
5. Bradford	8%	2	33,000
6. Hartlepool	39%	3	19,000
7. Hackney	31%	2	17,000
8. Rochdale	11%	2	16,000

Source: CASE Area Strand, 1998
* Some local authorities have several clusters

Our analysis of the 1991 census identified 284 poverty wards i.e. wards that were both in the 5% most 'work poor' and 5% most deprived. Only 40 of these wards were 'lone' wards within a local authority. The rest were grouped in 51 clusters and adjacent areas.

Clusters of poverty matter because all the disadvantages associated with poverty are more concentrated and more extensive therefore escape becomes more difficult. It is for this reason that large poverty areas persist, have a long history and attract powerful stigma (DoE, 1976). The maps of deprivation, poverty and urban decline have largely not changed their place over long periods (DETR, 1998). However, area *conditions* do change, are subject to decline, stabilisation or improvement, depending on what actions are taken (Robson, 1995).

Intrinsic and acquired area characteristics

The characteristics of areas that accumulate high poverty and deprivation can be divided between *intrinsic* or long-term area characteristics that make some places difficult and unattractive to live in; and *acquired* characteristics that result from the impact of intrinsic problems on people, determining who moves in, who stays and who moves out. Chart 1 summarises these two categories.

Given the inequality of areas, for example distance from work, tenure, quality of schools and environment, it is inevitable that more vulnerable people with less economic clout will be concentrated in areas of greater difficulty, with lower opportunities. People with more choice will go to great lengths to stay out or move out of such areas. As a result, these areas have only half the proportion of people in work and double the proportion of deprived households.

The impact of clustering

The clustering of poverty neighbourhoods across large urban areas works to limit people's chances in many ways:

- there are less obvious escape routes so more people feel trapped;

- depression and low morale are more common, resulting in lower levels of organisation and initiative and higher levels of frustration, aggression and other negative behaviour;
- children's social learning is heavily influenced by surroundings and negative behaviour;
- schools suffer from low expectations resulting in lower performance and employment prospects; they also suffer more disruptive behaviour;
- less cash income affects shops and other services;
- the high concentration of low-skilled people leads to intense competition for a shrinking pool of low-skill jobs, lower wages and withdrawal from the labour market;
- the larger and longer running the area problems, the stronger the culmulative impact leading to flight of those more able to go and culmulative loss of control resulting from chronic instability;
- tipping into chaotic decline becomes more likely as the backbone of a neighbourhood weakens (James, 1995; Farrington, 1996; Power and Tunstall, 1997).

Chart 1 Intrinsic and acquired area characteristics

Intrinsic characteristics	**Acquired characteristics**
Location	Population mix
Transport	Reputation
Physical style	Appearance/conditions
Ownership	Standards
Environment	Service performance
Economy	Income
Outcomes	**Outcomes**
Low status	Deteriorating conditions
Low value	Rejection and isolation
Low desirability	Negative behaviour
Low mix	Withdrawal

These 'clustering' impacts on people's life chances can be explained in the following way. At a personal level, being poor in an area with many poor people and poor conditions generates gradual loss of confidence in 'the system'. In the largest poverty cluster in Newcastle for example, only one in ten people vote. In Hackney and Liverpool the performance of local government has been a source of scandal for two decades (DoE, 1979). Many conventional forms of involvement cease to operate as an area declines. A sense of failure, rejection and shame over where people live and belong grows. This increases dissatisfaction and undermines hope of change.

All these pressures together generate aggressive behaviour particularly in young males (Power and Tunstall, 1997). Parenting and street behaviour often become 'rougher' under the impact of depression. A social climate can come to prevail in a depressed area that militates against collective provision, individual success and social cohesion. This then gives negative signals to the next generation. The incidence of child abuse, youth crime, street disorder, disrupted classrooms, crime, shuttered shop-fronts and abandoned property stem from the loss of social controls that result from these forms of collective withdrawal. An area can slide from marginal viability towards collapse. This process was fully documented in Estates on the Edge (Power, 1997) and is supported by our current study in Manchester and Newcastle (Power and Mumford, 1999).

Evidence from declining cities and declining neighbourhoods

Evidence from four acutely declining neighbourhoods in two cities with severe long-run economic problems shows how severe the clustering of poverty is within large cities. The problems of these cities are different in degree, but not, I would argue, in kind from most other big cities. Intrinsic problems such as structural economic change can play into the more specific area – and people – based problems we have outlined. The four neighbourhoods we studied are within much larger poverty clusters. We present here only the barest summary of our findings to illustrate the severity of the problems we encountered. All tables are derived from our forthcoming report for the Joseph Rowntree Foundation (Power and Mumford, 1999). I attempt to link these new findings to the wider problem of social exclusion and to the Government's new approaches to regeneration.

There is long run movement away from cities and conurbations, although the exodus slowed over the 80s.

Table 4: Population of conurbations, 1961 – 91, '000s

	1961	1971	1981	1991
Greater Manchester	2720	2729	2595	2571
Tyne and Wear	1244	1217	1143	1114
Merseyside	1718	1657	1513	1412
Greater London	7992	7452	6696	6683

Source: Halsey, 1988; ONS, 1991.

With the exception of Inner London, the population decline is more acute in the main cities than the wider conurbations and even worse in particular inner neighbourhoods. In the four neighbourhoods we studied, it is now leading to visibly abandoned pockets of sound housing.

Table 5: Depopulation of Manchester, Newcastle and four neighbourhoods

Period	Manchester	Newcastle	*N1	N2	N3	N4
1971-1981	-18%	-10%	-39	-39	-13	-15
1981-1991	-11%	-5%	-5	-8	-19	-20
1991-1996	-7%	-2%	-6	-7	-20	-10

Source: Power and Mumford, 1999

*N1-N4 represents the four inner neighbourhoods we studied in Manchester and Newcastle

Note: from here on unless otherwise stated, the source for all tables is the report for the Joseph Rowntree Foundation by Power and Mumford, 1999.

The tenure pattern of the two cities is out of line with the national picture. A much higher proportion of local authority housing and far lower owner occupation help determine who lives and stays in the cities and who leaves. The pattern for the four neighbourhoods is even more extreme.

Table 6: Housing tenure in 2 cities and 4 neighbourhoods

	National Average	Manchester	Newcastle	N1	N2	N3	N4
Local authority renting	19	38	35	50	54	48	77
Owner occupied	67	41	50	28	30	35	16
Private rented	10	12	9	8	8	10	2
Housing associations	4	7	5	13	6	6	4

The aspiration to own is difficult to meet within inner city areas and take-up of the right to buy is below the national average for both cities. In the four neighbourhoods, the level of right to buy is extremely low in spite of the predominance of good quality council houses with gardens. People are less willing to risk ownership in the most acutely declining areas. The concentrated poverty affects aspirations and prevents many from considering it.

The loss of jobs in inner areas of both cities has affected males far more than females. The expansion of jobs in outer areas has not held people within the city boundaries as many people have leapfrogged to new housing in the surrounding districts while working in the city.

Table 7: Employment change in Manchester and Newcastle 1984 – 1991, as % of total working age population

All workers	**Manchester**		**Newcastle**	
Inner	–6%		–7%	
Outer	+41%		+9%	
Male and female workers	**Male**	**Female**	**Male**	**Female**
Inner	–13%	+1%	–19%	+4%
Outer	+25%	+54%	–1%	+14%

Source: DETR, 1996.

The cities, and particularly the four inner neighbourhoods, manifest acute signs of decline and deprivation. The contrasts with the national picture are stark.

Table 8: Indicators of decline and deprivation in 2 cities and four neighbourhoods

	National	Manchester	Newcastle	N1	N2	N3	N4
% working age not working	24	31	37	46	48	49	50
% deprived	18	34	30	41	41	39	46
% long-term unemployed *	27	39	34	40	38	45	42
% manual	43	55	46	71	73	63	83
% children in lone parent households.	11	37	32	39	35	33	33

*as % of all unemployed

The intense deprivation of the four neighbourhoods affects almost entirely white populations. This confirms earlier findings that concentrated poverty in disadvantaged areas is frequently not connected with race. This is another important distinction between British and American urban problems (Power and Tunstall, 1997).

In sum the most disadvantaged neighbourhoods experienced:

- a skewed tenure distribution with very large concentrations of social housing;
- significant and rapid depopulation over a long period and still continuing;
- ever more concentrated deprivation as in-comers tend to be more desperate than out-goers.

This resulted in:

- a rapid turnover of occupants and growing difficulty in keeping empty property filled;
- private withdrawal and growing empty spaces;
- trouble in the vacuum of collapsing demand;
- strong pressures to build outside the city so that people needing a home can escape the poorest inner areas. The process thus becomes self-fuelling.

These outcomes are illustrated by the following information we collected from small areas of incipient abandonment within the four neighbourhoods.

Table 9: Turnover rate in Council housing as an indicator of low demand and severe management difficulty

		Rate of turnover of tenants p.a.
National		10%
Manchester		18%
Newcastle		20%
Specific estates in four neighbourhoods	(a)	40%
	(b)	54%
	(c)	30%
	(d)	34%
	(e)	36%

Table 10: Growing percentage of empty Council properties in 4 small areas

	1996	1997	1998
Area 1	2%	6%	19%
Area 2	7%	13%	16%
Area 3	6%	18%	35%
Area 4	4%	8%	15%

Table 11: Accelerated pace of abandonment of Council properties in one year 1997-98 showing growing number of empty homes per quarter

	Year start	1st quarter	2nd quarter	3rd quarter
Area 1	75	111	136	166
Area 2	151	174	229	248
Area 3*	257	244	214	252
Area 4	249	360	370	430

*Area 3 lost significant properties through demolition. This did not prevent continuing abandonment.

Table 12: Percentage of empty Housing Association and privately owned property

	% empty
Housing Association 1	54%
Housing Association 2	56%
Private landlord owned areas 1	42%
Private landlord owned areas 2	30%
Private landlord owned areas 3	50%

Incipient abandonment of unpopular areas

This summary of evidence points to a chronic problem that is relatively new in this country but long running in the United States – the tipping of areas from viability at the bottom of the hierarchy to galloping abandonment. The social consequences for the people left behind and for the surrounding areas which become affected by the blight are devastating. The knock-on consequences for cities are worrying the government (Prescott, 1998). Large areas of major cities are losing value, cohesion and viability.

The following contentious questions are raised:

- Regeneration programmes, which are ongoing in these areas, have so far failed to stem the tide of decline. What changes of approach are necessary?

- Demolition of structurally sound and often physically attractive, renovated property appears inevitable in the face of zero demand and zero market value. How does this fit with the overall projected increase in household numbers? Are there untried remedies to resolve this contradiction? Is it purely a regional problem?

- Private loft apartments and quayside flats within a mile of the emptying areas are selling vigorously for high prices. Could developers do more? Could less glamorous private initiatives help restore inner neighbourhoods?

- Since 1930 the allocation of council housing has been broadly needs-based. This has created intense polarisation and during the 1980s it was made much worse by the loss of traditional jobs, the break-up of traditional family patterns, the rapid expansion of owner occupation and the collapse of private renting. Is there a way of breaking up the pattern of ghettoisation?

- When social controls disintegrate under the impact of rapid change, crime and anti-social behaviour increase. How can order and security be restored in such areas so that people with some prospects, commitment and confidence are willing to move in? Is zero tolerance the answer?

- The trajectory for boys and men in poor neighbourhoods is strongly downwards. This is unleashing aggression and generating fear. Simply locking more people up is an expensive solution. What new ideas are there to tackle the alienation of many boys and young men?

- Residents within acutely declining areas face an increasingly precarious future. Some argue for new clearances and a clean-sweep, strategic approach to regeneration. Yet such solutions are immensely costly and therefore of limited applicability in the face of several thousand acutely declining neighbourhoods (SEU, 1998). Holding onto populations and developing many smaller initiatives around them appears more promising. Will New Deal for Communities adopt the clean-sweep or incremental approach? What lower level initiatives are possible and practicable across every town and city in Britain?

New approaches

Area based policies have two strong intrinsic merits. Firstly they operate within universal systems such as education, health, policing and housing that can link and equalise all individuals and communities in the country. Secondly they target specific additional resources to compensate for the problems of accumulated and concentrated poverty, and to counter some of the intrinsic disadvantages of poor areas, the special negative effects of which are not in doubt. In addition the attention of

constantly renewed special programmes has a 'Hawthorne effect' – the extra effort and attention of themselves raise standards, at least for the duration of the programme. Most importantly, regeneration and other special programmes make the enforcement of basic standards within marginal areas essential. Programmes cannot succeed without this baseline. Regeneration programmes hold conditions and invariably arrest the slide into chaos that has struck many US inner cities. At its best it restores viability (Robson, 1995). A key finding from European experience of area reserve programmes in Estates on the Edge (Power, 1997) is that even the most chaotically declining areas can be restored. Action gives out the strongest signal that poor areas matter and poor people deserve equal treatment. For these reasons, special programmes targeted on special needs and poor areas are politically inescapable, logical, and a prerequisite for integration. Without them, in spite of universal supports, some areas would decay even faster (Power, 1997).

So how can regeneration be made to last, to take root? In the new service-based economy of smaller and generally far better-off households, city authorities need to examine the potential for gentrification – attracting in and retaining many more of the new-style workers who currently flee the city. This is happening among high earners in core city areas in highly secured developments such as the quayside flats in Newcastle and canal-side loft apartments in Manchester. It could be made to work in the inner city hinterland by appealing to the following types of workers:

- low-income entrepreneurs and pioneers of new approaches;
- people who like the urban mix and value cities;
- commuters who prefer not to travel but are worried by schools, security, police and environment;
- people who see potential in extremely decayed, now obsolete inner areas.

Islington was a blighted slum clearance area until the 1970s. The central mill, warehouse and canal district in Manchester was until the 1990s. The banks of the Tyne were until 3 years ago. There are many European and U.S examples of inner city renewal too (Urban Task Force, 1999).

To achieve such a shift towards a greater mix of population requires a new approach to regeneration. Crucially it needs pro-active visible policing, open access to good schools, intensive care of and quality of streets and open spaces, a broader group of people in social housing, a change in ownership, the development of local shops and other services. These major policy areas that are closely linked to the future of cities are beyond the scope of this short paper.

Many of the right ingredients are built into New Deal for Communities:

- a long-term approach;
- a focus on cities and distressed areas with the most severe problems;
- stabilisation and support for the existing population;
- the option of transfer of stock away from Council ownership.

But it must incorporate:

- open allocations systems for social housing;
- a revenue stream to fund the management of difficult areas of transition over the long-term;
- super-caretakers or wardens to perform the essential, front-line tasks of maintenance, security and social liaison;
- a new style of ground level guarding within neighbourhoods.

Overall it must take account of how to fund the organisational support task, how to generate on-going, smaller scale reinvestment, how to keep up with change while stabilising conditions, how to retain existing communities while attracting new ones.

The Prime Minister's proposals for super-caretakers and wardens within a framework of neighbourhood management at the launch of "Bringing Britain together" offer the potential for a changed approach to urban conditions (SEU, 1998).

Council housing needs to move in the direction of arm's length, non-political, smaller scale structures, that diversify ownership, incomes and management, that have the freedom and flexibility to draw in new groups as old groups disappear. New housing company and housing association models are likely to spread rapidly. Already, Glasgow, Liverpool, Manchester, Coventry and Islington have discussed the idea of transferring all council housing away from direct political control.

Conclusion

Will the Government reverse the growing inequality of areas and stop the leeching out of more successful people? – only if area policy is linked to the wider urban agenda of re-concentrating cities, stopping sprawl, improving transport, raising environmental and social conditions in cities as a whole.

My focus on small, deprived areas only suggests possible answers to the bigger questions of 'city renaissance' (Urban Task Force, 1998). But successful cities and city neighbourhoods are an amalgam of a complex patchwork of initiatives, actions and enterprise within small localities (Jacobs, 1970; Power, 1997). By encouraging many of these patchwork initiatives in the most difficult areas alongside more ambitious and universalist reforms, the Government should at least reverse a slide into abandonment, and at best lead on urban renaissance.

References

CASE Area Strand (1998) Analysis of national census data to identify poverty wards

DETR (1998) *1998 Index of Local Deprivation*. London: DETR

DoE (1976) *Inner Area Studies*. London: DoE

DoE (1979) Reports to the DoE on difficult to let housing in Hackney and Liverpool by the Priority Estates Project

DoE (1981) *Difficult to let investigation*. London: DoE

DoE (1996) *Urban Trends in England: Latest evidence from the 1991 census*. London: HMSO

Farrington, D. (1996) *Understanding and preventing youth crime*. York: YPS/Joseph Rowntree Foundation

Glennerster, H.; Lupton, R.; Noden, P. and Power, A. (1999) *Poverty, Social Exclusion and Neighbourhood.* CASEpaper, London School of Economics, forthcoming

Halsey, A. H. (ed.) (1988) *British Social Trends since 1900 – A guide to the changing social structure of Britain*. London: Macmillan Press

Jacobs, J. (1970) *The Death and Life of Great American Cities*. London: Jonathan Cape

James, O. (1995) *Juvenile violence in a winner-loser culture: socio economic and familial origins of the rise in violence against the person*. London: Free Association Books

Jargowsky, P. (1997) *Poverty and Place: ghettos, barrios and the American city*. New York: Russell Sage Foundation

ONS (1990 & 1991) *Labour Force Survey / Great Britain*. London: ONS

Power, A. (1997) *Estates on the Edge*. London: Macmillan Press

Power, A. and Mumford, K. (1999) *The Slow Death of Great Cities?* York: JRF

Power, A. and Tunstall, R. (1997) *Dangerous Disorder: Riots and violent disturbances in thirteen areas of Britain*, 1991-92. York: JRF

Prescott, J. (1998) *Press Release on launch of Urban Task Force*. London: DETR

Robson, B. (1995) *Inner Cities Research Project: Assessing the impact of urban policy* . London: HMSO

SEU (1998) Bringing Britain together: a national strategy for urban renewal, Cm. 4045. London: TSO

Urban Task Force (1998) *Prospectus*. London: DETR

Urban Task Force (1999) *Urban Renaissance – interim report*. London: DETR

Wilson, W.J. (1996) *When Work Disappears: the world of the new urban poor*. New York: Hopf

‘Claimant dynamics of lone mothers – individual and area effects’

Mike Noble, Department of Applied Social Studies, Oxford University

This paper reports a study which examined the dynamics – or claiming patterns – of lone mothers receiving means tested benefits. The study was undertaken in Oldham, a town in the North West. Although the focus was mainly on individual trajectories on and off means tested benefits over time, the effect of ‘area’ was examined in two ways. First the fact that the study was undertaken in a single town effectively controlled for local labour market effects. Second we specifically examined the extent to which ‘area’ in the sense of local neighbourhood had any explanatory power when examining exits from Income Support.

The study was based on two data sources. First, administrative data consisting of twice yearly extracts of all cases was drawn from the Housing Benefit/Council Tax Benefit data base for the study are beginning in July 1993 and ending in July 1997. These were then linked together to produce a longitudinal data set. Overall there were approximately 9,500 different lone parents represented within the data set over the study period. Second a postal survey of a random sample on lone mothers from the administrative data set was undertaken – to which just under 600 lone mothers responded.

The administrative data set

Table 1 Profile of Lone Mothers on Income Support July 1996

Mean	IS claimants N=3123	NS claimants N=1159
Age	32.5	33.8
No. of dependent children	1.9	1.7
Age of eldest child	9.4	10
No. of children under 5	1.2 (1178)	1.1 (321)
No. of hours working	–	23.5 (760)
Weekly Family Credit amount (£)	–	60.4 (879)
Weekly earnings (non self employed) (£)	–	81.6 (911)
Weekly self-employed earnings (£)	–	52.5 (25)
% of teenage mothers	1.5	0.6
% under age 25	16.3	9
% receiving disability benefits	1.9	5.3
Tenure: owner occupiers	14	27.5
private tenants	31.3	21.8
council tenants	54.7	50.6
% having children under 5	37.7	27.7
% of earners receiving Family Credit	–	94

The administrative data set covers both those on Income Support and those making a direct claim for Housing Benefit/Council Tax Benefit as part of a package of ‘in work’ benefits. It includes the age and sex of the claimant, the number and age of dependant children and housing tenure. It also contains limited information on hours worked, income sources and outgoings such as rent.

The administrative data showed that:

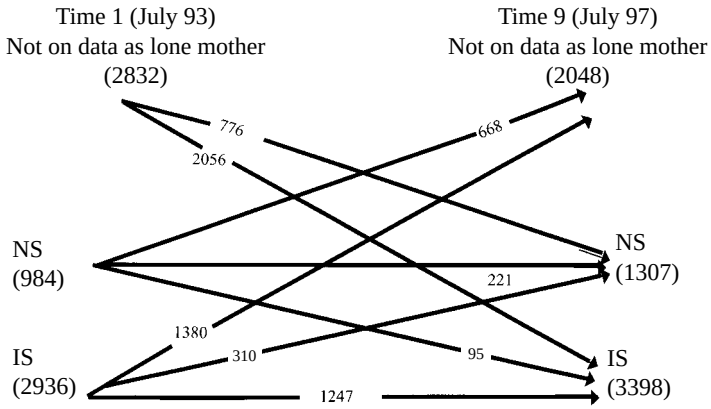
- the mean age of lone mothers on Income Support at any time during the observation period was around 32 years. Fewer than 2 per cent were teenagers and 16 per cent were under 25;
- the mean number of children was approximately 1.9;
- the mean number of children under five was 1.2;
- the mean age of the eldest child was nine years five months;
- 55 per cent were council tenants, 31 per cent private and housing association tenants and the remaining 14 per cent owner occupiers.

How much movement?

The results of the analysis showed a significant amount of movement on and off benefits revealing a variety of claiming patterns among lone mothers.

At any one time point in the four year observation period there were between 2936 and 3398 (mean 3059) lone mothers claiming Income Support – yet over the four year period a total of 6767 different lone mothers used Income Support for some period. This suggests a high turnover rate, with many lone mothers claiming for relatively short spells.

Chart 1: Origins and Destinations of Lone Mothers 1993-1997



Lone mothers who were on Income Support in July 1993 were tracked for the subsequent four years. Only 20 per cent had an **uninterrupted** claim for the whole period. 80 per cent had moved off benefit at some point. However, some of those who moved off were unable to stay off and returned to Income Support. When movements off and then back on – 'cycling' – were disregarded, 43 per cent of the lone mothers who were on Income Support at the beginning of the observation period were still there four years later (Chart 1).

An examination of **non** Income Support lone mothers (most of whom are in low paid work), revealed that only 32 per cent were still present on the data set as lone mothers four years on. Most had left altogether. 22 per cent were still present as non Income Support claimants and 10 per cent had become Income Support claimants.

From these results three claiming patterns were identified: long stay claimants, 'cyclers' – those who return to benefit more than once – and short stay claimants.

Who moves?

Some of the characteristics of lone mothers associated with a greater propensity to stay on or move off benefit were identified by using techniques such as survival analysis and logistic regression. Several factors emerged as important.

- lone mothers under the age of 25 had the highest exit rate from Income Support. The results indicated that the *older* the lone mother, the less likely she would come off Income Support;

- the number of dependent children acted as a barrier to leaving Income Support. The more children a mother had, the less likely her exit from benefit became;

- in all analyses owner occupiers were much more likely to leave Income Support than those living in other accomodation. However, it was not possible to determine whether owner occupiers were simply better qualified or whether there were some other factors at work such as where they lived.

The hypothesis that women who had their first child while still teenagers were more likely to remain on Income Support for long periods was also tested. The findings clearly showed that:

- 'Once teenage mothers' were not significantly different from their older counterparts in their chances of leaving Income Support and were no more likely to be long term reliant on Income Support.

The role of Family Credit

Charting the movements of Family Credit lone mothers from July 1994 to July 1997 revealed that:

- 30 per cent of the original lone mothers were still claiming Family Credit at the end of the period;

- 16 per cent were claiming Income Support;

- 54 per cent had either left the data altogether or moved into HB/CTB only claims which suggests that they had moved into higher paid jobs not requiring the support of 'in work' benefits.

Thus although some lone mothers seemed to be reliant in the long term on a mixture of 'in work' benefits and low paid work, it was a route out of benefit altogether for an increasing number as time progressed. There was however a small number who were unable to sustain work even with the support on in work benefits and ended up on Income Support.

The role of area

To what extent does 'area' in the sense of the neighbourhood where a lone mother lives affect her chances of leaving Income Support? If we map the quintiles of enumeration districts which have the greatest proportion of long stay Income Support claimants and compare these with the quintiles with the highest proportion of exits, on the face of it there does seem to be some clear, geographical distinction.

To investigate this further, cluster analysis was used to classify neighbourhoods into groups based on tenure, socio-economic and ethnic mix. These clusters were then incorporated into exit models. However, the effect such neighbourhoods had on exits became insignificant as soon as tenure was controlled for.

When specific neighbourhoods were added into the models, one neighbourhood did stand out as having a significant effect on exits even when controlling for tenure. Investigation revealed that a cake factory with flexible employment policies was located in the area which helped to explain the higher probabilities of lone mothers leaving benefit in that area.

The sample survey

Though the administrative data can record gross movements on and off benefit and help identify some of the characteristics of longer and shorter term claimants, it tells little or nothing of the reasons why, at an individual level, lone mothers move on or off benefit. For instance, the administrative data cannot tell us if lone mothers came on to benefit as a result of relationship breakdown or whether they had always been single, never married and came on to benefit for other reasons such as the cost of bringing up a child alone. Similarly, the administrative data yields no information on the reasons why, such as a new relationship or a new job, lone mothers were able to leave benefit altogether. The postal survey gave information which plugged some of these gaps in the administrative data.

The survey showed:

- most lone parents were married (41%) or living with a partner (21%) when they first had children;

- 30% described themselves as 'single never married' at this point, but only 22% consistently described themselves in this way both when they first had children *and* at the time of the survey.

Reasons for coming on to and moving off benefits

The single never married lone mothers were typically in their mid to late '20s and were most likely to have come on to Income Support as a result of the birth of a child or difficulties combining work with childcare. Those who were divorced or separated were typically in their mid to late '30s and were much more likely to have come on to Income Support as a result of relationship breakdown. The younger group of lone mothers tended to be better qualified overall, but this was still mainly at the lower end of the qualifications spectrum. Work-related factors constituted the main reason for coming off Income Support, and in most cases this went with a successful claim for Family Credit.

Claiming patterns

The survey results confirm the variety of claiming patterns identified in the administrative data:

- estimates of length of time on Income Support showed that the majority had quite short spells on Income Support, but there were a few very long stay claimants. About a quarter reported completed spells. The most common length of completed spells was two years. Long stay claimants were no more likely to be single never married or 'once teenage mums' than other groups. Those who had not worked at all at any point and those without qualifications were more likely to be long stayers;

- 37% of lone parents who had ever been claimants of Income Support were 'cyclers' i.e. had multiple spells on Income Support.

The overall pattern of results suggests that there are different groups of lone mothers with rather different family, work and benefit 'trajectories'. The single never married group tended to claim their Income Support when younger (during their '20s) and when they first have young children; the divorced or separated mothers were typically in their mid to late '30s.

Work orientation

All groups of lone mothers expressed a strong orientation to work. The majority had worked at some point since they first had children. Although for many this was to 'make ends meet', there was a high positive endorsement of work for other reasons too. Only a very small number did not want to work more or at all. Younger mothers were more likely to want to work than other groups (though they had worked less so far). Those who had not worked before or after children and did not want to work more or at all, were predominantly older mothers with married or long term relationship backgrounds.

Lone mothers overall held favourable attitudes to working for both positive ('prefer to work') and negative reasons ('have to work'). Asked whether mothers with under fives should have to work, younger mothers had a very much more work

orientated position than older mothers (especially those 45+). This may reflect an attitude shift between lone mothers born in the 1950's and those in the 1970's.

Younger mothers cited childcare reasons and financial consequences as the main reasons why they had not worked more. Older lone mothers were more likely to cite the need to stay at home to look after children or others in the family. Only a minority of lone mothers picked out personal (e.g. qualifications) or structural reasons (lack of available jobs) for not working more, though these would feature in any more comprehensive explanation.

Much of the childcare used by lone mothers was 'informal', though full time workers were much more likely to use formal care than other groups. A high proportion of this informal care was provided by family and friends and was also paid for. The main reason for utilising informal as opposed to formal care was the irregular and unsocial hours of much of the work undertaken by lone mothers. Informal care was the only feasible low cost solution. Lone mothers whose families lived locally and were prepared to help with childcare were more likely to work. However, when lone mothers refer to 'work' or their desire to work, they do not necessarily mean *full time* work, they may have in mind part-time work with flexible hours that can fit around other needs such as those of their children.

Conclusions

From the survey it is clear that the overwhelming majority of lone mothers want to work and the analysis of the administrative data demonstrate there is much movement into work.

For some, particularly those with young children or in the aftermath of relationship breakdown, work may not be the best option. It could be argued that mothers themselves should be the best judge of when and how much it is appropriate for them to work.

Many mothers who get into work find it difficult to sustain it both through problems with childcare and because of the marginal nature of the work they undertake.

This paper is based on Joseph Rowntree Foundation Findings April 1998 "Lone Mothers Moving In and Out of Benefit".

Session 2: Area and multiple deprivation: Discussion

Evidence

Four issues were identified as fundamental to the debate on area and multiple deprivation.

- *How important are area effects in determining outcomes for individuals?*

Do we really see better outcomes for someone on a low income living in a well off area compared with someone with the same income in a deprived area? Evidence using the US Panel Study of Income Dynamics suggests not. However, studies of experiments in Chicago suggest that there are definite areas effects, with women who were moved into a better off area having lower unemployment rates and children having higher school attainment than those still in the deprived area.

- *Is there evidence of increased area concentration of poverty in recent years?*

Data on this are limited, but work comparing the 1981 and 1991 census points to a drift towards more area concentrated poverty, with increased polarisation into "rich" and "poor" areas with fewer areas left in the middle.

- *Is policy too focussed on urban rather than rural deprivation?*

The highest rural area on the Government's Index of Local Deprivation is ranked 77 (out of 310). It was suggested therefore that the index is biased towards urban problems, and the result is that rural areas do not get their fair share of regeneration funding. The Index of Local Deprivation is currently being reviewed, and one aspect of the review will be seeing if it can be made more sensitive to rural deprivation. However, the general point remains that any index of deprivation will pick up urban factors more.

- *Do government indicators of deprivation measure the appropriate geographical areas?*

Data used in the Index of Local Deprivation are collected for census Enumeration Districts, wards and local authority districts. These are historical geographical boundaries, and therefore in many cases it is correct to say that they may not represent boundaries of local areas as they now exist. The Government is considering how more accurate data for small areas could be made available.

Policy issues

"Mixed" areas

It was argued that there is a general need to create neighbourhoods that are more "mixed" in a number of different dimensions. The homogeneity of the population in deprived areas means a lack of enterprise, a lack of aspirations and a lack of money to support local services. One ethnic group often dominates, often resulting in problems of racism. Another point made here was that there is a need to break up the physical environment with different styles of housing and more open spaces. A more general suggestion was that improving the perceived status of an area could be central to improving a wide range of aspects of life there.

Social housing mechanisms

It was suggested that the social housing system was instrumental in creating and emphasising "poverty areas", with local areas becoming very homogenous in terms of workless or low incomes households. It was argued that this is largely because of the homogeneity of these areas in terms of housing value and tenure, meaning that communities are made up of similar people. This was attributed to the hierarchical nature of the housing system, which means that people are always trying to move out of areas lower down the scale, and no one on a higher income chooses to live there. A suggestion to solve this problem was that local authorities should be allowed to sell off as much of the housing stock as possible. This could go some of the way to creating more mixed areas, since good properties at low prices could attract a wider range of people into the areas. It was claimed that most of the social housing stock is in good condition (particularly outside London) and there are high levels of under-occupation in some areas. Therefore it was argued that the Government should not spend regeneration money on housing, and should focus instead on improving the rest of the environment in these areas.

Points were made opposing the view that the social housing system was responsible for increased deprivation in the UK. In particular OECD work on deprived areas shows increased deprivation across all member countries, despite them having a wide range of different social housing systems. It was unreasonable therefore to attribute problems in the UK to the social housing mechanisms.

It was suggested that the UK should follow the French example of having non public ownership of housing, since having council landlords links the provision of social housing too closely with political objectives, building up the wrong incentives and shifting the aim away from providing housing for those who need it.

Wider issues

It was suggested that we should look more widely at the factors impacting on deprived areas, most notably globalisation and consumerisation. Both of these are putting pressure on any ideas of equity in the provision of housing. The result of these two forces is and will be that people who can afford to live in better areas will almost invariably choose to do so, given that they want a higher quality of life, better education for their children, etc. Hence society will become more polarised, with the subsequent further increase in area based deprivation.

Session 3: Retirement and the Elderly

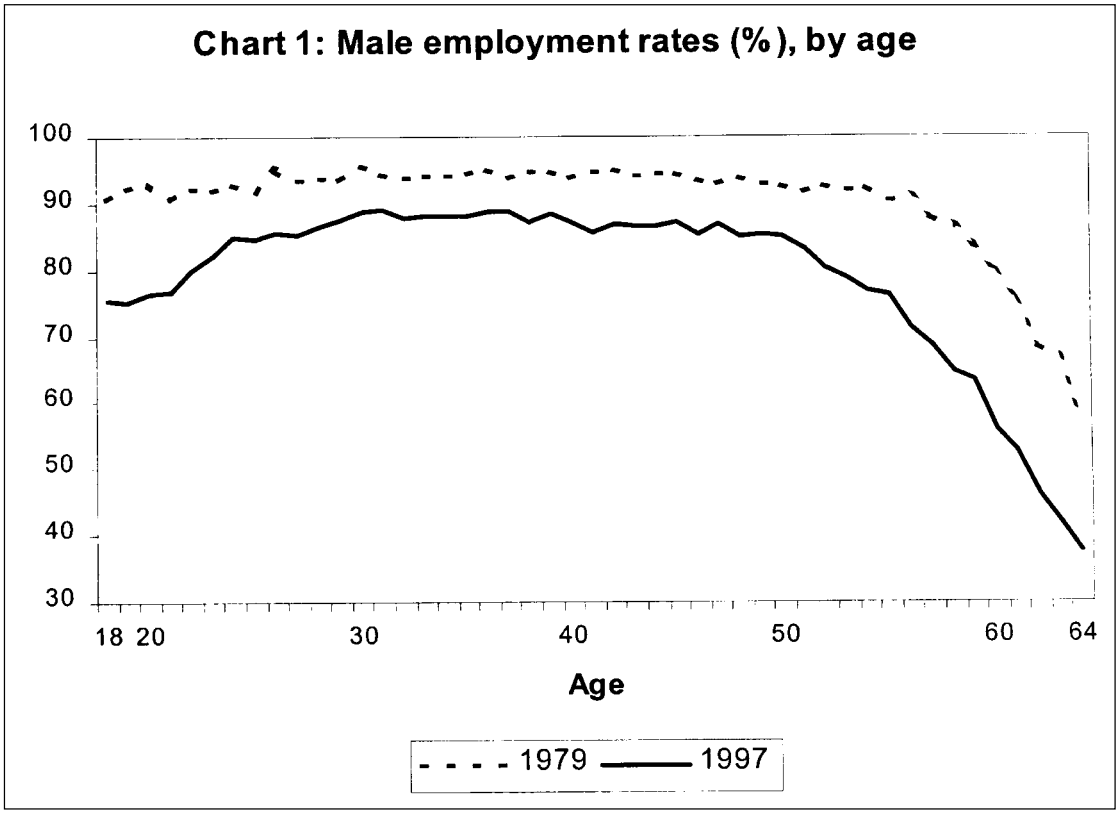
'The decline of employment among older people in Britain'

Nigel Campbell

Older men have experienced the largest falls in employment over the last twenty years. Two-fifths of men aged between 55 and 65 are now without work, compared to one-fifth in 1979. This paper[1] uses data from the Labour Force Survey and the first six waves of the British Household Panel Survey to examine why older people's employment has fallen, which groups have been most affected, and whether these trends are likely to continue.

Labour Force Survey evidence on aggregate employment rates

Chart 1 shows that employment fell substantially, for men of all ages, between 1979 and 1997 (similar points of the economic cycle). Older people have been particularly affected. 800,000 more men over 50 would be in work if employment rates had not fallen since 1979. This represents a larger fall in the number of jobs than the fall for "prime-aged" men (aged 25-50), even though the latter category is twice as large as the former.



Employment rates have always been lower among people in their 60s than in their 50s. Significantly, however, Chart 1 implies that there are now signs that the fall in male employment now begins from about age 50, rather than age 55.

Women are now much more likely to be in work than they used to be. Older women, however, have not shared in the general rise in female employment. According to Chart 2, the largest increase has been among women in their late 20s and early 30s, while women over 55 are no more likely to be employed than they were in 1979.

The change in employment has mainly been offset by economic inactivity, with unemployment[2] changing by much less. In particular, male economic inactivity has risen substantially as male employment has fallen, and female economic inactivity has fallen dramatically as female employment rose. This is particularly true for older men – unemployment has not increased at all among over 60s since 1979 – but is true at younger ages too. Men aged under 25, whose inactivity increased by slightly less than unemployment, are the only exception. Table 1 sets out the figures in detail.

---

[1] This paper is an abridged version of Campbell (1999).

[2] These data are from the Labour Force Survey, and so use International Labour Organisation (ILO) definitions of labour force states. In order to meet the ILO definition of unemployment, a person must have looked for work in the last four weeks and be available to start work in the next fortnight. Employment in this paper includes both self-employment and working as an employee. People who are neither employed nor (on the ILO definition) unemployed, are said to be "economically inactive". The ILO definition is not the same as the claimant count of unemployment, which measures the number of people claiming Jobseeker's Allowance.

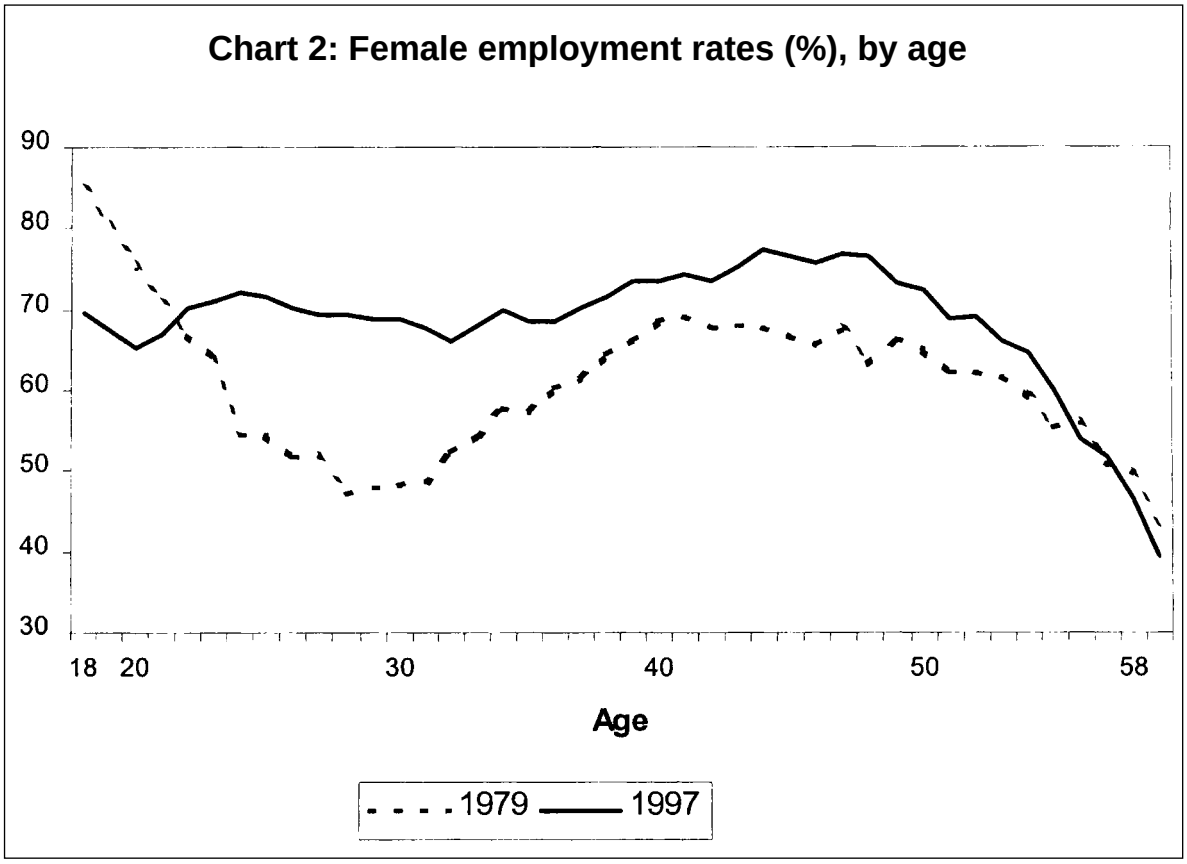


Table 1: Employment, unemployment and inactivity, 1979 and 1997 (%)[4]

		Men All	Men Aged 55-65	Women All	Women Aged 55-60
Employment	1979	90.8	79.4	60.2	50.9
	1997	80.6	58.3	68.9	50.4
	Difference	–10.2	–21.2	+8.6	–0.5
Unemployment	1979	4.3	3.8	3.7	2.2
	1997	6.2	4.6	3.9	2.2
	Difference	+1.9	+0.9	+0.2	0.0
Economic inactivity	1979	4.9	16.8	36.0	46.9
	1997	13.3	37.1	27.2	47.4
	Difference	+8.4	+20.3	–8.8	0.5

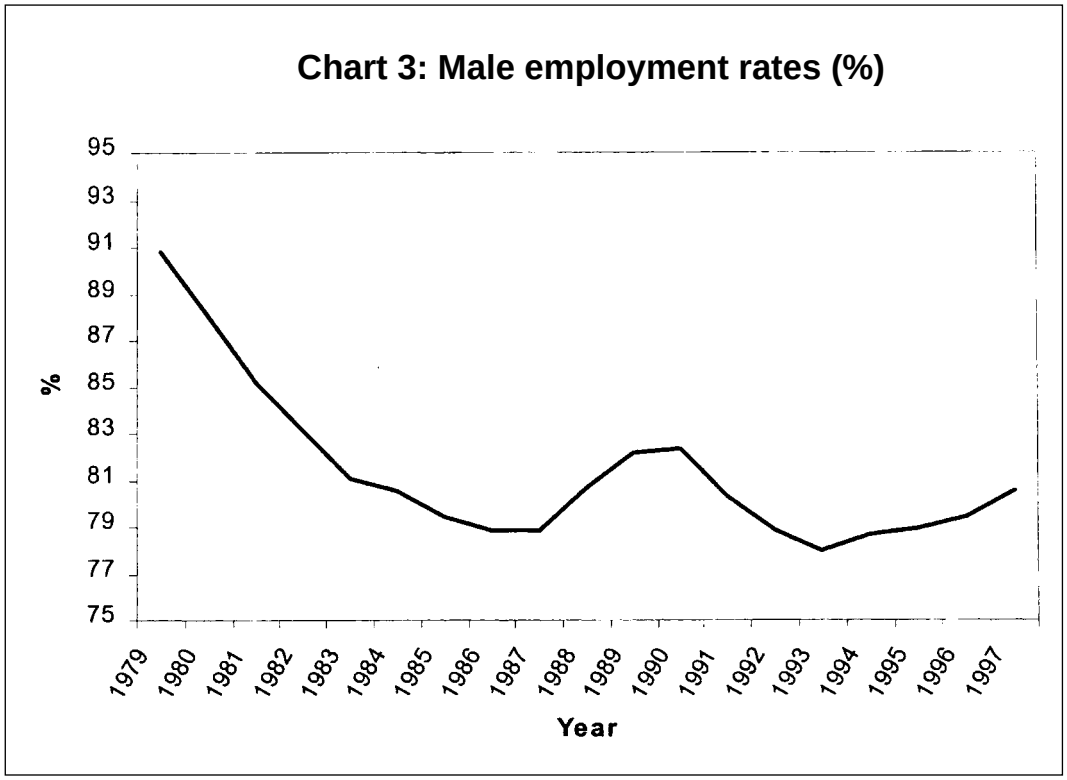
Although the fall in male employment since 1979 is of a similar magnitude to the rise in female employment, there is no trade-off between them. There is no fixed number of jobs, as the (untrue) "lump of labour fallacy" would suggest. (See Campbell (1999) for more details of the arguments.) Measures to increase the number of older men in work therefore need not reduce employment among younger people or among women.

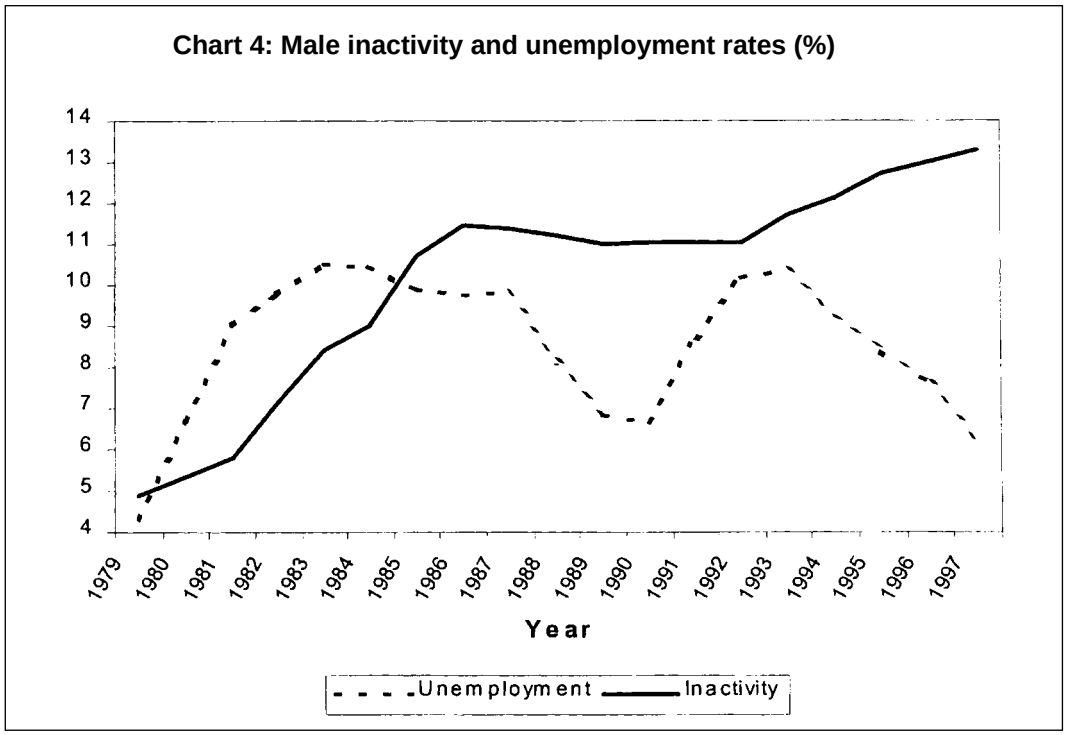
Most of the fall in male employment since 1979 took place before 1983 (chart 3). However, this does *not* mean that these changes can simply be attributed to a one-off shock in the early 1980s. The data on unemployment and economic inactivity (chart 4) show that the picture is more complicated. One puzzle is why economic inactivity has continued to rise since 1993, while unemployment fell sharply, which contradicts the "discouraged worker" hypothesis[3].

Regions with high male inactivity, at a particular point in time, also tend to have high male unemployment (chart 5). However, changes in male inactivity are not correlated with changes in male unemployment over the last cycle (1990-97). Charts 6a and 6b show that, while the gap between regional unemployment rates has narrowed since 1990, the gap between regional inactivity rates widened. Changes in male employment since 1990 are therefore not correlated with the level of regional employment then (chart 7). The three implications of these regional data are:

- It shows how drawing inferences about dynamic effects from "snapshot" data can be misleading;

[3] This hypothesis suggests that "discouraged workers" (who would like work, but are not currently actively looking for it) are attracted back to the labour market when unemployment is falling. It implies that unemployment and economic inactivity should be positively correlated.





- It provides further evidence that the "discouraged worker" hypothesis is not a good explanation of what has happened to men in the labour market since 1990. Either the hypothesis is flawed or a more powerful effect was working in the opposite direction;

- Even though the gap in regional male unemployment narrowed over the last economic cycle, there was no narrowing of the gap in total male employment. On the basis of the experience of the last cycle, economic recovery alone would seem not to be sufficient to reverse the trend of falling male employment. That is not to say that the level of output does not affect employment rates: deep recessions certainly harm employment, but recovery alone may not be enough.

This is an ongoing problem, not a one-off

We have already looked at the labour market status of people of different ages at two particular points in time (1979 and 1997), and at aggregate changes in between. Another way to analyse the Labour Force Survey is to compare people of the same age but of different cohorts.[4]

[4] A cohort is a group of people born in the same period. Here we consider cohorts of people born in the same five-year period, e.g. 1922-1926, 1937-31 etc.

Chart 5: Regional unemployment and inactivity (%), 1997

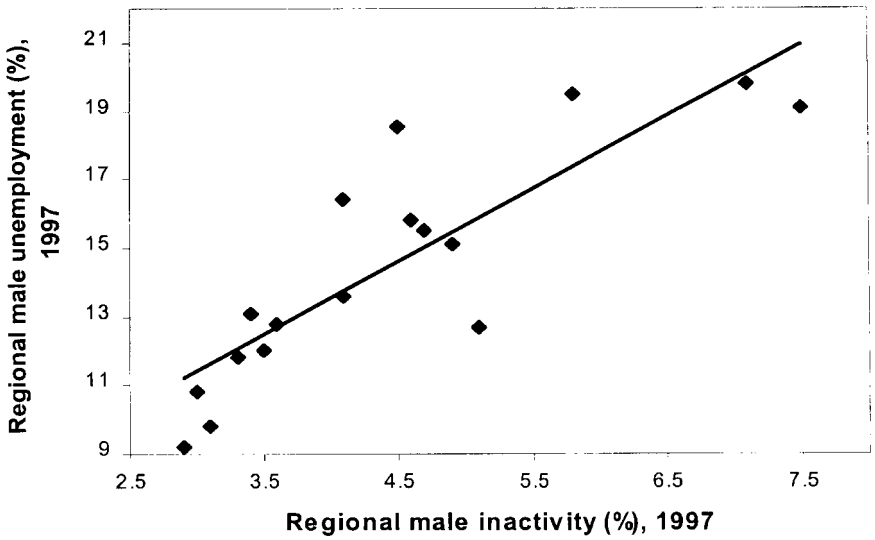


Chart 6a: Regional changes in unemployment, 1990 97

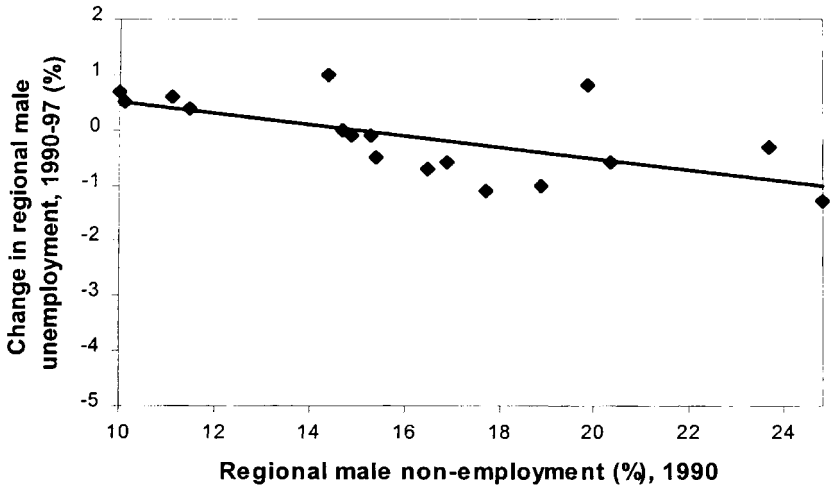


Chart 6b: Regional changes in inactivity, 1990-97

One advantage of cohort analysis is that we can determine whether the decline in male employment:

- has particularly affected one or two cohorts; or

- is part of an ongoing trend, with each successive cohort of men more disadvantaged (in terms of lower employment rates) than previous ones.

Both these scenarios are consistent with the severe consequences, associated with the decline of traditional industries, for men who were in their late forties or fifties at the start of the early 1980s. However, they have different implications for the future. Under the first, there is a clear concern for the generation affected, but the problem of declining employment would reduce naturally over time. In particular, the employment rate would rise again once that generation reach retirement age. On the other hand, the second scenario would give no grounds for complacency. It would imply that the trend is not likely to reverse of its own accord and, unless there were other offsetting effects, employment rates will continue to be significantly lower than they used to be.

The second scenario fits the data better. Later cohorts have lower male employment, at every age, according to Chart 8. For example, the employment rate of 50-year-old men born in 1942-1946 was lower than the employment rate of 50-year-old men born between 1932 and 1936.

This implies that falling male employment is part of an ongoing trend, with each successive generation more disadvantaged than the last, rather than a one-off effect that particularly affected one generation of relatively older men. The declining employment of older men is therefore not likely to reverse of its own accord. Extrapolating from the 1979-1997 data, and not taking account of the effects of recent policy or other changes, we would expect to see the employment of older men continuing to decline (although not as quickly as in 1979-1983).

Chart 9 shows the opposite trend for women. Later generations of women are more likely to be in paid employment, reflecting greater labour market participation. The increases from one cohort to the next are particularly large at younger ages. However, women are still less likely to be in paid work than men of the same age.

The wages of older workers

Real earnings for individuals continue to increase until a man (with the median wage for his age) reaches the age of 50 or so, and then decline slightly. However, at any given time, men around the age of 45 have the highest median hourly earnings. These statements can be reconciled as later cohorts have higher lifetime earnings and overtake those who are in their late 40s and are experiencing slower, but still positive, real earnings growth.

The average real wages of older men have increased over the last twenty years, but not by as much as the earnings of men in their mid-40s. Older men have therefore seen both a disproportionate fall in employment and lower relative wages. Together, these provide evidence that older men have faced an adverse shock to labour demand.

32-year-olds have the highest median hourly wages among women. However, the decline in median earnings beyond that peak can be fully explained by older women having on average lower educational qualifications.

Which individuals leave the labour market?

The Labour Force Survey is a representative sample of people at each age, so conclusions could be drawn from it about the employment status of cohorts by comparing successive observations. As different people are interviewed every year, however, the LFS cannot tell us what is happening to particular individuals over a number of years. This is important because, for example, the consequences of the following two situations may be very different, even if the overall employment rate at any given time is the same:

- people currently without work are likely to continue to be workless;

- people who are out of work today are likely to find work in the near future, so that individuals face shorter spells of unemployment or economic inactivity. Even if the employment rate is the same as in the first scenario, more people would be workless at some point in a five-year period, although the average durations of worklessness would be shorter. In addition, aggregate employment would be increased if more people had a close connection to the labour market.

Longitudinal data, which follow the same individuals over a period of time, are needed to investigate individuals' transitions between employment, unemployment and inactivity. The British Household Panel Survey (BHPS) can be used for this purpose, as the same people are interviewed every year.

This paper reports results from the first six waves of the BHPS. People who have given a full interview in all six waves have provided information on their labour force status on 1st September in seven years (1990 to 1996 inclusive), and whether they have had any spells on unemployment or long-term sickness during these years.[5]

[5] We also include those for whom we have three or more observations of whether or not they were employed, but who were not interested in every year of the sample . Paull (1996) has demonstrated that excluding everyone who would not be tracked down for an interview in every wave of the survey will give biased results. In total, the sample contains 2253 individuals aged between 45 and state pension age when their labour force status was first observed. We have a complete record – from September 1990 to September 1996 – for 73% of those in the sample.

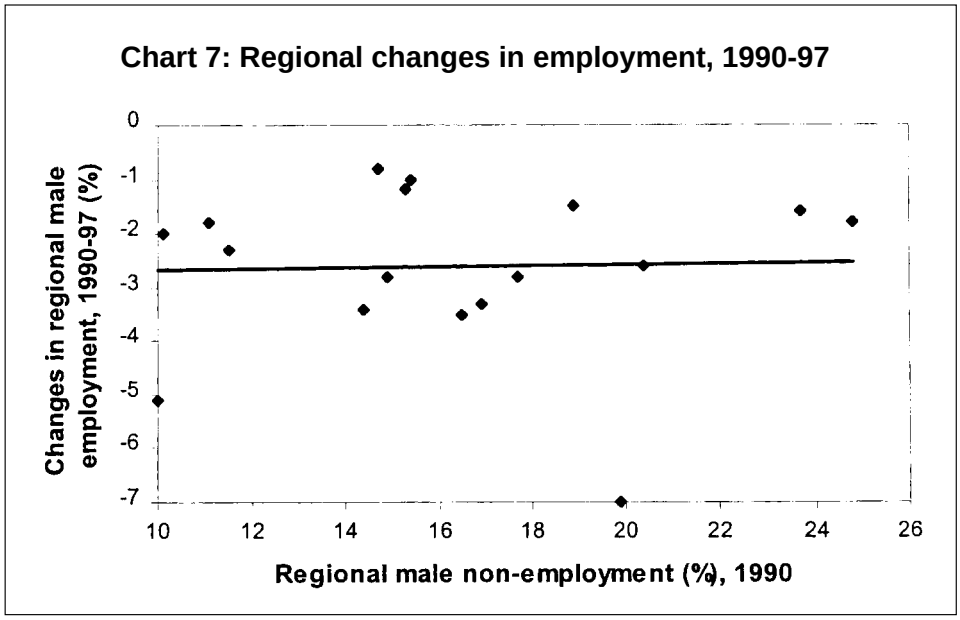


Chart 7: Regional changes in employment, 1990-97
Changes in regional male employment, 1990-97 (%)
0
-1
-2
-3
-4
-5
-6
-7
10
12
14
16
18
20
22
24
26
Regional male non-employment (%), 1990

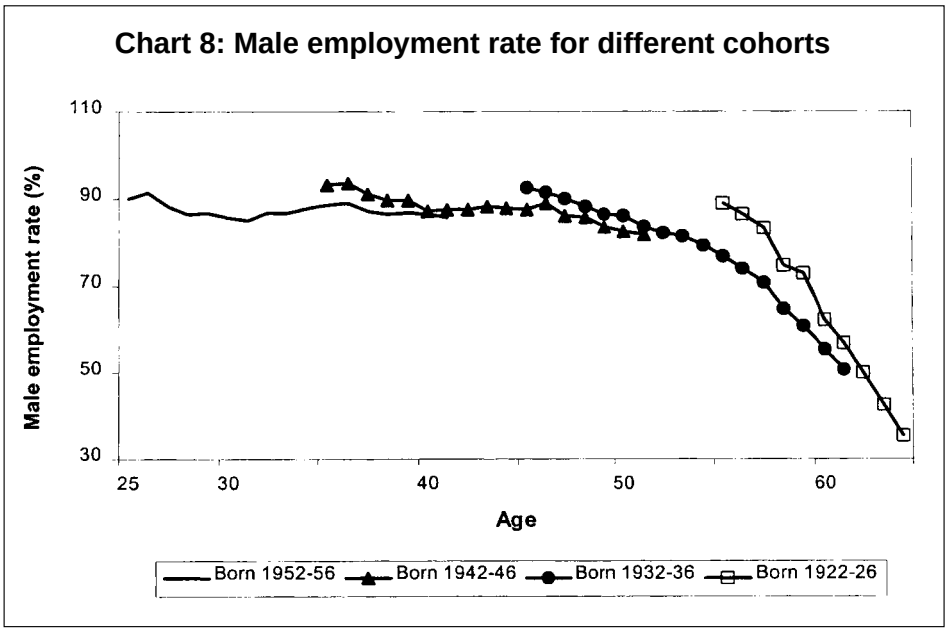


Chart 8: Male employment rate for different cohorts
Male employment rate (%)
110
90
70
50
30
25
30
40
50
60
Age
Born 1952-56
Born 1942-46
Born 1932-36
Born 1922-26

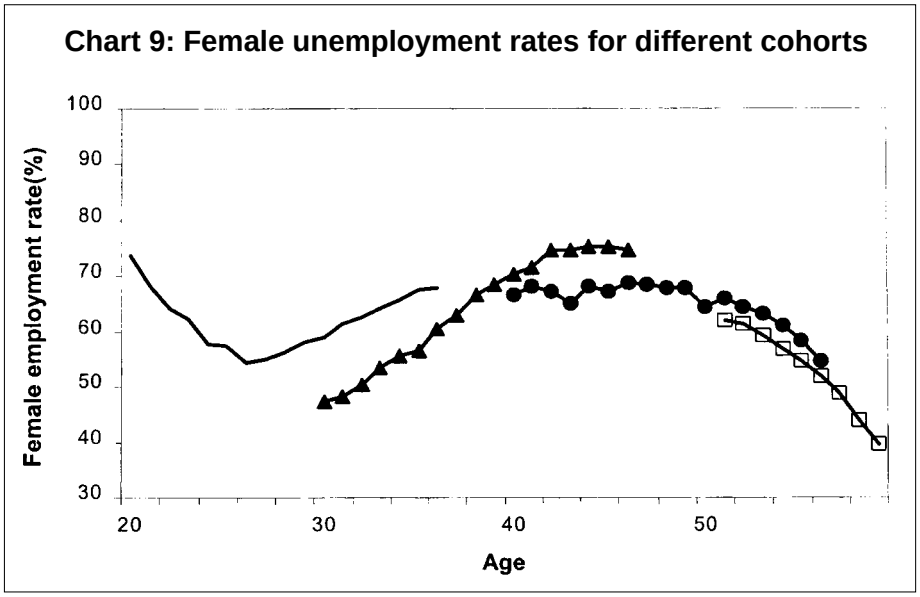


Chart 9: Female unemployment rates for different cohorts
Female employment rate(%)
100
90
80
70
60
50
40
30
20
30
40
50
Age

These data are used to provide evidence of who leaves the labour market, and who returns.

Who leaves the labour market?

Of the 71 per cent of the sample who were employed initially, 56 per cent of these were employed throughout their period of observation (typically six years), while 44 per cent were displaced from the labour market at some point. The latter may be because of a period of unemployment, long-term sickness, or (voluntary or involuntary) retirement. People who move from job to job without a period of unemployment or long-term sickness are held to have been in continuous employment.

Table 2 reports the results of a probit[6] regression to determine which characteristics are associated with whether or not a person is displaced from the labour market. It gives the probabilities of someone being displaced during the sample period (typically 1990-1996) given their age, gender, wage quartile, whether or not the person was working in a declining industry, and occupational pension scheme membership.

Table 2: Probability of being displaced during the BHPS sample period (%)

	Men				**Women**		
Age at beginning	**45-49**	**50-54**	**55-59**	**60-64**	**45-49**	**50-54**	**55-59**
In non-declining industries:							
Q1 of wage distribution and OP	19.6	28.9	39.6	65.6	25.6	36.1	52.5
Q1 and no OP	12.1	19.3	28.2	53.6	16.6	25.2	40.2
Q2 and OP	17.8	26.7	37.0	63.1	23.4	33.6	49.8
Q2 and no OP	12.1	19.3	28.2	53.6	16.6	25.2	40.2
Q3 (with or without OP)	16.9	25.5	35.7	61.8	22.4	32.3	48.4
Q4 (with or without OP)	20.6	30.2	41.0	66.9	26.7	37.5	54.0
In declining industries:							
Q1 of wage distribution and OP	29.3	40.4	51.9	76.2	36.5	48.2	64.6
Q1 and no OP	19.6	28.9	39.6	65.6	25.6	36.1	52.5
Q2 and OP	27.0	37.8	49.2	74.1	34.0	45.5	62.1
Q2 and no OP	19.6	28.9	39.6	65.6	25.6	36.1	52.5
Q3 (with or without OP)	25.9	36.5	47.8	73.0	32.7	44.2	60.8
Q4 (with or without OP)	30.6	41.8	53.4	77.4	37.9	49.7	66.0

Note:
OP = member of an occupational pension scheme
Q1 = top quartile of the wage distribution

Older age groups are more likely to be displaced (within the six-year period) than younger ones. Women are more likely to be displaced than men of the same age.[7] The following results hold, after taking age and gender effects into account.

- People in the bottom quartile of the hourly wage distribution are at the greatest risk of displacement;
- People in the top half of the wage distribution have a reduced chance of displacement, *provided they do not have an occupational pension*;
- Being in a job with an occupational pension significantly increases your chances of being displaced if you are in the top half of the wage distribution, often by ten percentage points or more. Men in their early 50s with an occupational pension and in the top quartile of the wage distribution are 50% more likely to be displaced than a man with the same age and hourly wages but no occupational pension. The effect on the third quartile is very weak and on the bottom quartile non-existent;
- These results hold even after controlling for the fact that some people initially worked in industries that faced sharp employment falls during the period, while other industries grew. Displacement was, unsurprisingly, higher among people working in an industry whose employment fell by more than 2 per cent a year on average between 1990 and 1995;
- Although working in a shrinking industry increases the risk of displacement, working in a growing industry does not reduce the risk compared to working in one whose employment is static;
- Finally, sector appears not to have a significant additional effect. The private sector, the civil service, local authorities and the NHS all seem – after controlling for age, gender, wages, occupational pensions, and changes in industry employment – to perform similarly with respect to the displacement of older workers.

[6] Further details of probit regressions are in Campbell (1999)
[7] This is probably related to the fact that the state pension age for women is lower than that for men.

Few people return to the labour market

One reason for the lower employment rates is that relatively few older people return to work after being out of the labour market. About one-quarter of the panel of people over 45 returned to work after being displaced. The return rates are even lower (18%) for people who were not employed at the start of the survey period. And nearly half of those 18% are back out of work before the end of the period. Table 3 has the details.

Table 3: Proportions returning to work (%)

	Men				Women			Total
Age at beginning:	**45-49**	**50-54**	**55-59**	**60-64**	**45-49**	**50-54**	**55-59**	
% of those not initially employed, who during the sample period:								
return to employment at some point	22	26	11	9	35	19	11	18
return and stay in work	17	17	6	4	24	10	7	11
return but don't stay	6	9	5	5	11	10	4	7
never work in period	78	74	89	91	65	81	89	82
% of displaced who:								
return to employment	49.0	35.1	10.7	10.9	31.6	22.8	12.6	24.1
don't return	51.0	64.9	89.3	89.1	68.4	77.2	87.4	75.9
Memo items:								
% not employed initially	9.5	18.1	30.2	47.7	27.2	32.6	46.9	29.3
% employed initially and are later displaced	25.9	31.5	38.4	41.4	22.9	32.0	33.1	31.2

Tables 4 and 5 show that there were significant movements within the broad category of being without work, and such movements were generally associated with lessening labour market attachment. About half of those who were unemployed at the start of the survey period were either long-term sick or retired (or, for women, looking after their family) by the end. About one-third of the long-term sick had retired by the end.

Of those who did return to work, unemployed people were more likely to return to work than people who were long-term sick or retired. The long-term sick had even less chance of returning to work than those who were retired.

Table 4: Men's transitions between different labour force states (%)

Labour force state initially:	**Labour force state at end of BHPS period**					
	Employed	**Unemployed**	**Long-term sick**	**Retired**	**Student or other**	**Total**
Employed	67	5	6	22	0	100
Unemployed	19	26	23	31	1	100
Long-term sick	3	3	62	31	1	100
Retired	5	0	2	93	0	100

Table 5: Women's transitions between different labour force states (%)

Labour force state Initially:	**Labour force state at end of BHPS period**					
	Employed	**Unemployed**	**Long-term sick**	**Retired**	**Looking after family**	**Total**
Employed	66	4	4	20	6	100
Unemployed	33	15	4	19	30	100
Long-term sick	4	0	58	31	6	100
Retired	6	3	1	74	16	100
Looking after family	15	1	6	24	54	100

What do the results tell us about the explanations of falling employment among older workers?

There are five explanations for the increase in employment among older workers:

- More people making a voluntary choice to retire early;
- Labour supply reductions that are involuntary or the result of either constrained choices or distorted incentives;
- The effects of occupational pensions;
- A shift in labour demand away from older men;
- Increasing age discrimination.

It is sometimes difficult, even in individual cases, to differentiate between these explanations. However, we can draw some conclusions on the basis of the evidence presented in the paper.

We can infer that age discrimination is not likely to have been the major cause of the dramatic fall in employment among older workers. Discrimination – in the sense of unequal treatment of people who could do the job equally well – on the grounds of age seems to have been experienced by relatively few older people. McKay and Middleton (1998) found that 5 per cent of people aged 45-69 believed that they had been discriminated against in one or more job applications because they were felt to be too old. However, the arguments against age discrimination hold even if, as the evidence suggests, it is not widespread.

Occupational pensions are associated with lower employment rates. People whose wages are in the top half of the distribution, are more likely to leave the labour market if they have access to occupational pensions. Occupational pensions could be reducing employment in a number of different ways. 90% of occupational pensions are salary-related, and employers' contributions to such pensions increase, often substantially, as people near retirement age. They therefore add to the cost of employing older workers and provide incentives on employers to encourage their employees to retire early. Separately, occupational pensions may reduce labour supply, either voluntarily or as a result of constrained choice. The first case seems benign, with greater pension entitlements making people richer and enabling them to choose to retire earlier. Sometimes, however, early retirement packages, including an enhanced occupational pension, are offered on a temporary basis when the firm is seeking to reduce its workforce. People accepting that offer may be making what is a very constrained choice, especially if they feel that redundancy later is the likely alternative.

There is also evidence of a labour demand shift against older men, as this group has seen the largest decline in their employment rates and a fall in their relative wages over the last twenty years. This shift has taken place over a long period, and so does not reflect the level of aggregate demand at a particular point in the economic cycle. Older men were more likely to have been working in industries whose employment declined dramatically in the early 1990s. Men over 45 were much more likely to have been working in shrinking industries. Half of them worked in industries whose employment fell by 12% or more between 1990 and 1995, while aggregate employment fell by less than 4%.

That leaves labour supply explanations for the changes. To what extent did labour supply reduce voluntarily? And to what extent were labour supply reductions involuntary or the result of constrained choices?

As successive generations are richer than their predecessors, theory would suggest that voluntary early retirement might increase. This explanation is likely to hold for a proportion of early retirees, although not all the increase in displacement associated with occupational pension schemes will be voluntary.

However, voluntary, unconstrained decisions are, at best, probably a limited description of the story. There are a number of reasons to believe that much of the change in employment reflects constrained choices or involuntary decisions:

- higher levels of wages are associated, in the absence of occupational pensions, with lower displacement rates. Voluntary, unconstrained decisions are not likely to have caused the substantial falls in employment among men at the bottom of the wage distribution;

- older men were more likely to be working in industries which shrunk in the early 1990s. Accepting an offer of early retirement in such an industry may be a constrained choice;

- a number of older people move from unemployment to long-term sickness or to retirement, and from long-term sickness to retirement. People making a voluntary decision are likely to move straight from employment to retirement instead;

- people who have been displaced typically find that their potential earnings in a new job are significantly less below their previous wages. This "pay gap" is usually larger for older workers. People who do not re-enter the labour market because of this pay gap are not making an unconstrained choice;

- the scale of the problem – with the proportion of older men out of work increasing from one-fifth to two-fifths – is too large to have been caused solely by a number of individuals deciding voluntarily to retire early.

What about the future?

Older men have been particularly affected by the fall in employment. There are two types of problem here. The obvious one affects people currently in their fifties: older people unexpectedly without work are likely to see both their current income and their income in retirement affected. The other issue is about what will happen in the future when younger people in the labour market reach their fifties.

The evidence presented here, covering 1979 to 1997, do not give grounds for confidence that the trend to lower employment among older men will reverse of its own accord (although employment might not be expected to fall as quickly as between 1979 and 1983). Indeed, later cohorts have lower employment rates, even at age 40, than men born before them. This implies that men in their fifties in the future could be even less likely to be employed than the current generation of older workers.

Older people without work are more likely to stay that way than younger people. Return rates to work are lower for the economically inactive than the unemployed, and for older people than the young. The evidence is that the labour market attachment of a workless older person tends to weaken over time, reducing further the likelihood of their later returning to a job. We have also seen that falls in male employment have been accompanied by an increase in the number of people who are economically inactive, and are therefore not looking for or available for work.

The main findings of this paper have been that:

- employment has fallen sharply among men, especially men over the age of 50;
- economic inactivity, much more than unemployment, has increased at the same time;
- the trend seems to be continuing, with each successive generation more disadvantaged than its predecessors;
- economic recovery will not solve the problem on its own, according to regional data;
- two groups of older workers have been most likely to leave the labour market. One group consists of people in the bottom quartile of the wage distribution. The other is people in the top half but who are members of an occupational pension scheme;
- few older people return to work after leaving the labour market. Indeed, older people without a job are more likely to become less attached to the labour market over time, moving from unemployment to long-term sickness or retirement or from long-term sickness to retirement.

Older women have not shared in the increase in female employment. This may be due to a cohort effect and if so, that might be less of a long-term concern. Looking to the future, the remaining concerns might then arise from:

- lower male employment,
- the sharper falls among older men, implying a trend of more people leaving the labour force early,
- the possibility that the next generation of men will stop work even earlier than the current generation, and
- whether any of the causes of lower male employment will limit the effective retirement age of women in the future.

References

Campbell, N (1999). 'The Decline of Employment Among Older People in Britain' CASEpaper 19. London School of Economics: Centre for Analysis of Social Exclusion.

McKay, S and S Middleton (1998). 'Characteristics of Older Workers', DfEE Research Report No. 45. London: The Stationery Office.

Paull, G (1996) 'The Biases Introduced by Recall and Panel Attrition on Labour Market Behaviour Reported in the British Household Panel Survey', Centre for Economic Performance Working Paper no. 827. London School of Economics.

‘Prioritising older workers’

Richard Disney, Professor of Economics, University of Nottingham, and Research Fellow, Institute for Fiscal Studies.[1]

Introduction

A serious problem for many European countries, both in OECD and in Eastern and Central Europe, is the growing rate of economic inactivity among older people, especially older men. In the UK, for example, there are over 2,500,000 people aged between 50 and state pensionable age (currently 65 for men and 60 for women) who are economically inactive. And in addition, among those who define themselves as ‘economically active’, many are in fact never likely to work again, having been unemployed for many years.

Many inactive people have retired ‘voluntarily’ through an occupational pension scheme. Early retirees are heterogeneous, and it should not simply be assumed that early retirement from paid work is automatically associated with poverty in old age, for example. Early exits from the labour market may be associated with both positive and negative income shocks. An example of the latter is inactivity on grounds of ill-health.

An opposite error is to assume that early retirement, even with an occupational pension, guarantees an adequate income. Many prospective occupational pension entitlements are rather small (Disney and Whitehouse, 1996), and employers in final salary occupational pension schemes have every incentive to create early retirement ‘windows’ to eliminate high cost staff since pension and pay profiles are ‘backloaded’ in final salary schemes. And for those without occupational pensions, income adequacy may be a severe problem. Not surprisingly, the 1980s and 1990s, which have seen a retrenchment in public pension provision, a growth in private pension income receipt, and two severe recessions, have also seen significantly widening pensioner inequality (Johnson and Stears, 1995).

Work by Tanner (1998) and by Disney and Tanner (1998) reinforce the view that the dynamics of retirement are complex and that individuals retire ‘prematurely’ both because of positive and negative shocks. For example, Disney and Tanner (1998) use econometric techniques to examine probabilities that individuals subsequently retire earlier, later or at the time that they expected, using the two waves of the Retirement Survey. Being unemployed and becoming disabled are strongly associated with retirement earlier than expected; lower income and wealth weakly so. These are all cases where there may be a link between retirement behaviour and subsequent poverty. But having an occupational pension increases the hazard of labour market exit after age 55, and lacking educational qualifications makes it less likely that individuals will retire early than expected *ceteris paribus*. Likewise, women who become divorced or widowed are likely to retire *later* than expected: these are examples of where negative income shocks induce individuals to remain in the labour market for a longer period than originally anticipated.

Some evidence

Charts 1 and 2, taken from *Labour Market Trends*, show the participation rates for the UK for men and women aged 55-64 from 1976 to 1993, projected to 2011. For men, there has been a steady decline in the rate of labour force participation for those aged 60-64 and around 50% of that male age group are now in the labour force. For those aged 55-59, there was an especially sharp fall in the early 1980s. Statisticians project a continued downward trend, but at a less precipitate rate.

For women, there is a different picture, with roughly stationary participation in the past, and even a projection of an increase in participation for the 60-64 year olds in the early part of the next century (which is in part linked to the raising of state pensionable age for women from 60 to 65 between 2010 and 2020). However the trend for women conceals two conflicting factors: a rise in cohort-specific participation rates over time, accompanied with an earlier downturn in the activity rate by age for each cohort, albeit from a higher base (see Disney, 1996, Chapter 7).

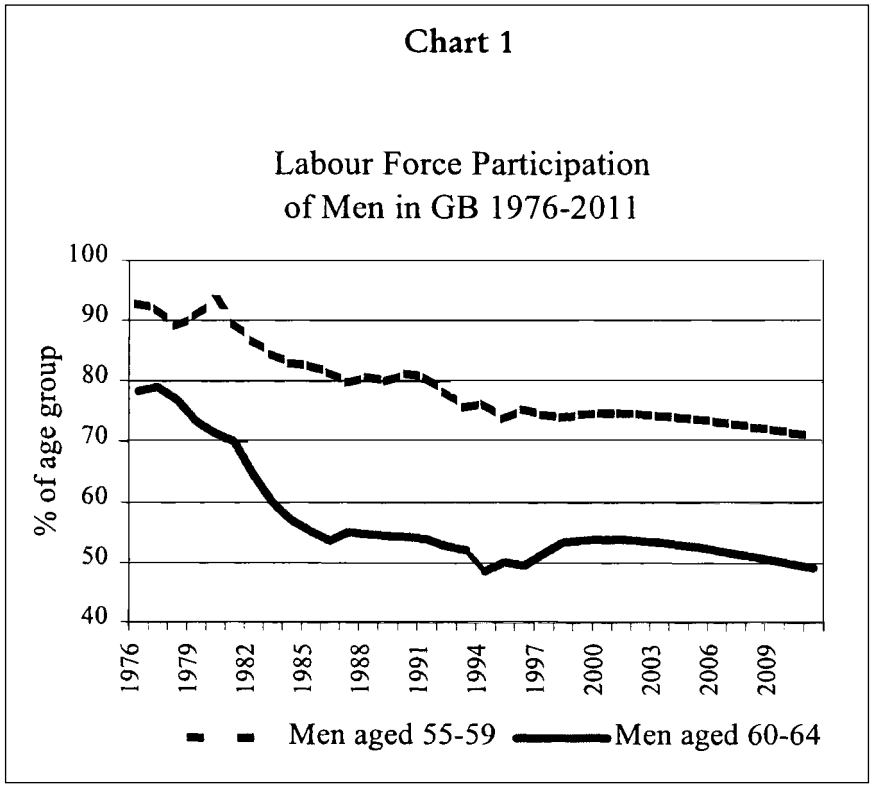
It should also be reiterated that economic ‘activity’ is not the same as employment, and many older people (especially men) are unemployed or on benefits prior to switching to incapacity benefits. Indeed *employment* rates of men and women in the 55-59

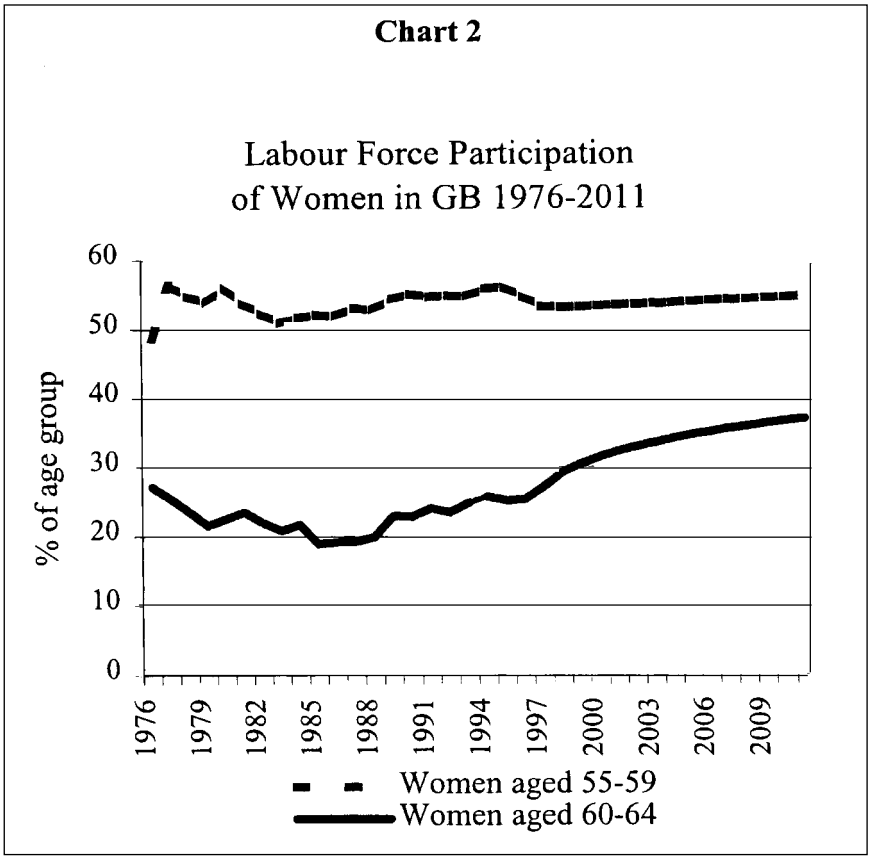
Table 1 Male Labour Force Participation in various OECD Countries 1974-94

Labour Force Participation Rates		
	Men Aged 55-64	
	1974	1994
Australia	80	60
Canada	80	60
France	70	42
Germany	73	52
Italy	42	30
Japan	86	86

Labour Force Participation Rates		
	Men Aged 55-64	
	1974	1994
Holland	75	43
Norway	82	72
Portugal	82	65
Spain	81	57
Sweden	82	76
US	78	66

[1] My thanks to seminar participants at the Centre for Economic Performance, LSE, and at the World Bank, for my comments on earlier drafts of this presentation.





age category are fast approaching equivalence, at around 50% of the age group. Finally, Table 1 shows a similar process going on in other OECD countries although there are interesting outliers, such as Japan. These data are taken from OECD (1996), where a number of explanations are adduced for the differences between countries; see also Gruber and Wise (1997).

Explanations of the trend

The decline in participation can be linked naturally to two sources of 'shocks'; from the demand side or from the supply side. If the source is demand shocks, it is necessary to ask why older workers (especially men) have been hit disproportionately hard. If the source is supply shocks, the question is whether certain policies do in fact impinge on this age group. For example, the standard policy advocated in OECD (1996) and by Chand and Jaeger (1996), of raising state pensionable age as a means of

Figure 1
A downward shock to labour demand

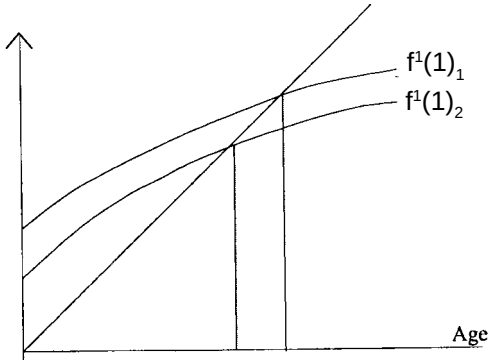
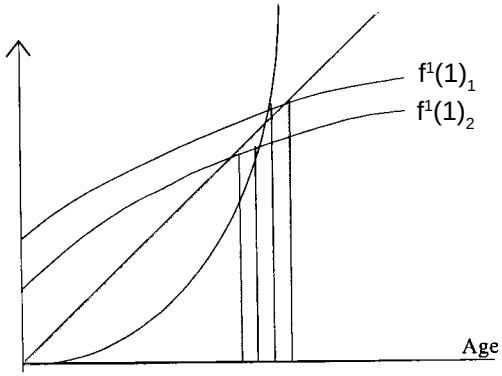


Figure 2
A downward shock to labour demand with final salary DB plan



improving the support ratio of workers to pensioners, may be quite irrelevant to participation if a large fraction of older workers have already effectively retired from the labour market long before reaching state pensionable age.

Figure 1 provides a stylised account of why demand shocks hit older workers. Here it is assumed that the age-specific marginal product of labour, *f'(l)*, is quadratic, reaching a maximum in late middle age. The combined wage plus accrual of Social Security Wealth (SSW) is positively related to age. Thus a downward shock to the demand for labour, reflected in a shift of the marginal product from 1 to 2, reduces the retirement age. Note (Figure 2) that where there is a backloaded pension plan, so that the age-remuneration profile is non-linear, 'normal' retirement will take place at an earlier age but the volatility of retirement age in response to demand shocks will be lower.

In Figures 1 and 2, it is the combination of the age-specific marginal product of labour and the remuneration profile that together generate changes in the retirement age in the face of demand shocks. However there are additional strong reasons for thinking that older workers will be disproportionately affected by changes in labour demand. First, there are more old workers relative to young workers at present as a result of the 'baby boom' generation reaching middle age. Second, insofar as the source of demand shocks has been technological, reflected in skill-biased technical change, older workers lose out if the skill shift is specific to cohorts entering the labour market, who are more willing and able to acquire new skills. Older workers are disproportionately hit by technical change biased towards the skills of labour market entrants, both because older unskilled workers are close substitutes for young unskilled workers and because older skilled workers are not close substitutes for young skilled workers.[2]

The case of a downward shock to labour supply, identified here as a shift in the marginal utility of leisure, *u'(leisure)*, from 1 to 2, is depicted in Figure 3. Note that where the remuneration profile is backloaded (as in the dotted curve), it is hard to believe that a supply explanation is plausible, because the marginal return to staying in work may outweigh the marginal disutility of work. This is of course the basis of the famous Lazear (1979) argument concerning mandatory retirement.

Although Figure 3 depicts the supply factor as a rising 'taste' for leisure, there is an influential literature, represented by Gruber

[2] For a discussion of production functions which attempt to separate age and education substitutability and complementarity, see Disney (1996), Chapter 6.

Figure 3
A downward shock to labour supply

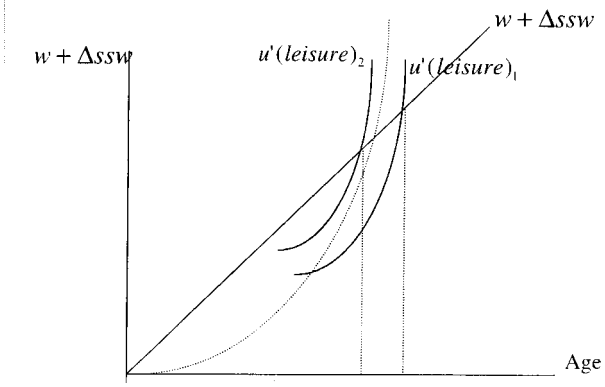
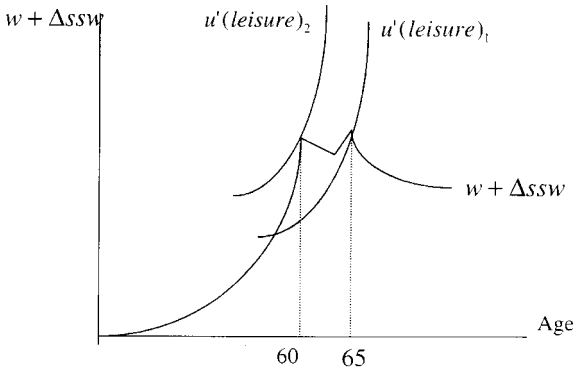


Figure 4
Labour supply with implicit taxes on late retirement



and Wise (1997) which argues that it is the impact of incentives on the after-tax age-remuneration profile that induces early retirement. Such factors include actuarially favourable early retirement, which induces 'spikes' in the profile (for an illustration, see Kotlikoff and Wise, 1985) and other taxes on subsequent work. A stylised version of a profile which generates early retirement 'spikes' is given in Figure 4, which shows distinct 'spikes' at 60 and 65. However it should be noted that, in Britain, many of the factors adduced for such non-linearities elsewhere, including explicit early retirement provisions in the public pension programme and explicit taxes on pensions if individuals continue to work, do not exist.[3] However, such perverse incentives have existed in the past in the UK, such as when it was possible to retire on tax-free Invalidity Benefit, which was therefore more attractive than retiring with the Basic State Pension at 60/65.

Policies

It remains to consider policies that might reverse this trend towards early departure from the labour market. On the *labour demand* side, there are some positive and negative conclusions:

- do *not* use early retirement as a means of cutting labour supply, whether by overgenerous retirement provisions in the social insurance system or by a disability programme. This strategy builds up future trouble for the viability of the social security programme and is an expensive alternative to more active policies. For example, letting an individual man leave the labour market at age 50, with little chance of re-entry at a later stage, will have a present value cost of well over £100,000 in benefit payments and lost tax receipts;

- work sharing and limits on the working week do not overcome the skill bias problem;

- toughening-up age discrimination legislation is problematic, even though 'codes of conduct' and educational programmes

[3] For further details, see OECD (1996) and Gruber and Wise (1997).

for employers are essential. Ceilings on ages in job advertisments are already illegal as a form of indirect discrimination. But younger and older workers *do* have different skills and attempts to compare equivalents will produce a large income for employment lawyers. There is evidence from the United States that older workers are hired into a smaller sub-set of occupations and industries due to skill-specificity, the costs of final salary pension plans, and so on. These may be the margins on which to operate;

- training and retraining therefore seem more attractive policies. Simply paying employers to retain older workers without training has high deadweight costs (as in the temporary employment subsidy programmes of the 1970s) and public training of out-of-work men has a low return. Subsidies to firms which are linked to explicit training and retraining programmes for older workers would seem to be the answer. This may need a refocus of New Deal policy: although the private returns to training young people are much higher, this differential provides no rationale for public intervention, which should arise where there is a wedge between private and social rates of return;

- re-examine the tax treatment of final salary pension schemes which use premature retirement as a means of downsizing the workforce: in the short term it is attractive for pension funds to be so used but in the long run the burden of such policies will be borne by other scheme members and by the state. Explicit use of such schemes may ultimately lead to younger workers 'voting with their feet' and initiating other pension arrangements, such as Personal Pensions.[4]

On the *labour supply* side:

- encourage transparent pension arrangements. Many people do not appear to understand the conequences of annuitisation and in particular of incomplete indexation. Provision of large tax-free lump sums and a high initial pension value may induce people to overestimate the value of their future pension stream;

- avoid all non-linearities in the benefit system which encourage premature retirement: actuarially favourable early retirement, tax-free treatment of certain benefits, excessive taxes on pensions if individuals continue to work after state pensionable age, and so on. The fact that all these policies have been adopted in the UK since the mid-1980s does however suggest that the problem of premature economic inactivity cannot simply be attributed to the 'wrong' incentives – maintaining the demand for labour is also important.

References

Chand, S. and Jaeger, A. (1996) *Aging Populations and Pension Schemes*, Occasional Paper #147, International Monetary Fund, Washington.
Disney, R. (1996) *Can we afford to grow older? A perspective on the economics of aging*, Cambridge: Mass, MIT Press.
Disney, R. and Tanner, S. (1998) 'Retirement and retirement expectations in Britain', *mimeo*, Institute for Fiscal Studies.
Disney, R. and Whitehouse, E. (1996) 'What are occupational pension plan entitlements worth in Britain?' *Economica*, 63, may, 213-238.
Gruber, J. and Wise, D. (1997) 'Social security and retirement around the world', National Bureau of Economic Research, *Working Paper* #6134, Cambridge: Mass.
Johnson, P. and Stears, G. (1995) 'Pensioner income inequality', *Fiscal Studies*, 16, November, 69-94.
Kotlikoff, L. and Wise, D. (1985) 'Labour compensation and the structure of private pension plans', 55-88 in D. Wise (ed) *Pensions, Labor and Individual Choice*, Chicago UP for National Bureau of Economic Research.
Lazear, E. (1979) 'Why is there mandatory retirement?' *Journal of Political Economy*, 87, 6, 1261-1284.
OECD (1996) Ageing in OECD *Countries: A Critical Policy Challenge*, Social Policy Studies, No. 20, Paris.
Tanner, S. (1998) 'The dynamics of male retirement behaviour' *Fiscal Studies*, 9, May, 175-196.

[4] For a discussion of the viability of final salary pension plans when the choice of defined contribution instruments is available, and where the workforce is ageing, see Disney (1996), Chapter 5.

‘UK Pensioner Incomes’

Carl Emmerson, Institute for Fiscal Studies

Introduction

When looking at income dynamics and the importance of dynamic income inequality, pensioners are a group that are of particular importance. Not only because once individuals have reached retirement they are extremely likely to remain on the same income level, but more importantly because for many pensioners that level of income leaves them low down in the income distribution.

This short paper starts by describing the forms of income received by pensioners, both from the state and privately. It then goes on to look at the level of income in retirement this is presently providing, where it leaves pensioners in the overall income distribution and also the level of income inequality between pensioners. It then concludes with the implications of the present system for future generations of pensioners.

Current pension provision

Pensioners in the United Kingdom currently receive significant proportions of their income from both the state and private sources of income. The extent of the role that the state plays in the provision of retirement income influences both the level of provision made privately, and the level of income inequality amongst the elderly. This section describes the current system of state provision for retirement incomes and how, without further reform, this will change in the future before going on to describe the private forms of income both received by pensioners today and that which is expected to be received by future generations of pensioners.

Public pension arrangements

State provision is essentially in two tiers. The first consists of the Basic State Pension, and the increasing importance of means tested benefits. The second tier is the State Earnings Related Pension Scheme which is more commonly known by its acronym SERPS.

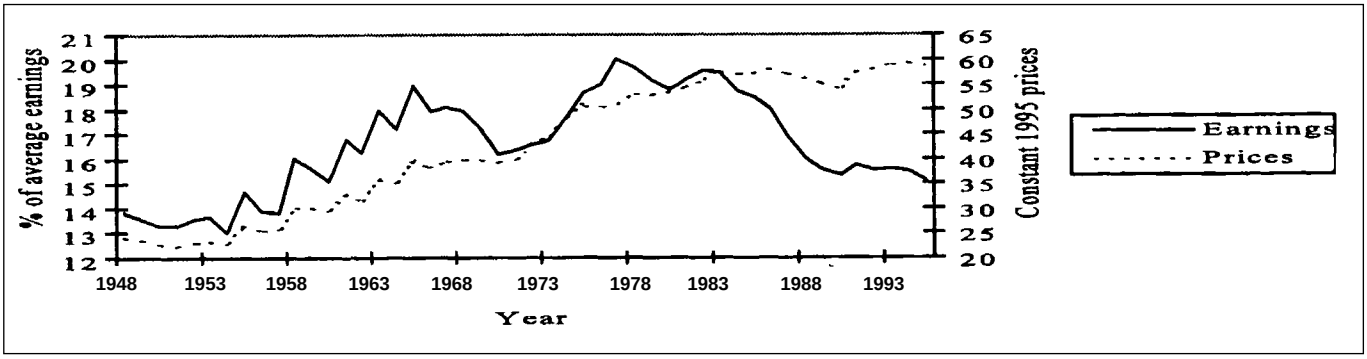
Basic State Pension

The basic state pension is a flat rate contributory benefit. It is easily the most expensive single item of government spending, currently costing £32 billion p.a. (3.7% of GDP), which is about one third of total social security spending. It is currently worth £64.70 p.w. for a single pensioner, which is equivalent to just 15% of average male earnings. Figure 2.1 shows how the value of the basic state pension in real terms and as a percentage of average earnings has changed since it was introduced in 1948. Between 1948 and 1982 it often increased in value by more then the growth in earnings, before it was formally indexed to prices in 1982. Real earnings growth since 1981 has led to its value as a share of average earnings falling from 20% to around 15% today. If price indexation continues then the basic state pension will be worth under 7% of average earnings by the middle of the next century.

Receipt of the basic state pension is conditional on contributions being credited, and whilst the vast majority of men aged over the state retirement age qualify this is not true of women. In future however receipt will become nearly universal as more women will qualify on the basis of their own contribution record. This is due to three factors:

- Increased labour market participation by women;
- Contribution credits are now given for time spent being in education or training, or for periods of unemployment or disability;
- The introduction of Home Responsibility Protection in 1978 which means that the number of years for which contributions are required is reduced for years spent looking after children or sick relatives.

Figure 1: The level of the Basic State Pension in relation to earnings and real prices (1948 to 1995).



Source: HM Treasury (1996)

Means tested benefits

A significant proportion of pensioner income now comes from means tested benefits. This consists mainly of Income Support which is the principal benefit for those with low incomes; Housing Benefit which is a payment towards the housing costs of those in rented accommodation and Council Tax Benefit which provides assistance towards the cost of local taxes. The total cost of government spending on means tested benefits to those aged over the state retirement age is £9.6 billion (1.2% of GDP).

Currently one in four Income Support claimants is aged over the state retirement age, with the majority of these being single women. In total around 15% of those aged over the state retirement age qualify for Income Support. The principal reason for this is that the Income Support level is now, and has been for many years, at a higher level then the basic state pension. This is an effect of government policy to only uprate the basic state pension in line with prices, whilst Income Support has risen slightly faster. The recent announcements of a Minimum Pension Guarantee following the Government's Comprehensive Spending Review indicate a continuation of this policy. Whilst this undoubtedly ensures that additional funds are concentrated on the poorest pensioners, it also means that those approaching retirement with low levels of saving have little incentive to make any provision for themselves, since Income Support is withdrawn with a 100% taper.

State Earnings Related Pension Scheme (SERPS)

Although it was only introduced in 1978, perhaps the most notable feature of SERPS is how short lived its original form was. It was introduced to provide compulsory second tier pension coverage for all those earning above the Lower Earnings Limit (LEL) who did not have an occupational pension scheme. Whilst under its original format it was quite generous, subsequent reforms have substantially reduced the amount of entitlement and hence the size of future SERPS payments.

Private pension arrangements

There are two main types of private pension schemes – occupational pension schemes and personal pension schemes. The first, which are by far the most important for the current generation of pensioners, typically operate on a defined benefit basis. For example a typical scheme may provide a pension equivalent to 1/60th of final salary for each year worked. Around 50% of the workforce are members of such a scheme, with higher levels of coverage amongst older workers. This has been relatively constant for around 30 years, so it is not the case that in future more individuals will retire with occupational pensions. However entitlements will continue to rise in future, despite the lack of increase in coverage, since younger generations will, due to real earnings growth, have higher lifetime earnings.

Personal pension schemes, although not being a particularly important source of income for the vast majority of today's pensioners, will become more important in future. They typically operate on a defined contribution basis, and were allowed as an alternative to SERPS from 1988 onwards. They are particularly popular amongst the young, who have longer to accumulate returns in these funds. In addition the tax system encourages saving for retirement in this form.

Pensioner incomes

So given the system of state and private pension provision at present in the United Kingdom, what does this actually provide for the current generation of pensioners? This section looks at the incomes of different groups of pensioners, how this compares to that of the population as a whole, and the distribution of income between pensioners. This is done using data from the 1995 Family Resources Survey, which is an annual survey of around 27,000 households containing approximately 47,000 individuals. For the purposes of this work a pensioner has been defined as someone aged over the state retirement age, or someone aged over 60 & not employed or self employed. Couples have been defined according to the status of the husband. The measure of income used is the total net income to the benefit unit.

Table 1 shows how average incomes of pensioners vary between different types of pensioners and different age groups. Pensioner couples and single male pensioners tend to have higher average incomes once they reach 65, which is due to men not being able to claim the basic state pension until they reach that age. With this exception older groups have, on average, lower incomes. This is unsurprising since as mentioned earlier younger pensioners will have higher levels of a average earnings due to real earnings growth.

Table 1: Average U.K. pensioner income (£ per week), by status and age group.

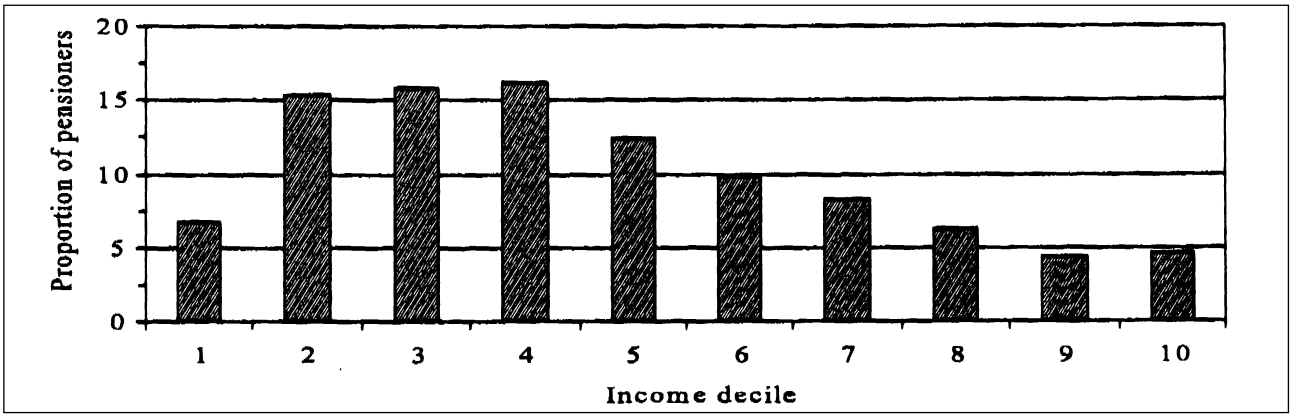
	Age group				
Status	60 – 64	65 – 69	70 – 74	Over 75	All over 60
Couples	228	254	219	206	228
Single men	125	150	132	127	133
Single women	139	126	113	109	116

Source: 1995 Family Resources Survey; Emmerson and Johnson (1998).

When assessing the economic well being of pensioners, it is the comparison of their incomes to that of the working population that is likely to be of greater importance. Figure 2 shows what percentage of pensioners are in each income decile, so if

pensioners were equally spread across the income distribution there would be 10% in each one. What we actually find is that there are under 10% of pensioners in the first income decile, which since the start of the 1970s has increasingly being taken up by growing numbers of unemployed (Goodman and Webb, 1994). However pensioners are significantly over represented in deciles two through to five, but not uniformly poor, since there are still significant proportions in the top four income deciles. This is a different picture to that of the 1970s with pensioners much more concentrated in the lower income deciles (Johnson and Stears, 1995).

Figure 2: Proportion of pensioners in each income decile.

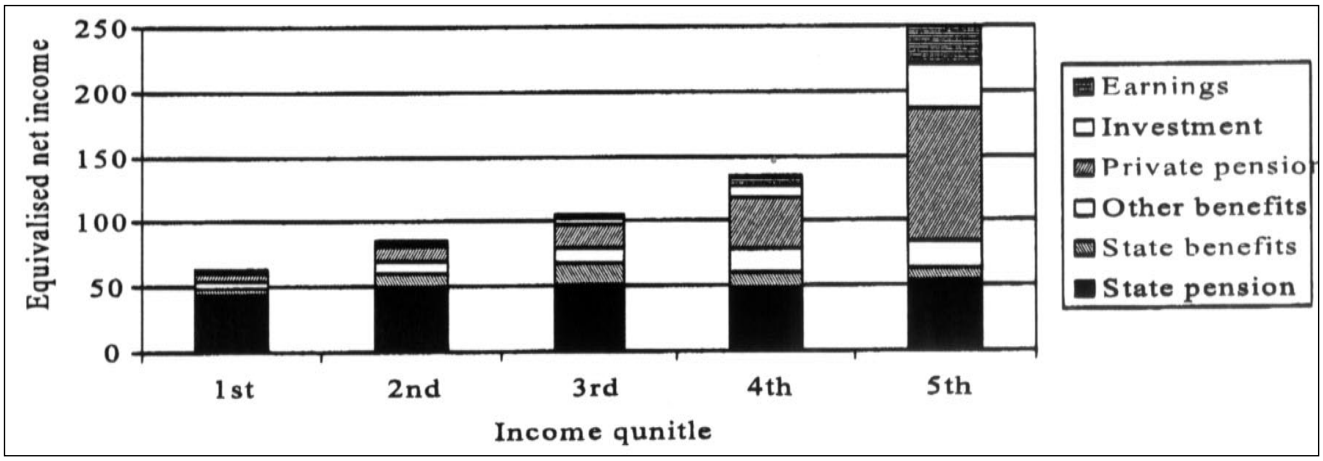


Note: Benefit unit income equivalised to that of a single person using the (1,0.7,0.5) equivalence scale. For example the income of a couple with no children will be divided by 1.7, whilst that of a couple with two children will be divided by 2.7.

From a dynamic perspective pensioners are clearly a different group to the rest of the population, since once retirement has been reached they are likely to remain on the same level of income for potentially a substantial period of time. This means that despite evidence that it is tending to be other unwaged groups such as lone parents and the unemployed that are in the first income decile these individuals will be more likely to be in higher deciles at a later date than pensioners. Hence the presence of large proportions of pensioners in the lower income deciles may be more concerning then for other groups. Of course it could be the case that due to dissaving consumption by the retired was actually much higher then their current incomes. However, as discussed in Banks et al (1998), upon retirement consumption actually tends to fall faster then income.

Figure 3 looks at the income distribution of pensioners, and how the composition of that incomes varies. This gives a picture of what is behind the much wider dispersion of pensioner incomes compared to the 1970s. Looking first at the levels of average income between the five quintiles there is only a small difference between the first four quintiles, but with substantially higher levels of income in the fifth quintile. Average receipt of the basic state pension is roughly constant across the quintiles, which is unsurprising given its flat rate nature. Perhaps more surprising is the significant receipt of means-tested benefits amongst those in the top quintiles. This reflects the fact that for some people means-tested benefits, especially Housing benefit, are generous enough to lift them up the distribution. The main factor behind pensioner income inequality is the much higher levels of income from private pensions, investments and also earnings in the top two, but particularly the richest, income quintiles. Average private pension income by those in the richest income quintile is actually more then total average income for those in the second income quintile. In future, given the reductions in the generosity of SERPS and the fact that it will be those with higher life time earnings who are able to save significant amounts in personal pension schemes, the trend of increasing income inequality amongst pensioners is likely to continue.

Figure 3: Equivalised net pensioner income, by income quintile.



Note: The individual components have been calculated by multiplying the percentage of total income that they correspond to with the average net equivalised income for each quintile.
Source: 1995 Family Resources Survey; Emmerson & Johnson (1998).

Policy conclusions

Reforms over the last twenty years, coupled with a less stark demographic situation have left the UK in a position, where unlike other European neighbours the state pension system can be afforded without future increases in taxes. However, whilst the present system is sustainable in terms of its affordability, it remains to be seen whether it is sustainable in terms of its acceptability. Whilst increasing the level of Income Support to pensioners rather than the Basic State Pension does redistribute to the poorest pensioners it also provides little incentive for those approaching retirement with little savings to try and make some provision for income in retirement.

Without further reforms, the future is likely to see two groups of pensioners emerging. Those who have been able to make enough savings for retirement to have significant levels of income from private sources, and those who are reliant on state sources of income. Whilst more compulsion would lead to increased savings for some, for many the reason individuals are unable to save significant amounts will be that they have insufficient earnings during their working lives. It is unlikely that any reasonable degree of compulsion will stop these groups having low levels of income in retirement.

References

Banks, J., Blundell, R. and Tanner, S. (1998), 'Is There a Retirement-Savings Puzzle?', *American Economic Review*, vol. 88, no. 4, pp. 769-788.

HM Treasury (1996), *Tax Benefit Reference Manual, 1995-96 edition*, London: HM Treasury.

Department of Social Security (1998), *Social Security Departmental Report: The Governments Expenditure Plans 1998-99*. London: The Stationary Office.

Dilnot, A., Disney, R., Johnson, P. and Whitehouse, E. (1994), *Pensions Policy in the UK: An Economic Analysis*, London: Institute for Fiscal Studies.

Emmerson, C. and Johnson, P. (1998), *Pension provision in the United Kingdom*, Institute for Fiscal Studies (mimeo).

Goodman, A. and Webb, S. (1994), *For richer, for poorer: The Changing Distribution of Income in the United Kingdom, 1961-91*, Commentary no. 42, London: Institute for Fiscal Studies.

Johnson, P. and Stears, G. (1995), "Pensioner Income Inequality", *Fiscal Studies*, vol. 16, no. 4, pp. 69-93.

Session 3: Retirement and the Elderly: Discussion

The earlier sessions of the conference had stressed the need for early intervention to prevent poverty but this was clearly more difficult in the case of poverty in retirement. Today's pensioners began their working career before the pension system which we have in place today existed. By the nature of the problem, poverty amongst the retired would require alleviation for today's pensioners as well as prevention for future pensioners.

Over the 1980s there was a tendency to disregard the decline in employment rates of older men as part of a decline in manufacturing and a general increase in unemployment. The presentations had clearly shown that there was a secular component which had changed the labour market opportunities of older male workers.

These problems raised some policy issues;

- How does the state influence the individual's decision to retire? In some cases early retirement is through choice rather than displacement, how does the state value leisure?
- How can the different trends in employment rates of men and women be explained? There may be a certain logic to these trends where couples wish to retire together.
- How should the Government intervene? The German model where there are moves towards encouraging early retirement runs counter to UK policy.
- Should the Government be prescribing one occupational pension over another? Is there a trade-off between final salary and money purchase schemes, whereby the former might decrease employment rates among older workers, but the latter might leave pensioners worse off financially?
- Does the link between final salary related schemes and early retirement imply a need for "winding down"?
- How does the decline in employment rates of older men tie in with lifelong learning? Should we continue to train our older workers?
- Should the Government be providing in-work subsidies to older workers, along the lines of the Working Families Tax Credit?
- The decline in employment rates has been equally matched by an increase in inactivity rates for older men, this has meant an escalation in the number of incapacity benefit claimants. Have the reforms to the all-work test and incapacity benefit receipt been enough/too much?
- Does the link between poverty and longevity mean that poverty in retirement is being understated?
- How can the Government strike the right balance between providing minimum income guarantees and creating incentives to save for ones own retirement?

During an open discussion the following issues were raised;

Demand for older workers in the labour market

Do older workers lose jobs at a faster rate than younger workers? It is clear that older workers are less likely to return to work than younger workers following unemployment or inactivity. It is more difficult for older workers to find jobs because they typically have longer durations and because they have to face a more concentrated search for employment. Some occupations/employers will not take on older workers, either because of backloaded defined benefit pensions schemes or because of the costs of re-training older workers.

Replacement ratios and the distribution of income

Measured or stylised replacement ratios can exceed 100% by a considerable amount. But the greatest income gains to retiring are not always found for those on occupational pensions. The greatest income gains are typically to married women who are on low incomes before retirement. Replacement ratios are complicated across the income distribution. Moreover the distribution of occupational pensions is very wide, there are many people with only very small occupational pensions. A pension scheme which looks good on paper can provide quite different returns if earnings and contributions are only intermittent. Therefore, having an occupational pension does not necessarily equate to remaining out of poverty in retirement. Furthermore, providing a high occupational pension means that there is every incentive for a firm to unload its older workers.

What about distribution across the family - if the employment rates of older women are increasing and more women have a pension in their own right then should we worry about the decline in male participation? Some of the trends in older workers' employment rates is attributable to personal choice but this does not mean that there is not a problem. There is clearly a demand side problem whereby it is harder for older workers to get back into the labour market even if they want to continue working.

Influencing the decision to retire

At present the government effectively subsidises the decision to retire relative to the decision to continue working because older workers continue to pay tax whilst the retired do not. Whilst there might not be a sensible way in which to equalise this choice, one possibility which was suggested was to raise awareness of the issue. For example, bringing attention to the subsidy involved in mortgage interest relief helped to focus the policy debate.

Retirement age

Subsidising early retirement, as in the German model, would run counter to UK policy on retirement. There is a potential role for the public sector to play in the debate about early retirement. Public sector workers are some of the worst offenders for retiring early, the proportion of workers retiring on ill health grounds is 39% in local government, 20% in the civil service and 25% of teachers whilst the median private sector firm was British American Tobacco with 9% of their employees retiring on ill-health grounds. Early retirement in the public sector was seen as particularly problematic given that most public sector pension schemes are unfunded.

Training older workers

Should the Government be subsidising retraining of older workers? Employer based training appears to be better than government training in this context, the internal rates of return are highest to in-house training provided by the employer. The deadweight costs of subsidising retraining of older workers must be high but it is likely that the pay-off would be better than a subsidy purely for retaining the older worker. The private return to training younger workers is inevitably higher than to training older workers but perhaps the policy prescription about who to train should not be dependent on private rates of return. The fact that there seems to be a general trend for frequent retraining must help older workers since the incentives to train older workers increase as the returns increase.

Session 4: Work and Poverty

'Low pay, no pay dynamics'

Mark B. Stewart, University of Warwick

Introduction

Dynamics are important when investigating low pay. Some of the individuals who are low paid in one period are paid above the threshold the following year. Others are no longer employees. Similarly those not working and those above the pay threshold in the previous period may move into low pay. This paper looks at these transitions into and out of low pay together with movements into and out of employment, i.e. at the dynamics of low pay and no pay.

Low pay persistence

Starting with the customary approach when examining earnings mobility, transitions within the earnings distribution are examined, restricting attention to those who are employees at the start and end of any transition considered.[1] Estimated conditional probabilities are presented in Table 1. The degree of persistence exhibited is strong. The probability of being low paid in year t is much higher if the individual was low paid at t-1. For the £3.50 threshold the probability of being low paid at t given low paid at t-1 is 57% compared with 3% given higher paid at t-1 They are similarly far apart for the other two thresholds.

Table 1: Conditional Low Pay Transition Probabilities

	Threshold		
	£3.50	£4.00	£4.50
Probability of being low paid at t given:			
Low paid at t-1	.57	.68	.74
Higher paid at t-1	.03	.05	.06
Probability of being low paid at t given low paid at:			
t-1, t-2	.73	.79	.83
t-1, t-2, t-3	.72	.84	.85
t-1, t-2, t-3, t-4	.77	.83	.85
Probability of being low paid at t given low paid at t-j-1 but higher paid at each of the j years in between:			
j=1	.27	.28	.30
j=2	.10	.15	.19
j=3	.10	.11	.12
Probability of being low paid at t given higher paid at:			
t-1, t-2	.02	.03	.04
t-1, t-2, t-3	.02	.02	.03
t-1, t-2, t-3, t-4	.01	.02	.02

Source: Stewart (1998a)
Data: BHPS, Waves 1-5
Earnings adjusted to April 1997

Table 1 also indicates that the degree of persistence is higher for those who have already been low paid for more than one period. Looking first at conditioning on two periods, the probability of remaining low paid is higher if the individual was low paid at t-1 and t-2 than just conditional on t-1: 73% against 57% in the case of the £3.50 threshold for example. Additional conditioning on being low paid at t-3 and t-4 results in a much smaller change in the probability of remaining low paid.

For those above the low pay threshold, prior experience of low pay increases the probability of returning to it. Having been low paid at t-2 increases the probability of making the transition from higher paid at t-1 back to low pay at t: about 30% compared with about 3% if the person had also been higher paid at t-2. Looking at this the other way round, for those low paid at t-2, moving up to being higher paid at t-1 reduces the probability of being low paid at t: about 30% compared with about 80% for someone who had remained low paid at t-1.

The longer the period in higher pay, the further the probability of returning to low pay falls. For someone low paid at t-4, but

[1] The analysis described uses the first five waves of the BHPS, 1991-95. Transitions are aggregated over the waves. Earnings are adjusted to April 1997 terms. See Stewart (1998a) for details of the sample and variable condition.

higher paid from t-3 to t-1, the probability of returning to low pay at t has fallen to about 10%. This falling probability of being low paid, the greater the experience of higher pay is confirmed in the final block of the table. For each threshold the probability falls with each additional period of higher conditioned on pay (going backwards in time).

The conclusion from Table 1 is that in aggregate terms there is considerable persistence, particularly for those who have already been low paid for more than one period, and that the probability of becoming low paid declines the longer a person is higher paid.

Scarring effects of low pay?

There is more than one possible explanation for this strong persistence in aggregate low pay probabilities. The dependence of the probability of being low paid on past low pay experience may result either from heterogeneity among individuals or from the impact of the experience of low pay itself. In particular, heterogeneity in characteristics which affect the probability of an individual being low paid can create persistence in aggregate transition probabilities even if such an effect is absent in individual transition probabilities.

Alternatively, or in addition, there may be "true", or "structural", dependence for individuals: being low paid in one period may *in itself* increase the probability of being low paid in the next period, even relative to another individual with identical characteristics who was not low paid in the first period. Employers may view low paid employment with another firm as an indicator of an individual's low productivity and be discouraged from making a job offer. Employers may also treat holding a low paid job as a signal of a high turnover propensity. On the supply side, dependence may result from low paid employment reducing subsequent human capital accumulation or causing the depreciation of human capital not currently being used, thereby keeping an individual's productivity low and reducing the probability of rising out of low pay in the future. In addition, a spell of low paid employment may influence an individual's perception of their market value and discourage them from applying for better paid jobs. Being in a low paid job may also alter worker preferences or motivation in such a way as to make them more likely to remain in that segment of the labour market.

In all these illustrations of structural dependence, earnings correlates are altered by the experience of low pay. This contrasts with the pure heterogeneity case where individuals differ only in characteristics that affect their chances of being low paid, but that are not affected by the experience of low pay. Persistence in the aggregate probabilities that is due to heterogeneity can be influenced by changing individual characteristics, e.g. by providing training, but "true" dependence may be harder to tackle.

Distinguishing between structural dependence and omitted heterogeneity is a difficult statistical problem, since the initial pay state is likely to be correlated with the omitted heterogeneity (the "initial conditions" problem). Stewart and Swaffield (1999) use a formal model for low pay transitions that allows for this endogeneity of the initial pay state. They find that (1) exogenous selection into the initial low pay state is strongly rejected, (2) ignoring the endogeneity results in considerable overstatement of the effects of characteristics on the transition probability, and (3) there is considerable structural dependence, i.e being low paid in one period *in itself* increases the probability of being low paid in the next period. They estimate that this accounts for between 3/5 and 3/4 of the raw aggregate probability difference.

The low pay, no pay cycle

The transition probabilities looked at so far are restricted to individuals in employment at each date and therefore only give part of the picture. As well as there being transitions between low and higher pay, there are also transitions into and out of employment. It is important to incorporate those not in the earnings distribution into the analysis. As well as being more likely to remain low paid, the low paid are also more likely to move out of employment the following year. Thus restricting attention to those who remain employees overstates the probability of the low paid moving up the earnings distribution and above the threshold. Using the £3.50 threshold, 48% of those low paid at t-1 are still low paid at t and 17% are no longer employees. Thus only 35% have moved up the distribution into higher pay. This probability is overstated when attention is restricted to those who remain employed, as in Table 1.

The greater propensity of the low paid to move out of employment represents part of a cycle of low pay and no pay, which is illustrated in Table 2. First, those who are low paid at t-1 are more likely to not be working at t than those higher paid at t-1: 14% against 5% in the case of the £3.50 threshold and similar differences for the other two thresholds.[1] Second, those not working at t-1 who become employees at t are more likely to be low paid than those who were already in employment at t-1: 33% against 8% for the £3.50 threshold for example. Third, among those re-entrants who were not working at t-1, those who were low paid at t-2 are more likely to be low paid again at t when they are working again than those who were higher paid at t-2: 42% against 14% for the £3.50 threshold and similar differences for the other two thresholds. The low paid are more likely to be out of work in the future; those out of work are more likely to be low paid on re-entry; and are even more likely to be so if they had been low paid prior to being out of work.

Might this cycle in aggregate probabilities be due to heterogeneity? Some light is thrown on this by the fact that this picture is repeated within important sub-groups. There is a low pay, no pay cycle for men and women, for those aged above and below 25, and for those with and without qualifications. The picture therefore has a fractal quality: zooming in on a sub-group, one sees the same pattern as in the original picture. The cycle does not seem to be the result of heterogeneity with respect to the main observable characteristics, but the possiblity that it results from heterogeneity with respect to unobservable ones cannot be ruled out.

[1] The "not working" category includes both unemployed and out of the labour force.

Do low paid jobs act as stepping stones to higher paid jobs as is sometimes argued? This question is addressed here by looking at those who are not employees at t-2, but are at t. Do those who enter a low paid job at t-1 have a better chance of being paid above the threshold at t than those who remain out of employment at t-1 and enter at t? The evidence presented in Table 3 indicates that they do not. For all three thresholds those who have a low paid job at t-1 have a lower probability of being paid above the threshold at t than those not employed at t-1. This suggests that low paid jobs are more likely to act as blind alleys than as stepping stones to positions higher up the pay distribution. This feature too is repeated within important sub-groups, by gender, age and qualifications.

Table 2: The Low Pay, No Pay Cycle Conditional Probabilities

	Threshold		
	£3.50	£4.00	£4.50
Probability of not working at t given:			
Low paid at t-1	.14	.12	.11
Higher paid at t-1	.05	.05	.04
Probability of being low paid at t given employee at t and:			
Not working at t-1	.33	.47	.60
Employee at t-1	.08	.15	.22
Probability of being low paid at t given employed at t, not working at t-1 and:			
Low paid at t-2	.42	.61	.68
Higher paid at t-2	.14	.22	.32

Source: Stewart (1998a)
Data: BHPS, Waves 1-5
Note: Not working includes both unemployed and out of the labour force.

Table 3: Low Paid Jobs as Stepping Stones?

Probability of being higher paid at t for those employees at t, but not employees at t-2, by t-1 status

	Threshold		
Status at t-1	£3.50	£4.00	£4.50
Low paid	41.9	30.5	22.9
Higher paid	87.7	84.9	87.8
Not employee	65.5	50.0	38.7

Source: Stewart (1998a)
Data: BHPS, Waves 1-5

Low pay and poverty

The low pay, no pay cycle clearly has implications for poverty dynamics. The link between low pay and poverty, even in a static context, is a complex one, depending on household composition, hours worked and the workings of the tax and benefit system, among other things. I start by looking at the static overlap between low pay and poverty, before looking at dynamics.[1]

The poverty thresholds in needs-adjusted real household net income used are given in the note to Table 4. The first two are commonly used (closely-related definitions are used in the DSS's HBAI statistics): (i) half of the wave 1 sample mean income, and (ii) the poorest quintile in each wave.[2] The first of these is fixed (in real terms) across waves, the second varies across waves. For an individual who is married, with non-working spouse and no children the three poverty thresholds correspond roughly to 40 hours at the three low pay thresholds. However for other groups the translation is very different.

The cross-sectional overlap between low pay and poverty is not very large. The first panel of Table 4 shows the percentage of the low paid who are in poor households.[3] One in seven of those paid below the low pay threshold of £3.50 per hour are in households with equivalent net income below the first poverty threshold, rising to about a quarter for the highest of the three poverty thresholds. Of course these figures (and those for the other thresholds) are all much higher than the corresponding

[1] This section is based on Stewart (1998b).
[2] Calculated across full samples, including those not employed and the retired.
[3] Since the focus here is on the interplay with low pay, pensioners and those under 18 are excluded. 11.0%, 13.5% and 17.4% of remaining individuals are in households with adjusted net income below the three thresholds respectively.

figures for those paid above the threshold - between five and ten times as great in all cases.[4] However it is still the case that the vast majority of those who are low paid are not in poor households.

Typically poor households do not contain earners. The third panel of Table 4 indicates that between three-quarters and four-fifths of pre-retirement adults in poor households are not employees. Looking at all those in poor households relatively few are low paid, because relatively few are in employment. If we restrict attention to those in work, the association is much closer. A substantial number of the employees in poor households are low paid, particularly for the higher two low pay thresholds. For example, over three-quarters of employees in households with income below the first poverty threshold earn below £4.50 per hour.

Table 4: The Overlap between Low Pay and Poverty

		Poverty Threshold		
		(1)	(2)	(3)
Percent of low paid who are in poor households:				
LP threshold =	£3.50	14.5	18.2	25.5
	£4.00	12.3	15.7	22.5
	£4.50	10.5	13.7	19.8
Percent of higher paid who are in poor households:				
LP threshold =	£3.50	1.9	2.8	4.6
	£4.00	1.4	2.1	3.7
	£4.50	0.9	1.5	2.8
Percent of pre-retirement adults in poor households who are employees:				
		19.0	21.0	25.5
Percent of employees in poor households who are low paid:				
LP threshold =	£3.50	42.7	38.5	34.6
	£4.00	61.2	56.0	51.5
	£4.50	76.4	71.6	66.4
Percent of "permanent" low paid who are in poor households:				
LP threshold =	£3.50	49.4	52.5	63.1
	£4.00	42.1	46.5	58.6
	£4.50	41.7	45.6	56.1
Percent of "temporary" low paid who are in poor households:				
LP threshold =	£3.50	29.4	34.7	43.4
	£4.00	25.3	29.9	36.6
	£4.50	18.1	21.5	29.3
Percent of never low paid who are in poor households:				
LP threshold =	£3.50	10.4	12.2	16.0
	£4.00	8.8	10.3	13.6
	£4.50	7.2	8.7	11.2

Source: Stewart (1998b) *Data*: BHPS, Waves 1-4
Notes:
Poverty thresholds (in April 1997 terms):
(1) £133.08/week in all 4 waves: half wave 1 mean.
(2) £139.70/week in wave 1 to £147.14/week in wave 4: poorest quintile in each wave.
(3) £160/week in all 4 waves.

Whilst, as stated above, the overlap between low pay and poverty for the full sample is not very great, it has increased considerably in the last twenty years or so. The poor in the 1990s are more likely to be working than the poor in the 1970s. This rise in the number of working poor over this period is all the more remarkable because it has occurred despite another of the most important trends of the period: the fall in the proportion of families which have at least one worker.

An important consideration when looking at the overlap between low pay and poverty is transitory variation. There are significant differences between those who are "permanent" low paid and those who are "temporary" low paid. The importance of this for the overlap between low pay and poverty is reinforced by the cycle of low pay and no pay.

Due to this cycle of low pay and no pay some care has to be taken in making the distinction operational. Of those low paid in at least one of the 5 waves of the BHPS used in the last section, around half were also not employed in at least one wave. The "permanent" low pay group is defined here to be those who were low paid in at least one wave and higher paid in none, i.e. in the

[4] In contrast they are much lower than the corresponding figures for those who are not working: 31.8%, 38.0% and 45.9%.

waves when they were not low paid they were out of a job. The "temporary" low paid are those who were low paid in at least one wave and also higher paid in at least one wave. Finally the never low paid group are those who are higher paid in at least one wave and low paid in none. About 1/3 of those low paid in at least one wave are permanent low paid under this definition. The permanent low pay proportion is about 2/3 of the corresponding cross-sectional low pay proportion for each threshold.

Table 5: Movements into and out of Low Pay and Poverty

	Poverty Threshold		
	(1)	(2)	(3)
LP threshold = £3.50			
Probability move into poverty, given:			
move from higher to low pay	11.4	13.6	13.5
remain higher paid	1.0	1.2	1.7
Probability move out of poverty, given:			
move out of low pay	85.4	74.4	68.4
remain low paid	60.1	63.4	49.9
LP threshold = £4.00			
Probability move into poverty, given:			
move from higher to low pay	11.2	11.2	11.5
remain higher paid	0.6	0.8	1.3
Probability move out of poverty, given:			
move out of low pay	88.8	74.2	64.7
remain low paid	61.1	57.8	48.8
LP threshold = £4.50			
Probability move into poverty, given:			
move from higher to low pay	8.2	8.5	9.3
remain higher paid	0.3	0.5	1.0
Probability move out of poverty, given:			
move out of low pay	87.1	73.2	66.1
remain low paid	63.9	58.6	49.8

Source: Stewart (1998b)
Data: BHPS, Waves 1-4
Note: Poverty thresholds as in notes to Table 4.

Around half of those who were "permanent" low paid using the £3.50 threshold are in a poor household for at least part of the period if the lowest poverty threshold is used. (Poverty in at least one of the years seems the appropriate focus from a welfare perspective due to the borrowing constraints faced by poor households.) In contrast to this, only 1 in 10 of those who were never low paid (using the £3.50 threshold) are in poverty in any of the waves if the lowest threshold is used, around 1 in 6 if the highest threshold is used.[1] The position for those who were "temporary" low paid is roughly half way between that for the "permanent" and never low paid. Clearly from this more longitudinal (although still relatively short-run) perspective, the overlap between low pay and poverty is considerably greater than when viewed in a single-point snapshot context.

It is also informative to look at the degree of association between movements into and out of poverty and movements into and out of low pay. Table 5 first considers the association between movements into low pay and movements into poverty. In this case the group in focus is those who were paid above the low pay threshold and were not in poor households at t-1. For those who became low paid at t, 11.4% move into poverty, compared with only 1.0% among those who do not become low paid (first poverty threshold and £3.50 low pay threshold). Thus becoming low paid has a large (relative) impact on the probability of the household becoming poor. The other thresholds show similar differences between the two groups.

Next consider the association between movements out of low pay and movements out of poverty. Now the group in focus is those who were both low paid and in a poor household at t-1. For those who move out of low pay at t, 85.4% move out of poverty, compared with 60.1% among those who remain low paid. Whilst this indicates that leaving low pay is not the main determinant of leaving poverty, it is also clear that it is a very important influence.

To sum up this section, the snapshot overlap between low pay and poverty is not large, but when one takes a more inter-temporal view, the association is much more important.

[1] Those out of work in all four waves being analysed are excluded.

Conclusions

The main findings reported in this paper are as follows. There is considerable persistence in low pay, in aggregate terms, particularly for those who have already been low paid for more than one period. In addition, the probability of becoming low paid declines the longer a person is higher paid. Much of the persistence in low pay is "true" or "structural" dependence rather than merely the result of heterogeneity.

There is strong evidence of a cycle of low pay and no pay. The low paid are more likely to be out of work in the future; those out of work are more likely to be low paid on re-entry; and are even more likely to be so if they had been low paid prior to being out of work.

The hypothesis that low paid jobs act as stepping stones to higher paid jobs is not supported by the data. The evidence presented here suggests that low paid jobs are more likely to act as blind alleys than as stepping stones to positions higher up the pay distribution.

The cross-sectional overlap between low pay and household poverty is not large. However around half of those classified as "permanent" low paid are in household poverty. From this more longitudinal (although still relatively short-run) perspective, the overlap between low pay and poverty is considerably greater than when viewed in a snapshot context. It is also found that movements into and out of low pay exert an important influence on movements into and out of poverty.

References

Stewart, Mark B. (1998a), "Low Pay in Britain: Piecing Together the Picture", mimeo, University of Warwick.
Stewart, Mark B. (1998b), "The Dynamics of the Relationship Between Low Pay and Poverty in Britain", mimeo, University of Warwick.
Stewart, Mark B. and Joanna K. Swaffield (1999), "Low Pay Dynamics and Transition Probabilities", *Economica*, vol. 66, pp.23-42

‘Wage mobility in Great Britain’

Richard Dickens, Research Fellow, Centre for Economic Performance, LSE

Introduction

The sharp increase in cross section wage inequality that occurred in the UK since the late 1970’s has been well documented and the potential causes have been extensively researched (See Machin, 1996). However, relatively little attention has been given to the important question of how much workers move within the wage distribution from one period to the next. Cross section studies provide only a snapshot of the earnings distribution, so they only tell us about differences between workers at a point in time. We know that the distribution of this snapshot has widened considerably but this tells us nothing about earnings differences between workers over their “lifetimes”. If workers experience a high degree of mobility in the wage distribution from one period to the next then this will act to offset some of the cross sectional differences; the low paid today could well be the high paid next year and vice versa. In addition, it is possible that mobility has increased over the last couple of decades to offset some or all of the rise in cross sectional dispersion, so that “lifetime” earnings differences are unchanged. Alternatively, it could be the case that mobility has fallen which would exacerbate the increase in cross sectional dispersion.

Until recently little was known about these issues. However, with the advent of a number of longitudinal data sources, that follow the same individuals over time, evidence on earnings dynamics and mobility is becoming more widespread.[1] In this chapter I provide an overview of this new evidence.

What do we know about Earnings Mobility?

- *Mobility in the wage distribution over the course of one year is limited and those individuals that do move tend to experience quite short range mobility.*

Tables 1a and 1b (from Dickens, 1997) present information on transitions of males and females between 1993 and 1994 from the New Earnings Survey. The table includes information about transitions within the (hourly) wage distribution and transitions into and out of other labour market states. The figures reported are the percent of individuals in a certain decile or labour market state in 1993 who are in a given decile or labour market state in 1994.[2]

Table 1a: Male One Year Transition Rates (NES) 1993/94. Percent of Given State in 1993 in Given State in 1994.

	State in 1994												
State in 1993	Unemployed	Missing	Missing Wage	1st Decile	2nd Decile	3rd Decile	4th Decile	5th Decile	6th Decile	7th Decile	8th Decile	9th Decile	10th Decile
Unemployed	54.80	27.17	4.35	4.62	2.45	1.76	1.35	0.90	0.85	0.57	0.39	0.39	0.40
Missing Wage	5.27	17.49	36.70	5.16	4.83	4.34	4.39	4.12	3.78	3.30	3.02	3.42	4.18
1st Decile	6.44	14.38	11.12	48.23	13.22	3.14	1.34	0.67	0.55	0.30	0.18	0.23	0.18
2nd Decile	4.01	10.28	9.49	6.57	43.65	17.45	5.30	1.56	0.97	0.39	0.17	0.10	0.07
3rd Decile	3.71	9.16	8.04	1.91	8.81	40.49	19.69	5.12	1.89	0.67	0.30	0.10	0.12
4th Decile	3.24	9.36	8.00	0.87	2.55	9.55	38.42	19.20	5.98	1.87	0.63	0.28	0.05
5th Decile	2.82	9.57	7.32	0.53	1.05	2.96	9.34	40.52	18.42	5.16	1.55	0.50	0.25
6th Decile	3.02	8.73	7.19	0.48	0.50	0.96	2.77	9.75	42.34	18.85	3.94	1.05	0.42
7th Decile	2.94	9.36	6.32	0.37	0.45	0.53	0.98	3.29	10.14	45.83	15.92	2.82	1.06
8th Decile	2.47	8.99	5.84	0.28	0.17	0.18	0.43	1.04	2.47	9.25	53.68	13.47	1.72
9th Decile	1.97	9.61	6.44	0.15	0.18	0.15	0.25	0.55	0.96	1.67	8.15	59.58	10.34
10th Decile	1.84	10.75	7.49	0.35	0.12	0.08	0.15	0.18	0.28	0.42	1.13	6.88	70.32

Notes: 1. The NES is conducted in April.
2. The unemployed are those claiming unemployment related benefits.
3. The missing includes the self employed, retired, inactive and those not captured by the survey.

Notice the high degree of persistence associated with labour market states and deciles of the wage distribution. The diagonal elements are all much higher than the off diagonal elements. For example, over 48% of males in the bottom decile in 1993 are still there one year later. Many are leaving employment altogether for unemployment or inactivity and some have missing wage details the next year. Consequently, only 20% move up the wage distribution. Most of those that do move up, do not rise very far. Two thirds only make it to the 2nd decile and very few progress beyond the median.

There is more movement within the middle deciles of the distribution with about 40% remaining in their decile of origin.

[1] See Atkinson, Bourgignon and Morrison (1992) for a survey of the earnings dynamics literature at that date. Stewart and Swaffield (1997), Gosling, Johnson, McCrae and Paull (1997) and Ball and Marland (1996) all provide an analysis of earnings mobility in Great Britain.

[2] Earnings are split into deciles; ten bands each containing 10% of employees. The 1st decile contains the lowest paid 10%, the 2nd decile contains the next lowest paid 10% and so on up to the 10th decile, which contains the highest paid 10% of workers.

Table 1b: Female One Year Transition Rates (NES) 1993/94. Percent of Given State in 1993 in Given State in 1994.

	State in 1994												
State in 1993	Unemployed	Missing	Missing Wage	1st Decile	2nd Decile	3rd Decile	4th Decile	5th Decile	6th Decile	7th Decile	8th Decile	9th Decile	10th Decile
Unemployed	34.87	36.08	7.11	4.05	3.97	3.24	2.73	2.13	1.42	1.44	1.57	0.94	0.46
Missing Wage	2.70	22.07	36.62	5.96	4.85	4.78	3.89	3.33	2.70	3.10	2.58	3.14	4.27
1st Decile	2.56	19.16	13.79	43.65	11.45	4.16	1.76	1.16	1.00	0.58	0.28	0.26	0.20
2nd Decile	2.25	15.73	12.13	8.59	41.31	12.63	3.94	1.55	0.76	0.66	0.30	0.10	0.06
3rd Decile	2.15	13.36	10.37	2.57	7.94	39.67	15.61	4.58	1.71	1.02	0.64	0.30	0.10
4th Decile	1.67	11.68	9.65	1.47	2.65	7.98	40.90	16.37	4.32	1.63	0.94	0.62	0.14
5th Decile	1.59	10.80	8.28	0.85	1.23	2.70	7.37	43.06	17.52	4.28	1.43	0.67	0.22
6th Decile	1.37	11.08	7.46	0.76	0.62	1.23	2.84	7.48	46.15	15.95	3.68	1.07	0.32
7th Decile	1.68	11.19	7.90	0.51	0.41	0.51	1.26	2.70	7.51	46.61	16.26	2.96	0.49
8th Decile	1.66	11.51	7.44	0.22	0.30	0.47	0.71	0.91	1.99	7.70	50.30	15.23	1.56
9th Decile	1.30	11.44	8.52	0.28	0.10	0.18	0.26	0.34	0.53	1.66	7.16	55.97	12.27
10th Decile	0.81	12.59	13.36	0.16	0.14	0.12	0.20	0.18	0.26	0.45	1.16	4.95	65.62

Notes: See Table 1a.

Again, mobility tends to be quite short range with a high concentration around the deciles close to the diagonal; 68% of those starting in the 5th decile either stay there or move to an adjacent decile. Mobility is much lower at the top of the distribution; 70% of those in the 10th decile retaining their status. Those that do move down from there tend not to move very far.

Table 1b presents the same transition matrix for women. A similar pattern emerges, with evidence of immobility in earnings and labour market state. There is some evidence that women face slightly higher levels of mobility than men, with less employees remaining in the same decile year on year.

- *Workers in the bottom end of the wage distribution are much more likely to exit into unemployment or inactivity. Similarly those unemployed and inactive that do find work tend to enter into low paying jobs.*

We see that far more of those who leave employment for unemployment (or drop out) do so from the bottom end of the wage distribution than elsewhere. For example, 6.4% of the 1st decile are unemployed a year later compared to 2.8% of the 5th decile and 1.8% of the top decile. Males in the bottom decile are twice as likely to become unemployed than those in the 5th decile. The unemployed face a high degree of persistence, with 55% remaining unemployed a year later. Those that do make it into work are much more likely to do so at low wages. Some 4.6% enter at the bottom decile compared to 0.9% in the 5th decile and practically nobody at the top.[3]

- *Earnings mobility is greater when measured over a longer time period (5 years or 14 years) but even here there is little long range movement.*

Table 2 presents five year decile transition matrices of hourly earnings for males between 1989 and 1994 from the NES (See Dickens, 1997). As expected mobility is higher when measured over this longer time span with much less

Table 2: Male Five Year Transition Rates (NES) 1989/94. Percent of Given State in 1989 in Given State in 1994.

	State in 1994												
State in 1989	Unemployed	Missing	Missing Wage	1st Decile	2nd Decile	3rd Decile	4th Decile	5th Decile	6th Decile	7th Decile	8th Decile	9th Decile	10th Decile
Unemployed	38.34	36.53	5.31	5.98	3.55	2.47	2.23	1.79	1.19	1.00	0.60	0.67	0.33
Missing	6.80	70.32	4.63	2.33	1.98	1.85	1.72	1.63	1.70	1.73	1.65	1.68	1.98
Missing Wage	8.34	30.23	20.09	4.09	4.20	4.14	4.47	4.03	4.03	3.61	3.70	4.29	4.77
1st Decile	11.54	26.49	8.82	22.25	13.45	7.53	3.76	2.11	1.59	1.10	0.68	0.31	0.38
2nd Decile	9.62	23.18	8.32	6.86	18.76	14.25	8.38	4.96	2.52	1.57	0.88	0.50	0.21
3rd Decile	7.84	21.57	8.72	3.56	8.50	17.99	13.29	8.66	5.20	2.69	1.18	0.51	0.29
4th Decile	7.04	20.81	8.49	2.33	4.11	8.64	16.53	14.47	8.98	4.88	2.35	0.85	0.53
5th Decile	6.67	20.04	7.75	1.77	2.56	4.03	9.79	16.47	14.64	9.70	4.43	1.67	0.49
6th Decile	5.77	19.81	6.84	1.39	1.74	1.96	4.28	9.53	18.37	16.15	9.76	3.20	1.19
7th Decile	5.79	19.23	7.05	1.10	1.13	1.21	2.10	5.01	10.18	19.43	18.35	7.49	1.95
8th Decile	4.85	19.84	6.53	0.83	0.64	0.82	1.29	1.97	3.21	10.31	25.69	19.41	4.62
9th Decile	4.61	20.69	8.19	0.53	0.51	0.53	0.61	0.87	1.53	2.78	8.84	33.15	17.16
10th Decile	3.93	25.51	8.68	0.54	0.29	0.20	0.34	0.45	0.61	0.87	2.15	8.54	47.89

Notes: See Table 1a.

[3] This is in line with the existence of a low pay-no pay cycle as demonstrated by Mark Stewart in this volume.

concentration on the diagonals than over one year; only 22% of males remain in the bottom decile after five years. Nevertheless many of the employed men in the bottom decile in 1989 have dropped out of employment altogether by 1994 so that only 30% have actually moved up the wage distribution, compared to 20% moving up over one year. Amongst those that do move few progress very far, with two thirds finding themselves in the next two deciles. There is more mobility from the middle deciles, but most movement is still fairly short range. Once again those in the top decile seem to retain their status the most, with some 48% of males remaining there after five years and with very few experiencing large wage falls. The figures for females (See Dickens, 1997) display a very similar pattern to these, with perhaps some evidence of slightly more mobility.

Ball and Marland (1996) examine earnings mobility of males over a fourteen year time span (1978/79 to 1992/93) using the Lifetime Labour Markets Dataset.[4] Over this long time span they find more mobility but much of this is still quite short range, with most workers only moving a couple of deciles. Many of those in the bottom part of the wage distribution fall out of employment onto benefits. They also find evidence of strong persistence for a core group of workers. For example, 13% of young workers who were in the bottom decile in 1978/79 are still there in 1992/93. However, some 25% of these are in the bottom decile for every intervening year. Their results suggest that for some individuals low pay and benefit dependency is a very persistent phenomenon.

- *Short run mobility rates have fallen for men and women since the late 1970s which has exacerbated the rise in cross section wage inequality.*

Analysing changes in the transition matrices between the late 1970s and late 1980s one finds an increase in the proportion of employees who remain in the same decile from one year to the next (See Dickens, 1997). The results suggest a slightly larger fall in mobility for males than females. In addition, examining five year transition matrices one also find a fall in mobility for males but little change for females.

However, there are some potential problems with the analysis of changes in mobility using transition matrices. Whether an individual crosses a decile threshold depends on the wage range within each decile. We know that this range has risen due to the rise in cross section dispersion so that movements across deciles are not comparable over time.

In order to resolve this problem I employ an alternative measure of mobility based on the individual's actual position within the wage distribution and examine changes in this between two time periods. I do this by computing each individual's percentile ranking based on their wage in a given year. This gives a measure from zero to one for each individual depending on where they lie in the wage distribution.

Figure 1a plots the percentile ranking of individuals in 1978 against that in 1977. If there is no mobility then one would see a positively sloped diagonal line, since nobody changes position in the wage distribution from one year to the next. If individual's earnings are uncorrelated between the two years then one would see a random scattering. If individual's earnings are negatively correlated between the two years, so the lowest paid became the highest paid and vice versa, then one would observe a negatively slopped diagonal line starting from the top left corner of the figure. In fact we see a concentration of individuals around the positively slopped diagonal. This concentration is much higher at the top and bottom of the distribution, indicating lower levels of mobility at these points. Figure 1b presents the same scatter plot for earnings rankings in 1988 and 1989. It is clear that there is a greater concentration around the diagonal in this latter year, providing evidence that mobility has fallen over this time period for males.

These ranking plots for females (not presented) provide a similar pattern of changes in mobility over this time period.

I have also computed an index of mobility based on these changes in percentile rankings of individual's earnings (See Dickens, 1997, for more details). The index is plotted for males and females from 1976 to 1994 in Figure 2. This index takes a minimum value of zero when there is no mobility, a maximum value of one when earnings are perfectly negatively correlated and a value

Figure 1a Earnings Ranking in 1977 and 1978: Males

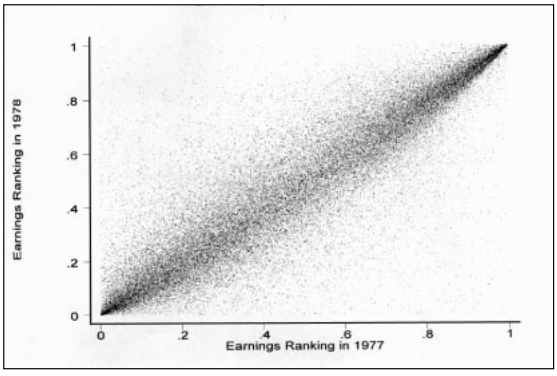
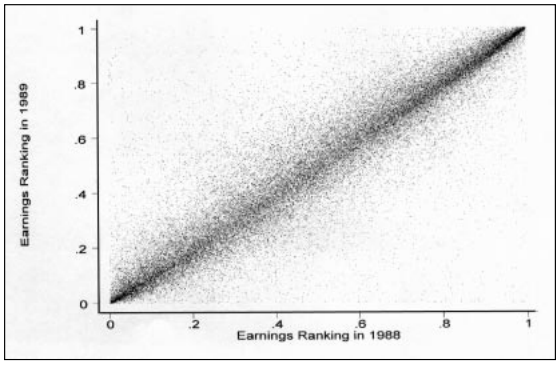
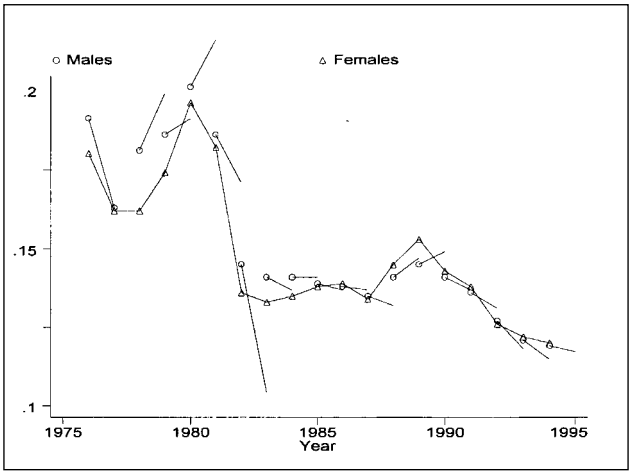


Figure 1b Earnings Ranking in 1988 and 1989: Males



[4] See also the chapter by Rebecca Endean in this volume.

Figure 2 One Year Mobility Index: Males and Females 1976-94



of two thirds when earnings are uncorrelated across the two years. Taking the period as a whole the indices fall. By 1994 they have fallen by 41% for males and females since peaking in 1980.[5]

- *There is some weak evidence that long run mobility rates have fallen for men but not for women since the late 1970's.*

One can also use this ranking methodology to examine changes in longer term mobility. In Dickens (1997) I compute this mobility index for males and females over a five year time span. After controlling for the effects of inflation I find some weak evidence that mobility has fallen for males but no evidence of any change for females.

- *At least half of the rise in cross section inequality can be explained by increasing permanent differences between workers.*

Another way of analysing this issue is to decompose earnings differences into that part which is permanent and that part which is transitory and examine how these have changed over this time period. Permanent differences between individuals are those that last forever and may reflect the effects of fixed unobserved ability differences. Transitory differences die out over time and may reflect the effects of job characteristics, bonus payments, etc. In Dickens (1998), I find that about half of the rise is accounted for by an increase in permanent differences, with the other half accounted for by a rise in (highly persistent) transitory differences. Consequently, over half of the rise in cross sectional earnings inequality is explained by increasing differences between individuals that last for a good many years.

Conclusions

In this chapter I have reviewed the evidence that has emerged over the last couple of years on the dynamics of earnings. This has shown that the picture that has sometimes been painted of a mobile society is far from the truth. In fact, the evidence shows a high degree of immobility with little long range wage movements. In addition to this there is evidence showing that earnings mobility has fallen since the late 1970's. Given that we have also seen a sharp rise in cross sectional wage inequality over this time period, this tells us that not only has the gap between the rich and poor risen but the ability of the low paid to close this gap has fallen considerably. Far from offsetting the increase in cross section wage inequality, changes in mobility appears to have exacerbated this rise.

The evidence on wage mobility suggests that policies that raise the earnings of the poorly paid will provide some welcome relief. For example, the minimum wage will help to compress the pay distribution. In addition, mobility both within and into and out of the wage distribution means that more people will be affected by the minimum wage than suggested by cross section figures. However, it is unlikely to do much to help individuals progression up the wage distribution. Similarly, policies that aim to get people back into work must not then leave the individual to their own devices once they are in work. Individuals placed in poorly paid entry jobs with little prospects are unlikely to progress on from these.

References

Atkinson, A, F. Bourguignon and C. Morrisson, (1992) Empirical Studies of Earnings Mobility. Harwood Academic Publishers, Reading, 1992.
Ball, J and M. Marland (1996) "Male Earnings Mobility in the Lifetime Labour Market Database", Department of Social Security, Analytical Services Division Working Paper No 1.
Dickens, R. (1997) "Caught in a Trap? Wage Mobility in Great Britain: 1975-94" Centre for Economic Performance Discussion Paper No. 365.
Dickens, R. (1998) "The Evolution of Individual Male Wages in Great Britain: 1975-95" Centre for Economic Performance Mimeo.
Gosling, A., P. Johnson, J. McCrae and G. Paull. (1997) The Dynamics of Low Pay and Unemployment in Early 1990s Britain, Institute for Fiscal Studies, London.
Machin, S. (1996) "Wage Inequality in the UIC", Oxford Review of Economic Policy, Vol 12, No. 1, pp47-64.
OECD (1997) "Earnings Mobility: Taking a Longer Run View", Employment Outlook, July 1997, pp27-61.
Stewart, M.B. and Swaffield, J. (1997) "The Dynamics of Low Pay in Britain", in Gregg, P. (ed) Jobs, Wages and Poverty: Patterns of Persistence and Mobility in the New Flexible Labour Market, Centre for Economic Performance, pp36-51.

[5] There is a potential problem arising from the fact that mobility measures in the NES are highly correlated with inflation (See Dickens, 1997). Nevertheless, I still find evidence of a 22% fall in this mobility index for males and an 11% fall for females between 1976 and 1994 after controlling for the effects of inflation.

‘Patterns of work, low pay and poverty – evidence from the Lifetime Labour Market Database and the British Household Panel Survey’

Rebecca Endean, Analytical Services Division, Department of Social Security

Introduction

This chapter falls into two parts. The first section presents some descriptive statistics based on the Lifetime Labour Market Database (LLMDB) showing patterns of low pay, high pay and no pay in the early 1980s and early 1990s (see Nicholls, Marland and Ball, 1997). The aim is look at the extent of persistence in various labour market states for working age individuals and whether this has changed over time. As such this work complements the chapters by Richard Dickens and by Mark Stewart which look at similar patterns but use different data sources. The second section looks at patterns of low pay, high pay and no pay for working age individuals in the British Household Panel Survey (BHPS) in the early 1990s and relates this to patterns of household income. This brings together the work on household income dynamics – see Stephen Jenkins’ chapter – which work on individual labour market dynamics.

The Lifetime Labour Market Database (LLMDB)

The LLMDB is a 1 per cent sample of all National Insurance records. Each individual, aged over 16, has a unique National Insurance number and, as the same individuals are sampled each year, the information can be linked over time to provide a longitudinal labour market information. The following information, held on the database, has been used in this analysis:

- **personal information**: the database contains information on age, sex, death and migrant status;
- **National Insurance contributions:** all classes and amounts of contributions are held. Contributions are paid by employees and the self employed. People receiving certain types of Social Security benefits are credited with contributions. Individuals who have the contribution records protected because of their caring responsibilities (Home Responsibilities Protection) can also be identified;
- **earnings information:** total annual taxable earnings for each person for whom employers provide an end-of-year PAYE return.

There are some gaps in the data:

- the information on contributions and credits can be expected to be more or less complete. The coverage of the information on earnings is less certain. Employers are legally required to provide information on employees who earn above the National Insurance Lower Earnings Limit but the coverage of people who earn below the LEL is unlikely to be complete;
- there is no earnings information for periods of self-employment but it is possible to identify periods of self-employment where Class 2 National Insurance Contributions are paid;
- there is no information about household characteristics or other sources of income. As a result it is not possible to look at trends in the extent of low-income persistence.

For employees, the database records annual gross earnings. As a result people who work fewer hours per week or fewer weeks per year than other people earning the same wage will be located further down the earnings distribution. As a result the following analysis is limited in what it can tell us about changes in labour market dynamics. However, it is useful in that it provides a dynamic picture of patterns in individuals’ income from employment.

There are gaps in people’s contribution records – years where we have no information on either earnings or credited contributions or periods of Home Responsibilities Protection. These gaps can occur because the individual was out of work but not claiming the relevant benefits or in work and not paying National Insurance. In the following these gaps are assumed to be periods of no pay. This is a strong assumption, as some of the gaps will refer to periods when the individual was out of the country[1] or in an institution (prison, hospital etc). The main alternative assumption, which is to reject all cases with gaps in their contribution records, would lead to the sample becoming biased and the results unrepresentative of the working age population as a whole. However, the estimates presented here were also calculated using this alternative way of defining the sample, and the main trends over time shown below were also evident in this restricted sample, although the numbers falling into each category were slightly different.

The LLMDB currently holds information for the 1978/79 to the 1995/96 period. The following analysis takes two five-year periods or “windows”, 1979/80 to 1983/84 inclusive and 1990/91 to 1994/95 inclusive. These periods relate to broadly similar

[1] However some attempt was made to remove some of the National Insurance numbers which refer to people who are no longer in the country. Excluded from the sample were any National Insurance records where there were no recorded contributions in any year in the relevant five-year period. This will reject individuals who left the country before the beginning of the relevant period. Also excluded were people for whom there is a record on the file denoting that they migrated into the country after the start of relevant period. After these restrictions were made the resulting number of cases matched well with the estimated resident UK population in the relevant periods.

points of the economic cycle and so should not be affected much by cyclical changes. The sample was restricted to those below State Pension Age at the beginning and end of the period i.e. men aged 16-59 in 1979 and 1990 and women aged 16-54 in 1979 and 1990. In these five year periods the proportions of people falling into each of the following eight categories were estimated:

- High pay in every year;
- Low pay in every year;
- No pay in every year;
- Either no pay or low pay in every year;
- Either high pay or low pay in every year;
- Either no pay or high pay in every year;
- At least one period of self employment during the five year period; and
- All other combinations.

People were classed as self employed in a year if they had some Class 2 National Insurance Contributions at any point during the year. People were classed as having no pay if they had no pay as employee recorded and no Class 2 National Insurance contributions. This category will include some people who were working during the year but had very low earnings – below the LEL for employees and the small earnings limit for the self employed.

In order to decide whether people were high paid or low paid two arbitrary earnings thresholds where chosen:

- A threshold which was held constant in real terms over the period. This was set at just under £3000 per annum in 1979/80 rising to £7000 per annum in 1994/95 (current prices). People with annual earnings below this threshold were categorised as low paid, above the threshold as high paid.
- A threshold which increased at the same rates as average earnings over the period. This was set at just under £3000 per annum in 1979/80 rising to £9500 in 1994/95.

These thresholds are completely arbitrary and one useful extension of this work would be to see whether the results are sensitive to changes in the threshold.

Absolute Pay Threshold

Table 1 shows the proportions of the sample falling into each of the eight categories specified above where low pay is defined using the absolute threshold. The main points to note are:

- Half the sample fell into the three "permanent states" – high pay in every year, low pay in every year and no pay in every year – in both periods. This demonstrates considerable persistence within the labour market. If the population were randomly distributed between the states in each year (with the same propensity as observed in the population as a whole) then the numbers falling into these first three categories would be very small. Another way of looking at this is to calculate what proportion of those in each state remained there for all of the following four years. 69 per cent of those with high pay in 1990/91 had high pay in all of the next four years, 54 per cent of those with no pay in 1990/91 had no pay in all of the next four years and 29 per cent of those with low pay in 1990/91 had low pay in all of next four years;
- Men and women had significantly different labour market patterns. Men are more likely to have had high pay in every year and less likely to have had low pay in every year, no pay in every year and either low pay or no pay than women are;
- 14 per cent of the population had either low pay or no pay in every year compared with 5 per cent of the population having either high pay or no pay in every year and 13 per cent having either high pay or low pay in every year. This indicates that people without work are more likely to combine spells out of work with spells of low pay than with spells of high pay. And that people in low pay are just as likely to combine spells of low pay with spells of no pay than with spells of high pay even though a much higher proportion of the working age population is high paid than out of work. These patterns provide further supporting evidence of a "low pay no pay" cycle as demonstrated by Stewart and Swaffield;
- Using this absolute pay threshold then, for the population as a whole, the proportions falling into each category were similar in 1979/1983 and 1983/1994;
- For men there has been a decline in the proportion with high pay in every year, an increase in the proportion with no pay in every year and a small rise in the proportion with either no pay or low pay in every year. The reverse is true for women, there has been an increase in the proportion with high pay in every year, and a fall in the proportion with low pay every

year, no pay in every year and either low pay or no pay in every year.

Tables 2 and 3 show the position for men and women by age group. The main points to note are:

- The increase in the proportion of men with no pay in every years is largest (in percentage point terms) for older men – the proportion with no pay in each of the five years increased from 9 per cent to 18 per cent. The fall in the proportion of men with high pay in every year was also sharpest for this age group. However there was still a significant fall in the proportion of prime age men with high pay in every year from 54 per cent to 48 per cent;

- For women, the rise in the proportion of women with high pay in every year was largest for prime aged women up from 13 per cent to 24 per cent.

Relative pay threshold

Tables 4,5,6 present the same estimates using the threshold that increases with average earnings over time. The main points to note are:

- Unlike tables 1,2,3, which use the absolute pay threshold, there is a decrease in the proportion of the population who had high pay in every year and a corresponding increase in the proportion of the population with low pay and either low pay or no pay in every year from 15 per cent to 17 per cent. This reflects the widening of the distribution of earnings over this period and provides some evidence that the low pay-no pay cycle has increased (providing low pay is defined in relative terms);

- There is no increase in the proportion of the population experiencing either high pay or low pay in every year. Therefore these estimates do not suggest that the increase in the numbers of people who are relatively low paid at a point in time were offset by increased mobility within the earnings distribution;

- For men there is a significant increase in the proportion with either low pay or no pay in every year up from 6 per cent to 10 per cent. For women there is only a slight decline in the proportion falling into this category;

- For women the increase in the proportion with high pay in every year is now slightly smaller than the increase in the proportion with low pay in every year.

British Household Panel Survey

This section presents information on the links between individual labour market patterns and household incomes. Differences can occur between an individual's position in the labour market and her position within the household distribution of income because of:

- Household structure, the number of adults and children in the household;

- Earnings of other members of household;

- Other income sources, benefits, investment income;

- The structure of taxation.

As a result although income from employment is an important determinant of household income these other factors also play a part in determining who lives in a low-income household. In order to explore this the BHPS was used to look at working age men and women, their employment patterns and household income patterns over the 1991-1995 period. Individuals' employment patterns were classed as:

- Favourable – high pay in every year using the same absolute pay threshold as in the LLMDB analysis but with monthly gross pay rather than annual pay as the relevant pay variable;

- Unfavourable – either no pay in every year or low pay in every year or a combination of low pay or no pay in every year;

- Self employed – at least one year our of the five spent in self-employment;

- Mixed – all other employment patterns.

Then people were separated into those who lived in households with persistently low income over the 1991 to 1995 period and those who did not. Persistently low income was defined as living in a household which was in the bottom 30 per cent of the income distribution in at least three years out of five and no more than one year in the top 60 per cent of the income distribution. (For more detail on the rational behind this classification and the income variable used see DSS (1998) HBAI 1996/7 chapter 4.)

Table 7 shows the proportion of all working age individuals who lived in households with persistently low incomes by employment pattern. 13 per cent of working age individuals fell into the persistently low income category with slightly more working age women than men. The proportion of the overall population with persistently low incomes is higher because pensioners and children are more likely to live in such households than working age people. Working age individuals with unfavourable employment patterns are more likely to live in households with persistently low incomes than other working age individuals are. 38 per cent of working age men and 27 per cent of working age women with these unfavourable employment histories fell into this position. However, the majority of these people did not live in households with persistently low incomes suggesting that in some of these cases other factors – such as the existence of other earners within the households – may be having an impact on household incomes.

Table 8 shows that the majority of individuals living in households with persistently low incomes had unfavourable employment histories. 67 per cent of those living in households with persistently low household incomes also had unfavourable employment histories. The proportion of low-income women with unfavourable employment histories – 86 per cent – was higher than the proportion of low-income men – 44 per cent.

Conclusion

The results presented in this chapter provide some evidence of the extent of labour market persistence and the links between individual employment patterns and household incomes. However, descriptive statistics can only be indicative of causation and more research work is needed using longitudinal data to explore the factors driving these changes and the implications for policy. However, in summary, the main points to be noted are:

- Men's labour market patterns worsened between the two periods. They became more likely to be continuously out of work, continuously low paid or in a low pay-no pay cycle – where low pay is defined using a relative threshold. The change was most dramatic for older men but there were also signs of a decline in the position of prime age men;

- Women's employment patterns improved over the period relative to men's but they are still more likely to be continuously out of work, continuously low paid or in a low pay-no pay cycle than men are;

- This work does not suggest that the increase in the number of people with relatively low pay over the period was offset by an increase in the amount of mobility between low pay and high pay;

- Most working age women with persistently low household incomes also had unfavourable employment patterns; for men the pattern was less clear cut.

Table 1: Patterns of low pay, high pay and not pay 1979/1983 and 1990/1994 using a low pay threshold fixed in real terms; all of working age.

Column Percentages

	All of Working Age		Men aged 16-59		Women aged 16-54	
	79/83	90/94	79/83	90/94	79/83	90/94
High pay in every year	32	32	47	40	13	23
Low pay in every year	8	7	1	2	17	13
No pay in every year	11	13	5	11	18	14
Low pay/no pay in every year	15	14	6	8	27	22
High pay/low pay in every year	13	13	13	10	14	15
High pay/no pay in every year	5	5	6	6	3	3
Self employed in at least one year	8	10	13	16	2	4
All other combinations	7	7	8	7	7	6
Total	100	100	100	100	100	100

Table 2: Patterns of low pay, high pay and no pay 1979/1983 and 1990/1994 using a low pay threshold fixed in real terms; men by age group

Column Percentages

	Men aged 16-24		Men aged 25-44		Men aged 45-59	
	79/83	90/94	79/83	90/94	79/83	90/94
High pay in every year	31	28	54	48	47	36
Low pay in every year	4	4	1	1	1	2
No pay in every year	4	8	4	9	9	18
Low pay/no pay in every year	14	18	4	6	4	4
High pay/low pay in every year	24	19	9	7	11	8
High pay/no pay in every year	4	4	6	6	8	8
Self employed in at least one year	9	9	16	18	12	18
All other combinations	11	11	6	6	9	7
Total	100	100	100	100	100	100

Table 3: Patterns of low pay, high pay and no pay 1979/1983 and 1990/1994 using a low pay threshold fixed in real terms; women by age group

Column Percentages

	Women aged 16-24		Women aged 25-44		Women aged 44-54	
	79/83	90/94	79/83	90/94	79/83	90/94
High pay in every year	11	19	13	24	18	23
Low pay in every year	10	9	17	13	26	19
No pay in every year	12	10	23	26	14	15
Low pay/no pay in every year	30	25	27	21	23	18
High pay/low pay in every year	21	22	11	13	12	12
High pay/no pay in every year	3	2	2	3	3	4
Self employed in at least one year	2	2	2	5	1	4
All other combinations	12	10	6	6	5	5
Total	100	100	100	100	100	100

Table 4: Patterns of low pay, high pay and no86 pay 1979/1983 and 1990/1994 using a low pay threshold fixed in real terms; All of working age.

	All of Working Age		Men aged 16-59		Women aged 16-54	
	79/83	90/94	79/83	90/94	79/83	90/94
High pay in every year	32	26	47	35	13	16
Low pay in every year	8	12	1	4	17	21
No pay in every year	11	13	5	11	18	14
Low pay/no pay in every year	15	17	6	10	27	25
High pay/low pay in every year	13	13	13	13	14	14
High pay/no pay in every year	5	5	6	5	3	2
Self employed in at least one year	8	10	13	16	2	4
All other combinations	7	6	8	7	7	4
Total	100	100	100	100	100	100

Column Percentages

Table 5: Patterns of low pay, high pay and no pay 1979/1983 and 1990/1994 using a low pay threshold fixed in real terms; Men by age group

	Men aged 16-24		Men aged 25-44		Men aged 45-59	
	79/83	90/94	79/83	90/94	79/83	90/94
High pay in every year	31	21	54	44	47	32
Low pay in every year	4	10	1	2	1	3
No pay in every year	4	8	4	9	9	18
Low pay/no pay in every year	14	22	4	7	4	6
High pay/low pay in every year	24	21	9	10	11	11
High pay/no pay in every year	4	2	6	5	8	6
Self employed in at least one year	9	9	16	18	12	18
All other combinations	11	8	6	6	9	7
Total	100	100	100	100	100	100

Column Percentages

Table 6: Patterns of low pay, high pay and no pay 1979/1983 and 1990/1994 using a low pay threshold fixed in real terms; Women by age group

	Women aged 16-24		Women aged 25-44		Women aged 44-54	
	79/83	90/94	79/83	90/94	79/83	90/94
High pay in every year	11	11	13	18	18	15
Low pay in every year	10	19	17	20	26	28
No pay in every year	12	10	23	16	14	15
Low pay/no pay in every year	30	30	27	23	23	21
High pay/low pay in every year	21	19	11	12	12	11
High pay/no pay in every year	3	1	2	2	3	2
Self employed in at least one year	2	2	2	5	1	4
All other combinations	12	6	6	4	5	4
Total	100	100	100	100	100	100

Table 7: Working age individuals with different employment patterns over the 1991-95 period by position in the household income distribution

Row percentages

Employment pattern 1991-1995	Household Income position 1991-1995								
	All of Working Age			Working Age Men			Working Age Women		
	Other income Patterns	Persistent low Income	All	Other income Patterns	Persistent low Income	All	Other income Patterns	Persistent low Income	All
Favourable	98	2	100	98	2	100	100	0	10
Unfavourable	70	30	100	62	38	100	73	27	10
Mixed	92	8	100	88	12	100	95	5	10
Self employed	88	12	100	87	13	100	91	9	10
All	87	13	100	89	11	100	86	14	10

Notes: The variables are defined as follows:

Favourable employment patterns – High pay in every year.
Unfavourable employment patterns – Low pay in every year, or no pay in every year, or every year spent in either low pay or no pay.
Mixed employment patterns – All other employment patterns
Self employed – At least one year when self employed

Persistent low income – At least three years out of 5 in the bottom 30 per cent of the income distribution and no more than one year in the top 60 per cent of the income distribution
Other income patterns – All other patterns

Source: HBAI (BHPS)

Table 8: Working age individuals with different employment patterns over the 1991-95 period by position in the household income distribution

Column Percentages

Employment pattern 1991-1995	Household Income position 1991-1995								
	All of Working Age			Working Age Men			Working Age Women		
	Other income Patterns	Persistent low Income	All	Other income Patterns	Persistent low Income	All	Other income Patterns	Persistent low Income	All
Favourable	40	5	36	51	10	46	28	1	24
Unfavourable	23	67	28	9	44	13	38	86	44
Mixed	23	15	22	21	22	21	26	8	24
Self employed	14	14	14	19	24	20	8	5	8
All	100	100	100	100	100	100	100	100	100

Notes: As table 7

Source: HBAI (BHPS)

Column Percentages

References

Department of Social Security (1998). Households Below Average Income 1979-1996/97, Corporate Document Services, London.

Dickens R. (1997). "Male Wage Inequality in Great Britain: Permanent Divergence or Temporary Differences" in "Jobs, Wages and Poverty: Patterns of Persistence and Mobility in the New Flexible Labour Market", ed Paul Gregg. Centre for Economic Performance.

Jarvis S. and Jenkins S.P. (1997). 'Low income dynamics in 1990s Britain', Fiscal Studies 18: 1-20.

Jarvis S. and Jenkins S.P. (1998). 'How much income mobility is there in Britain?', Economic Journal 108: 428-443.

Jenkins S.P. (1998). 'Modelling household income dynamics', Presidential Address to the European Society for Population Economics, Amsterdam, June 1998, unpublished paper, University of Essex.

Nicholls M., Marland M. and Ball J. (1997) "The Department of Social Security's Lifetime Labour Market Database" in "Jobs, Wages and Poverty: Patterns of Persistence and Mobility in the New Flexible Labour Market", ed Paul Gregg. Centre for Economic Performance.

Stewart M. and Swaffield J. (1997). 'The Dynamics of Low Pay in Britain" in "Jobs, Wages and Poverty: Patterns of Persistence and Mobility in the New Flexible Labour Market", ed Paul Gregg. Centre for Economic Performance.

‘The Impact of Unemployment and Job Loss on Future Earnings’

Paul Gregg, London School of Economics

Introduction

The growing evidence on poverty dynamics highlights the important role for variation in access to work and wages. Wage dynamics and low pay in general are considered by Mark Stewart and Richard Dickens elsewhere in this volume and there is a strong link between this paper and their work on the low pay – no pay cycle. This paper, however, looks at the available evidence on:

- the extent of and consequences of involuntary job loss, plus the nature of jobs and wages for returners to the labour market;
- the evidence on durations of joblessness and the scarring effects of long-term unemployment (duration dependence);
- the evidence on concentration of unemployment over long periods and thus including repeat spells. Plus the evidence that unemployment now increases the future risk of unemployment – that there is causal relationship behind repeat spells.

This represents rather a lot to get through so it is brief and in places patchy. Documenting the evidence of the issues of worklessness is relatively straight forward but interpretation is far more difficult. This requires disentangling what is due to the individual and that due to area variation in the availability of work. And where it is down to the individual, whether it is due to heterogeneity between people that develops before entry into the labour market (including innate variation), and that which has origins in the shocks and events that occur through peoples working lives. This is important to assess whether, when and how to intervene.

Job loss

The key points are:

- 1.8 million workers in Britain per annum will suffer involuntary job loss. This varies from about 1.4 million to 2.2 million counter-cyclically;
- on average a worker re-entering work after involuntary job loss will earn 9% less than in the previous job;
- when compared with an employee in continuous work the average wage loss of someone reentering the workforce is 14%;
- the cost of job loss is most severe among more experienced workers and those with longer tenure. Length of time before regaining work is also a key predictor of the wage gap;
- tenure is the most important single predictor of job loss. There is an 11.7% chance of a worker with tenure less than 1 year losing a job, this drops to just 4% after 5 years;
- about 7% of the wages declines associated with job loss are still present after 2 years of employment. US evidence suggests longer run persistence is due to repeat job loss. In the UK there are certainly far more temporary and part-time jobs in the stock of entry jobs than amongst all jobs;
- wages among entry jobs – those taken by those out of work have been declining relative to other jobs since 1980. In the last few years they have been declining in real terms.

Table 1

Annual separation and displacement rates

Year	Separation rate	Displacement rate
90/91	24.7	7.8
91/92	19.8	6.9
92/93	20.5	7.2
93/94	21.9	6.4
94/95	20.6	5.7
95/96	26.8	5.1
Average	22.4	6.5

Source: BHPS

Incidence of displacement

Industrial restructuring, changes in technology, industrial location and recession are all associated with worker displacement: the involuntary separation from a job. Who is at risk from displacement? Around one in five employees, some 5 million workers, will separate from their jobs during one year (Table 1). On average, some 6.5% of employees will lose their jobs as the result of displacement. This varies across the cycle from around 1.4 million in a good year to 2.2 million in a recession year.

The most important single predictor of displacement is job tenure. There is an 11.7% chance that a worker in a job for less than 12 months will lose a job, compared with a less than 4% chance of displacement for a worker in a job for 5 years or more, (Table 2). Men are almost twice as likely to be displaced as women, 8.4% compared to 4.5%. The displacement rate for younger workers, under the age of 25, is 11.5%, twice that of other age groups.

There is some evidence that education affects displacement. The lower the level of educational attainment, the higher the displacement rate. However, the difference between the highest and lowest education groups, at around 2 percentage points, is not large when compared with other variation. The industrial sector with the highest displacement rate is construction, at 13.4%, The lowest is the public services at around 2%. There is little variation across other sectors. Most of those displaced get

Table 2

Separation and displacement rates by worker and firm characteristics

	Separation rate	Displacement rate
Gender		
Female	19.2	4.5
Male	23.4	8.4
Age		
Youths <25	36.6	11.4
Prime 25-49	19.5	5.6
Mature 50+	17	5.2
Marital status		
Single	26.9	8.2
Married	18	5.4
Qualifications		
None	21.7	7
'O' level & equivalent	25.3	7.8
Intermediate & 'A' level	29.4	6.4
Degree/ teaching	29.6	5.2
Job tenure		
0-1 year	33.2	11.7
1-2 years	23.7	6
2-5 years	17.7	4.5
5-10 years	14.1	4
10+ years	13.4	3.6
Industry		
Agriculture/energy/water/ extraction	19.8	5.4
Manufacturing	22.1	6.4
Construction	32.4	13.4
Distribution	24.8	4.5
Transport/communications	19.6	4.5
Banking	29.7	5.2
Public services	29.3	2
Private services	16.9	4.4

Source: BHPS

back into the labour market in under 6 months (about two thirds), but around 5% take longer than a year to get back and a further 10% were still out of work at the end of the time window in the data.

Cost of job loss

Kletzer (1998) provides a useful summary of over ten years of research into the issue in North America. As yet the evidence from Britain is sparse, just two main papers:

- Gregory and Jukes (1997) provide the first evidence of the wage falls between jobs either side of a spell of unemployment for male benefit claimants (JUVOS linked with NES Panel). They find that, on average, earnings for men who have been unemployed fall by around ten percent compared with men who remain in jobs. In addition each month of unemployment adds about 1% to the wage fall;

- Gregg and Wadsworth (1998) use data from the British Household Panel Survey, (BHPS), over the period 1991-96 and broaden the scope of inquiry into job displacement by including all unemployment spells (claimant or otherwise) and spells of economic inactivity, (allowing for discouraged job seekers). They focus particularly on those suffering involuntary displacement. They highlight the groups which are most likely to experience displacement, those which are most likely to get back into work and the earnings changes associated with re-entry into work. They estimate the gap between old and replacement jobs associated with involuntary job loss is 10%. Compared with those who do not lose their job it is 15%, the difference being the foregone wage growth.

Why might job displacement involve reductions in wages? If wages rise with the experience gained within any occupation or skill group, then the job currently held is likely to pay more than any new job gained after displacement. The longer a worker has been in the job the greater this penalty is likely to be if some or all of the returns to accumulated on-the-job experience are lost in the next job. So the costs of job loss may be higher among older and more experienced workers or wherever job loss is a relatively rare event.

This is not the only reason why we might find wage costs to displacement. Those in work seek to secure good job matches through promotion or by moving firms. These matches may be provided by good firms which pay high wages and generally promote good working conditions or just by positions that suit an individual's talents. If workers with good jobs are unlucky enough to lose their jobs, they are unlikely to get as high quality matches on re-entry to work. For instance it has long been established that certain industries offer pay premia and that unionised firms generally pay higher wages. Displacement from these industries, and re-employment in the non-union sector could mean a significant drop in wages.

In addition to earnings losses, new jobs are likely to be less stable. Employer or employee may decide the match is not a good one, and the kind of redundancy rules mean that firms tend to target recent recruits when shedding labour. With variable or uncertain labour needs, firms often enshrine this practice through the use of temporary contracts. The share of full-time permanent work in entry jobs (those taken by people saying they were out of work previously) is much lower than in the workforce as a whole. Full-time permanent jobs make up just over 42% of entry jobs. Temporary jobs account for almost a fifth of entry jobs, but just 6% of all jobs.

Tables 3 and 4 summarise the mean percentage difference in earnings between the old and new jobs for displaced workers. As a comparison, we show the annual earnings changes recorded for those workers who remain in the same job over the year. Weekly wages of the average displaced worker are around 9% lower in the new job than in the job lost. If the worker moves from one full-time job to another the penalty is around 2%.[1] Weekly earnings of those who remain with their employer rise by around 5% over the year. So displaced workers not only experience wage losses relative to their previous job but they also forego general increases in wage levels. The total pay penalty is therefore 14% in weekly earnings, with a 9% overall pay penalty for those working full-time both before and after displacement.

There is considerable variation around these averages. Displaced women experience around twice the wage losses of men. Older workers and the least qualified also face higher monthly pay cuts than the average. The wage loss for those over 50 is around 23%. The displaced with more than 5 years job tenure suffer losses of around 30%. Displacement tends to be rarer as jobs lengthen but the cost of losing these jobs rises greatly.

Table 3

Real weekly pay change by displacement status

	Displaced	Stayers	Difference
Full-time to full-time	-2.1%	7.0%	-9.1%
Part-time to part-time	-5.6%	2.9%	-8.5%
Full-time to part-time	-60.1%	-53.6%	-6.5%
All	-8.6%	5.6%	-14.2%

Source: BHPS

[1] These numbers are similar to Gregory and Jukes' (1997) findings for unemployed men. There is only a very small hourly wage penalty, on average, to being displaced but this is mainly a selection effect, as the monthly wage gap is much smaller for those where hourly wages are defined.

Table 4

Average real weekly percent pay change by worker characteristics

	Displaced	Stayers	Difference
Total	-8.6	5.6	-14.2
Gender			
Female	-16.1	6.3	-22.4
Male	-6.5	4.7	-11.2
Age			
Youths <25	1.3	14.1	-12.8
Prime 25-49	-12.9	5.4	-18.3
Mature 50+	-22.7	1.4	-24.1
Marital status			
Single	-1.7	8.2	-9.9
Married	-19.8	4	-23.8
Qualifications			
'O' level & below	-14	5.1	-19.1
Intermediate	-10.3	5.7	-15.8
Degree/ further education	6.7	5.8	0.9
Tenure in previous job			
0-1 year	-6.7	18.2	-24.9
1-2 years	-5.3	7.6	-12.9
2-5 years	-14.4	6.2	-20.6
5+	-30	2.8	-32.8
Length of time out			
0-1 month	-6.6	-	-
1-3 months	-8.3	-	-
3-6 months	-13.3	-	-
6+ months	-13.6	-	-

Source: BHPS

Even those out of work for very short periods suffer wage losses, including the foregone wage growth the loss is around 12%. Displaced workers out of work for more than six months experience average wage losses that are twice those of people out of work for under one month.

The UK evidence (Gregory and Jukes 1997) suggests that about 7 percentage points of the wage gaps persist after two years continuous employment. US evidence suggests that repeat job loss or broken employment generates longer persistence in lower post-displacement wages.

The levels and recent trends of pay for returnees to the labour market

We do not have data on how the cost of job displacement has changed over a long period of time, but we can say something about the changing nature of wages likely to be on offer to those out of work. Table 5 gives the typical wages associated with entry jobs. These are wages earned by re-entrants into the labour market irrespective of why they left their last job. The Table gives wages for workers in the middle of the pay distribution, (the median). Entry jobs pay wages that are considerably below the national average. The typical entry job pays just over £100 a week compared with around £260 for all jobs. Fifty-five percent of entry jobs pay below half typical earnings. In part, this is because there are relatively more part-time jobs in the stock of entry jobs than in the workforce as a whole. However, as the bottom panel of Table 5 shows, there is still a substantial wage gap in hourly wages. The typical job pays around £6.70 an hour. The typical entry job only pays around £4 an hour. Moreover the wage gap has risen over time. In the 1980s, according to the General Household Survey, entry wages fell from being equivalent to those received by a worker 19% of the way up the aggregate weekly pay distribution to just 16%. More recently the Labour Force Survey suggests a more rapid decline. Labour Force Survey data show that hourly entry wages have been declining in the nineties both in real terms and relative to other jobs.

Table 5 The changing pattern of real wages in entry jobs

	Median (%)	Entry wage in overall distribution (%)
Weekly wages		
GHS		
1980	104.2	19.1
1984	107.3	19.3
1988	106.7	17.6
1990	107.1	15.7
LFS		
1993	99.8	17
1995	93.9	15.3
1997	99.2	16
Hourly wages		
GHS		
1980	3.63	22.3
1984	3.73	20.8
1988	3.98	19.2
1990	3.98	16.6
LFS		
1993	4.35	23.2
1995	4.17	20.7
1997	4.02	19.3

Source: LFS 1993-1997, GHS 1980-1990. GHS data are 3 year averages centered on year shown. Figures in April 1998 pounds.

Evidence on durations of joblessness and duration dependence

The duration of unemployment has been well studied over the years but the picture of worklessness in a broader sense has been less well documented. Evidence suggests:

- long-term unemployment rose sharply in the early 1980s but has cycled since. It has generally risen and fallen with aggregate unemployment with no clear trends;
- male inactivity has risen sharply especially for older men. Durations here are very much longer than for unemployment;
- fewer women are taking a break from the labour market around child birth and when they do it is shorter. These changes are muted for lone parents and partners of the unemployed;
- adult members of workless households have typically not worked for 3 years or more. This has risen sharply since the early 90s;
- exit rates from unemployment fall sharply with duration up to about two years. The statistical evidence is that the general decline in exit rates since the 1970s is not largely due to variation in who becomes unemployed. But the long standing pattern of declining exit rates with duration has never fully been established as being due to individual or area heterogeneity or true duration dependence;
- an alternative approach is to look at the impact of schemes that get the long-term unemployed into work or training/education. Random assignment experiments in US suggest that work and work based training are useful in raising employment (and wages) especially for older people and lone parents. Raising job search and job search skills are especially helpful. This suggests that there is al least some duration dependence and heterogeneity in search effectiveness.

Long-term unemployment (12+ months) accounted for around 20% of the unemployed in the 1970s. After the 1980s recession it has cycled from 30 to 40% (see figure 1 and 2 taken from Nickel, 1998). There appears to be a broadly stable relationship between the level of unemployment and the share that is long-term unemployment; (Machin and Manning (1998)).

It is important to remember that the unemployed make up a fraction of those not in work (around 20%) and among the inactive

patterns of durations out of work have changed considerably. The inactive have switched sharply from primarily being women with young children and a working spouse to those who are members of workless households. In 1970s about 20% of inactive were in workless households. This now stands close to 60% (see Gregg, Hansen and Wadsworth, 1998). Older men especially have seen sharp rises in inactivity (Campbell, 1999) whilst lone parents and partners of the unemployed have not increased attachment to the labour market in the way other mothers have. Of adults in workless households some 60% have not worked in at least the last three years. This has risen sharply, up from 45% in the early 1990s. The new DSS benefit data base also shows that 56% of those claiming benefits while out of work have durations over 2 years in length.

Duration dependence

The flash card evidence for duration dependence is the rapid decline in outflow probabilities with elapsed duration. Evidence developed by Layard, Nickell and co-authors suggests, plausibly, that the general decline in out flow rates after the 1970s could not be attributed to individual characteristics (see Layard, Nickel and Jackman, 1991, for a good summary). But how much of the long standing relationship between duration and exit rates is down to duration dependence is unclear. Estimation and controls for unobserved heterogeneity rely on assumptions which may or may not be believed. However, whilst in UK data statistical studies usually find strong evidence of duration dependence, it is not found for similar data on the continent (see Machin and Manning, 1998). This tends to suggest that it is not the particular techniques used that drive the evidence of duration dependence in the UK.

Another approach is to look at the evidence that schemes to re-attach the long-term unemployed to work are successful. US random assignment experiments net out unobserved heterogeneity. A S Krueger et al (1998) treasury paper suggests that at least for older displaced workers and lone parents job subsidies modestly raise future employment rates (and wages) after subsidy has stopped. This does imply that to some extent time spent in work (or to a lesser extent make work schemes) raises the individuals chances of securing a job match.

The evidence on concentration of unemployment over long periods and repeat spells

The duration of spells of unemployment highlights that most people leave unemployment quickly but most of unemployment is concentrated on a smaller group. Here it is interesting to look at how repeat incidence could change this picture. There is not a large body of existing work but Machin and Manning (1998) present data from BHPS and comparisons with US and German data. Teasdale (1998) presents summary statistics from the JUVOS panel of the claimant unemployed:

- about 30% of the working age population has a spell of unemployment in a five year window. About half of these people have more than one claim. It is higher for men than women and has the highest incidence for people in their twenties;

- Machin and Manning suggest 78% of unemployment in a year falls on those who are unemployed for 6 months or more. Over a four year window about half falls on those with 2 or more years unemployed (not necessarily in one spell);

- these figures are akin to Germany but way above the US where unemployment is spread more evenly;

- they do the same for non-employment (including the inactive). Here, over one year, nearly 90% of time spent out of work in a year falls on those out for 6+ months and 70% of worklessness over four years falls on those out for 2+ years;

- about 45% of those signing on have terminated a previous claim in the last 6 months. Calculations based on mid-points of bands of Tables in Teasdale suggest that 49% of all unemployment in a five year window fell on those with 2 plus years up to 1987 and this was up to 55% in the five years up to 1996. But this could be cyclical.

Is the evidence that unemployment now increases the risk of unemployment causal?

There are three possible reasons why unemployment now is associated with unemployment in the future. That some people are always more prone to unemployment because of low education etc. That high areas of unemployment persist (although the regional pattern has varied quite a lot over the last thirty years). Or finally that being unemployed hurts your future employment prospects (or structural dependence). Sorting out these effects has all the same problems as for duration dependence above.

The few studies in this area for the UK suggest positive structural dependence over and above duration dependence discussed above and that such effects are more marked after 25 or so (Narandranathan and Elias, 1993, Arulampalam and Booth, 1997, McCulloch and Dex, 1996). The National Child Development Survey is a particularly powerful tool in getting at this issue. By following a cohort of individuals all born in the same week and following them through childhood into adulthood, we can observe much more about the individual than is normal in labour market studies. There is also no aggregate macroeconomic cycle to worry about as they are all the same age when any shocks occur. Furthermore we can observe those that move area and use this to separate effects of being in a bad local labour market from individual experiences. The NCDS asks details of individuals experiences in the labour market from 16 to 23 when they were aged 23 and from 23 to 33 at age 33. Table 6 shows the individual patterns across these two spells. It gives the proportion of time spent unemployed or non-employed between 23 and 33 broken done by how many months they were unemployed between 16 and 23. The results are striking. It shows that for those men who had no unemployment before 23, only 1.6% of months between 23 and 33 were spent unemployed. For those with some unemployment but less than 6 months, this rises to 4% of months and for those with more than a years unemployment, an impressive 23% of months between 23 and 33 (or about 2 years). The patterns for women are less acute but

are stronger for non-employment which includes looking after children.
Table 7 controls for the characteristics that might lie behind such correlations. Column one reports the raw differences implied by a Tobit estimation as compared to a base group of those who had no unemployment before 23. Column 2 controls for region of residence in at age 33. Column 3 adds educational qualifications and column 4 adds all parental background, ability test scores behavioural tests etc. that NCDS undertakes on these children. It shows that little of this correlation can be explained by these factors. They reduce the implied impact of a years extra unemployment before 23 on the amount of time spent unemployed from 23 to 33 from adding 21% to 18%. Education has the biggest effect. This is not because education etc are not strongly correlated with a persons chances of being unemployed: they are. It says that for those who do have a lot of early unemployment, of which only a minority are well educated, they have a lot more later unemployment whether they are well educated or not. Table 3.2 looks at men only for brevity but patterns are similar for women. Further extensions to focus on migrants from high unemployment regions to low unemployment regions sees correlations which are only a fraction less strong as those for all people. Taken together with more sophisticated econometric work, not reported but see Gregg (1998), suggests that about two thirds of the raw correlation between higher early unemployment and higher late unemployment is down to the unemployment itself and one third because of area or individual variation. This is a strong justification for early intervention

Table 6: The Effects of Youth Unemployment: New Results from the National Child Development Survey Sample Means

(1) MEN

	No in sample	% time spent UNEMPLOYED between 23-33	% time spent Non-employed between 23-33
All in sample	**4305**	**5.2%**	**6.7%**
of which:			
No unemployment 16-23	**2448**	**1.6%**	**2.6%**
1<6 months unemployment 16-23	**1058**	**4.4%**	**5.9%**
6<12 months unemployment 16-23	**401**	**10.6%**	**12.3%**
12+ months unemployment 16-23	**437**	**22.7%**	**26.9%**

(2) WOMEN

	No in sample	% time spent UNEMPLOYED between 23-33	% time spent Non-employed between 23-33
All in sample	**4700**	**2.6%**	**23.8%**
of which:			
No unemployment 16-23	**2821**	**1.3%**	**21.7%**
1<6 months unemployment 16-23	**1001**	**2.5%**	**23.2%**
6<12 months unemployment 16-23	**448**	**4.6%**	**27.8%**
12+ months unemployment 16-23	**381**	**10.4%**	**36.4%**

Table 7: The Effects of Youth Unemployment: New Results from the National Child Development Survey (A) Men

	Regression[1] of % time spent UNEMPLOYED[2] between 23-33 on:				Regression of % time spent Non-employed[3] between 23-33 on:			
	1	2	3	4	5	6	7	8
1<6 months[4] unemployment 16-23	4.98 (15.7)	4.70 (15.6)	4.48 (15.1)	4.65 (14.7)	5.73 (14.7)	5.29 (14.5)	5.00 (14.0)	5.08 (13.9)
6<12 months unemployment 16-23	10.92 (19.5)	10.45 (19.4)	9.97 (18.9)	10.1 (18.4)	12.05 (18.1)	11.34 (18.0)	10.72 (17.5)	10.85 (17.1)
12+ months unemployment 16-23	20.62 (29.4)	19.55 (28.8)	17.8 (26.8)	17.9 (26.0)	24.01 (29.2)	22.66 (28.6)	20.44 (26.3)	21.16 (25.5)
Other variables included in regression:								
Region[5]	✘	✔	✔	✔	✘	✔	✔	✔
Education[6]	✘	✘	✔	✔	✘	✘	✔	✔
Ability and social background[7]	✘	✘	✘	✔	✘	✘	✘	✔

Notes:
1 Tobit estimates; number of observations = 3903; t-ratios in brackets.
2 Mean of the dependent variable in regressions (1) to (4) is 4.2% (i.e. on average, men in the sample spent 4.2% of their time unemployed between 23-33).
3 Mean of the dependent variable in regressions (5) to (8) is 5.4% (i.e. on average, men in the sample spent 5.4% of their time inactive between 23-33). Inactivity here means time not spent in employment or education. It therefore includes time spent unemployed, sick, and at home.
4 The variables denoting spells of unemployment between 16 and 23 are 0/1 dummies (i.e. they take the value 1 if the individual spent the specified period in unemployment between the ages of 16 and 23).
5 Eleven regional dummies are included to pick up regional effects.
6 Eight education dummies, representing the highest qualification achieved by the individual, are included to proxy for the effects of education on the probability of unemployment.
7 The variables include individual characteristics like ability aged 7, behaviour at 7 and 16, absenteeism, special needs, suffered major/minor illness, involvement with the law, along with parental education, parental unemployment, lone parenthood, financial measures and ethnicity.

Table 8: The Effects of Youth Unemployment: New Results from the National Child Development Survey
(B) Women

	Regression[1] of % time spent UNEMPLOYED[2] between 23-33 on:				Regression of % time spent Non-employed[3] between 23-33 on:			
	1	2	3	4	5	6	7	8
1<6 months[4] unemployment 16-23	2.85 (13.0)	2.60 (13.0)	2.61 (12.9)	2.64 (12.9)	3.25 (3.5)	3.04 (3.4)	3.66 (4.0)	3.35 (4.0)
6<12 months unemployment 16-23	5.12 (14.8)	4.66 (14.7)	4.69 (14.6)	4.70 (14.5)	7.5 (5.5)	6.98 (5.3)	6.73 (5.1)	6.16 (5.1)
12+ months unemployment 16-23	8.58 (19.2)	7.87 (18.9)	7.91 (18.6)	8.12 (18.6)	14.73 (9.6)	13.94 (9.3)	11.21 (7.6)	9.96 (7.3)
Other variables included in regression:								
Region[5]	✘	✔	✔	✔	✘	✔	✔	✔
Education[6]	✘	✘	✔	✔	✘	✘	✔	✔
Ability and social background[7]	✘	✘	✘	✔	✘	✘	✘	✔

Notes:
1 Tobit estimates; number of observations = 4233; t-ratios in brackets.
2 Mean of the dependent variable in regressions (1) to (4) is 2.4% (i.e. on average, women in the sample spent 2.4% of their time unemployed between 23-33).
3 Mean of the dependent variable in regressions (5) to (8) is 24.2% (i.e. on average, women in the sample spent 24.2% of their time inactive between 23-33). Inactivity here means time not spent in employment or education. It therefore includes time spent unemployed, sick, and at home.
4 The variables denoting spells of unemployment between 16 and 23 are 0/1 dummies (i.e. they take the value 1 if the individual spent the specified period in unemployment between the ages of 16 and 23).
5 Eleven regional dummies are included to pick up regional effects.
6 Eight education dummies, representing the highest qualification achieved by the individual, are included to proxy for the effects of education on the probability of unemployment.
7 The variables include individual characteristics like ability aged 7, behaviour at 7 and 16, absenteeism, special needs, suffered major/minor illness, involvement with the law, along with parental education, parental unemployment, lone parenthood, financial measures and ethnicity.

for youth to prevent long-term unemployment, if such interventions work.

References

Arulampalam, W. Booth, A. and Taylor, M. (1997) Unemployment Persistence mimeo Department of Economics Warwick

Gregg, P. (1998) The Scarring Effects of Youth Unemployment: New results from the NCDS, mimeo, CEP, LSE

Gregg, P. Hansen, K. and Wadsworth, J., (1998), The Rise of the Workless Household in Gregg and Wadsworth (eds) The State of Working Britain, MUP, Manchester forthcoming

Gregg, P. and Wadsworth, J., (1996), 'Mind the Gap: The Changing Distribution of Entry Wages in Great Britain', Centre for Economic Performance Discussion paper no. 303.

Gregory, M. and Jukes, R., (1997), 'The Effects of Unemployment on Subsequent Earnings: A study of British Men, 1984-94', Department of Education and Employment Working Paper. Huff Stevens (199*)

Kletzer, L., (1998), 'Job Displacement', Journal of Economic Perspectives, Winter, pp. 115-36.

Kreuger, A. (1998) treasury paper

Layard, R. Nickell, S. and Jackman (1991) Unemployment: Macroeconomic Performance and the Labour Market, OUP, Oxford

Machin, S. and Manning, A. (1998) The Causes and Consequences of Long-term Unemployment in Europe Centre for Economic Performance LSE Discussion Paper no. 400

McCulloch, and Dex, S. (1996) Modelling Male Unemployment Persistence in Britain mimeo University of Cambridge

Naradrathan, W. and Elias, P. (1993) Influences of Past History on the Incidence of Youth Unemployment: Empirical Findings for the UK, Oxford Bulletin of Economics and Statistics Vol. 55 No. 2 pp 161-185

Nickel, S. (1999) Unemployment in Britain in Gregg and Wadsworth (eds) The State of Working Britain, MUP, Machester forthcoming

OECD (July 1996) 'Making work pay' Chapter 2, pp25-58, Employment Outlook 1997. Organisation for Economic Co-operation and Development, Paris.

Teasdale, P. (1998) The Incidence of Unemployment and Repeat Spells Using Claimant Unemployment Data in Labour Market Trends, November, HMSO.

Session 4: Work and Poverty: Discussion

In open discussion on the presentations, the following points were made:

Views on work as an anti-poverty strategy

Current Government policy on poverty focuses heavily on encouraging work, viewing the lack of work as the main cause of poverty. This differs from past policy, to a degree, which provided more help for the poor through the welfare system. It is not clear that the Government's labour market policy (involving re-engagement to the labour market, reforms to make work pay and investment in skills and education) is also a comprehensive anti-poverty strategy.

Initial engagement to the labour market is seen as crucially important. For example, Paul Gregg's work suggests unemployment spells early in a person's life can have detrimental effects. However, initial engagement may not be sufficient to alleviate poverty in the longer term. Indeed it may actually be counter-productive in terms of future earnings and later labour market success if initial engagement is to a low-paid job. An implication of the work on the low-pay, no-pay cycle is that not all jobs are good jobs.

Given the existence of the low-pay, no-pay cycle it was suggested that the Government may need to go further than initial engagement policies, placing more emphasis on how we develop people from their first job. Such increased support would aim to ensure individuals remain employed in the longer term and move up the earnings ladder. This may be achieved by counselling people (which is occurring to an extent in the New Deal, with an on-going case management approach) or more fundamentally by changing the nature of the low wage labour market itself, for example to reduce turnover in low wage jobs.

One of the best safeguards against low pay is having been with your employer for a long time. Very few of the low paid have been with their employer for more than 1 or 2 years. This doesn't mean that we should keep these jobs going, however, as extending the life of low paid jobs doesn't mean they will become good jobs; it is simply the nature of many low paid jobs, that they last only a short time.

Possible explanations for the existence of the low-pay, no-pay cycle included:

- low paid jobs may signal low productivity to employers;
- low paid jobs may deskill, and perhaps more importantly do not skill people, reducing or failing to enhance worker's productivity;
- working in a low-paid job may restrict the amount of effort an individual can devote to search for alternative employment.

Further research should look into which of these, or other explanations for the low-pay, no-pay cycle, are of most importance.

Education was felt to help in the labour market by preventing individuals from becoming either low paid or unemployed. However, education doesn't help individuals get out of these labour market states as much as one might expect. In effect education has a strong effect on the level of earnings, but a lesser effect on changes in earnings.

The ability to predict those susceptible to the low-pay, no-pay cycle would, obviously, aid understanding. However, by definition with scarring one cannot perfectly predict those who will be subject to the low-pay, no-pay cycle. Low pay, of itself, **scars** an individual (whoever they are) **to the low-pay,** no-pay cycle. Past labour market histories can, to an extent, be used to predict – as those in the low-pay, no-pay cycle will have been through it before.

The existence of the low-pay, no-pay cycle was felt to have interesting implications for early intervention. It was felt that shocks and events which occur throughout an individual's life may require 'recovery' action. For instance, no form of early identification would have helped, now redundant, coal-miners. In essence there may be macroeconomic and structural changes which need to be adapted to.

Individual, not just labour market, characteristics need consideration

It is often the case that those with labour market problems simultaneously suffer multiple problems. For example, some may have children but no access to childcare or they may be long-term sick/disabled. Therefore, it may be an individual's personal characteristics, rather than their labour market characteristics, that cause them problems in holding down a job for any period of time. When providing help, policies need to consider personal characteristics and circumstances as well as labour market factors.

Individuals may not only be scarred in terms of their future labour market experience by unemployment. There is also some evidence of a relationship between unemployment and health. A study, using the NCDS, found in 33 year old men that a history of unemployment increased their chances of ill-health. In contrast it seems that stable income perpetuates good health. Work by Andrew Oswald reinforces this point. He has found that happiness (if one accepts that we can measure happiness) falls with unemployment and it falls further with the duration of unemployment. Chillingly, suicide rates also increase with unemployment and increase further with duration of unemployment.

Changing the balance of demand and supply of labour

Increasing the supply of highly skilled people and the demand for low skilled people was seen as a possible way of narrowing the earnings distribution. However, whilst changing the relative balance of demand and supply would change wages at the bottom end of the labour market, there will always be a bottom end. It was felt that there may be a particular problem with people who end up at the bottom of the labour market, especially in terms of lifetime equality. Therefore whilst changing the demand and supply of labour will change the returns to education (through changes in wages) it is questionable whether this will be enough to deal with the scars caused by the experience of unemployment or low pay. In addition increasing the supply of highly skilled workers, or moving people up the skills distribution, may be problematic given the repeatedly poor findings of government training programs.

The problem is simply a lack of demand

It was pointed out that the generation which entered the labour market in the 1930s had a huge experience of unemployment and yet in the post-war 'golden age' period, attachment to the labour market, in terms of the participation rate, was at its highest ever. This would seem to suggest that unemployment did not detrimentally scar these people. It may be that with 2 million people unemployed and large numbers inactive the main problem is simply deficient labour demand. Indeed the labour market may be working extremely well given a general shortage of jobs. It was felt there is a shortage of skilled jobs and that the economy needs to be able to create more skilled jobs.

A large part of the problem was seen as being due to withdrawal from the labour market, rather than specifically unemployment. For instance, if there had been a pick up in economic activity in the labour market in this recovery interest rates would not have needed to increase and so growth could have increased by more. Therefore the fact that some sections of the population are withdrawing from the labour market may be exacerbating demand problems, by inhibiting the economy from growing too quickly.

Session 5: Childhood Poverty and Family Structure

‘Poverty in the early years: evidence from the 1958 and 1970 British Birth Cohort Studies’

John Bynner, Centre for Longitudinal Studies, Institute of Education

Introduction

Children’s poverty is imposed rather than acquired through experience. Yet at the same time, growing up in poverty is a key factor in determining what adult experience, especially in the labour market, is likely to be. In this respect, childhood poverty places limitations on the individual child’s development, relative to others, as expressed in the idea of “deprivation”. In his review of the effects on children of poverty and inequality in the UK, Kumar (1996), for example, refers to “the lack of adequate resources to satisfy certain essential minimum human needs”. But he goes on to say that this apparently “absolutist definition” still has to determine where the minimum standards are set, reflecting a degree of relativity in the term. Even Sen’s (1978) identification of poverty as with “an irreducible core of deprivation” is still relativistic in the sense that deprivation embraces not only lack of resources to meet basic physical needs, but those needs which are more likely to be culturally acquired. Families living in homes without bathrooms or even telephones exhibit a degree of deprivation today that would not have been recognised sixty years ago.

Thus poverty is both defined by circumstances and, to a certain extent, determines how those circumstances affect life. In discussing “Children at Risk”, OECD (1996) adopt a definition of “risk” from Schoor (1988), in which “non school factors” affecting school failure and adolescent problems, including delinquency, comprise:

- growing up in persistent or concentrated poverty, and in a family of low social class;
- being born unwanted or into a family with too many children born too close together;
- growing up with a parent who is unemployed, a teenager, a school dropout or illiterate;
- having a parent who is impaired as a result of alcoholism, drug addiction or mental illness and/or a parent who is without social support;
- growing up in a family or neighbourhood with such a high level of social disorganisation as to leave a young child unprotected from abuse and violence, and with little exposure to healthy role models;
- growing up outside ones family, especially in multiple foster care or institutional placements;
- growing up with the sense that one has bleak prospects for good employment or a stable family life and little power to affect one’s own destiny and that one is not valued by the outside world.

The centrality of persistent poverty in this list emphasises its significance in lying at the core of disadvantage. This also makes the point that it is in combination with other factors that the potency of poverty for damage to life chances is most evident. A child may be able to withstand any one or two of such “risk” factors, but in combination they constitute severe barriers to normal and healthy development. Endean and Harris (1998) (from DSS and ONS respectively) extend this idea to the definition of poverty itself, embracing among their “non-income indicators”, child health, education and qualifications, workless households, multiple deprivation. The DSS area-based index of deprivation similarly ranges beyond the confines of family income, including among its twelve indicators: unemployment, receipt of benefits, mortality rates, low educational attainment, derelict land, crime availability of basic household amenities, and household overcrowding.

Research resources

The study of the consequences of early childhood poverty in the shorter and longer term for people’s life chances is greatly aided by the availability of the large-scale longitudinal birth cohort studies that are unique to Britain. Each has involved following up one week’s cohort of babies from birth into adult life, starting in 1946, 1958 and 1970 respectively. All have contributed to understanding the adverse effects of childhood poverty. For example James Douglas’s pioneering studies of the effects of social class on school achievement, such as The Home and the School (Douglas, 1964) were based on the 1946 study. More recent studies such as Kuh and Wadworth’s (1991) analysis of the effect childhood influence on adult earnings have similarly used this source. However, the birth cohort study that has been particularly concerned with the social outcomes in adulthood of earlier child circumstances is the 1958 birth cohort or “National Child Development Study” (NCDS) (Ferri, 1993). Less widely used or well known, but in many respects particularly relevant to current concerns is the 1970 British Birth Cohort Study (BCS70) (Bynner, Ferri and Shepherd, 1997). In this paper I want to draw on examples of the use of these two latter longitudinal data sources to examine three questions:

- How is child poverty measured?
- What are the short-term, medium term and long-term effects of child poverty on later life chances?
- Are the effects of child poverty changing in successive cohorts?

How is child poverty measured?

A variety of approaches to the measurement of poverty, have been adopted by different researchers working with the birth cohort studies. These are informative in revealing different theoretical and methodological predilections and also help to explain some of the inconsistencies in particular research results; though overall coherence in the patterns of relationships is evident. Definitions vary from the most narrow, concerned with income-based definitions of poverty, (e.g., Gregg et al, 1998), to those that extend to material circumstances (e.g.Wedge and Prosser, 1973). The broadest definitions extend to cultural resources, including the parents' level of education (e.g. Osborne and Milbank, 1987). At this level, poverty or deprivation is now frequently translated into an even broader generic notion that of social exclusion, i.e. economic and cultural deprivation are obstacles to the child's prospects, which in a sense are seen as the responsibility of the state. Figure 1 summarises the range of approaches.

Figure 1 Poverty Definitions

Narrow definition	**Broad definition**	**Broadest definitions**	
Low family income	Poverty	Deprivation	Social Exclusion
economic indicators	economic material indicators	economic material cultural indicators	disadvantage in antecedents disadvantage in outcomes/ statuses

Associated with and, in a sense, underpinning all of these definitions is the ubiquitous social class based on the Registrar General's classification of (usually) father's occupation. In the birth cohort studies, the first social class measures were those derived at birth, and subsequently those taken in the later sweeps of the studies: at ages 7, 11, 16, 23 and 33 in the case of NCDS, and 5, 10, 16 and 26 in the case of BCS70. Through adulthood (post 18), of course, the cohort member's social class as defined by their own occupation, comes into the picture alongside that of their parents.

Beyond the questions of concept coverage researchers also differ with respect to the assumptions of their measurement method. For example, some researchers take the absolute level of a poverty indicator, such as family income, or use it to identify relative magnitude, e.g., bottom quartile range. Another variant resides in whether cross-sectional poverty states are used in longitudinal models as opposed to cumulative measures across states at different times e.g. persistent as opposed to transient poverty. Some of the more complex indices of poverty embrace cause and effect within the measure itself. For example, parents' education in some formulations is treated as exogenous to parents' occupation on which social class is based. In others both are treated as exogenous.

Some examples of the different measurement approaches are set out below.

- **Wedge and Prosser: Born to Fail (1973):** Using NCDS up to age 11, Wedge and Prosser defined poverty in terms of three broad sets of indicators: family size – one parent family or large family (23%); income – child receives free school meals or family on supplementary benefit (14%); housing – more than 1.5 people per room, or where there was no hot water supply for the family's exclusive use (23%). Their poverty index comprised counts of the number of characteristics present in the child's family. On this basis the most disadvantaged group of all, exhibiting all characteristics, comprised 6.2% of the NCDS sample. This contrasted with the group who showed none of these characteristics 63.9%.

- **Osborn and Milbank: The Effects of Early Education (1987):** Using BCS70 data up to age 10 Osborn and Milbanks "social index" is a much broader concept of deprivation than Wedge and Prosser's, embracing cultural as well as economic components. It comprises 7 indicators: social class of father, highest educational qualification of either parent, housing tenure, type of accommodation, persons per room ratio, car ownership and telephone availability. Those exhibiting the most poverty, i.e. who showed the poverty attribute on all these indicators, comprised between 6% and 8% of the whole sample.

- **Hobcraft: Intergenerational and Life Course Transmission of Social Exclusion (1998).** Using the complete NCDS dataset to predict adult outcomes up to age 33, Hobcraft constructed a longitudinal index based on just two indicators: reported financial difficulties at 7, 11 and 16, and free school meals at 11 and 16. The highest levels of poverty would be shown by existence of these attributes in the cohort members' families at all ages and stages. The most affluent families would show none of them.

What are the short-term, medium term and long-term effects of child poverty on later life chances?

Wedge and Prosser's book, Born to Fail, was one of the first to demonstrate, using NCDS, the strong effects of early childhood poverty on subsequent performance through primary school. Wedge and Prosser calculated that at age 11 disadvantaged children were, on average, 3.5 years behind the other children in reading and maths test scores, though one in seven actually did better than half the other children. They noted that the key predictor was social class, concluding that the ethos of the British primary school was antipathetic to the educational progress of their largely working class intakes. Doria Pillings' book Escape from Disadvantage (1990) reported a follow-up by interview at age 27 of those individuals who as children had been defined by Wedge and Prosser as disadvantaged, yet subsequently had succeeded in education and in the labour market. She found that a

common feature of their experience was sustained parental aspirations and commitment from teachers, which overrode the effects of what was often temporary hardship. In other words childhood disadvantage is both pervasive and permeable in its effects. It inhibits life chances, but given a particular family and school context, it need not be permanently disabling.

Osborn and Milbank's study focused on a particular feature of the way middle class parents build the foundations for their children's school achievement – the provision of pre-school educational experience. They found that such experience, especially the pre-school play group, was significantly more common in families that scored high on their social index (absence of deprivation). They also found in a multivariate analysis that although pre-school experience (excluding the Local Authority day nursery) and social index score predicted reading and maths performance at age 10, the social index score was much the stronger predictor. Of the various kinds of pre-school provision, the largely middle class home-based playgroup with small numbers of children again came first.

When does the social gradient in educational achievement first become evident? Using the 1970 cohort we can go back to cognitive development before the age of 5, taking advantage of two early data sets based on sub-samples. Feinstein's (1998) analysis of BCS70 data collected on cognitive development at 22 months and 42 months, demonstrates a social class gradient in cognitive development indicators beginning at 22 months, which expands through 42 months and up to age 5. In other words, even in early infancy, not only is a social gradient apparent but this is accentuated with every subsequent month of life.

Modelling poverty outcomes in childhood and adulthood

The studies reviewed so far demonstrate strong social effects on children's subsequent progress. The studies by Gregg et al (1998) and Hobcraft (1998) using NCDS data (both reported in this volume) extend the findings to adulthood, demonstrating the persistent effects of childhood poverty, over and above other variables, on a number of adverse (social exclusion) outcomes in adulthood including low income. Such findings parallel those that are reported in more detail below on the origins of basic skills deficits in adulthood (Bynner and Steedman, 1995; Parsons and Bynner, 1998.)

Are the effects of child poverty changing in successive cohorts?

From the research reviewed above the connection between childhood poverty and adult disadvantage is well established. The mediating factor is educational achievement on which persistent poverty exercises an inhibiting effect. The last issue to consider is whether the relationship between poverty/class and education and their adult outcomes is changing over time. Is there a cohort effect? To find out NCDS and BCS70 data were used to model separately for each cohort the effects of childhood poverty on two kinds of outcomes: educational attainment in childhood and experience of unemployment in adulthood (Bynner, 1998). Using representative 10% samples of each cohort in which adult literacy and numeracy were measured (Bynner and Steedman, 1995; Parsons and Bynner, 1998), the longitudinal data were used to encompass the amount of unemployment experienced since leaving school up to age 21 (BCS70) and up to age 23 (NCDS).

Three childhood poverty indicators were employed: "free school meals", "overcrowding in the home" and "father's social class". Notably there were changes sometimes in opposite directions in the prevalence of these characteristics in the two birth cohorts. In the case of free school meals at age 11, NCDS, and age at 10, BCS70, there was a rise from NCDS to BCS70 – 10% to 16%. In the case of overcrowding, there was a marked decrease (65% to 30%). The proportion of fathers in professional occupations increased between the two cohorts (20% to 27%) and the percentage in unskilled manual jobs declined (22% to 18%). In other words, there was increasing disadvantage associated with free school meals, while disadvantage associated with overcrowding and social class was reducing.

To identify the short and longer-term effects of family poverty within a comprehensive model, structural equation modelling using the LISREL program was applied. The model specified adult unemployment related to a range of variables measured over the period 16 to 21/23. These variables were themselves related to variables measured at 10 and then before 10 back to birth. The effectiveness of the model was assessed in terms of estimated multiple correlations squared. These signified the percentages of variance in outcome variables at different ages that could be accounted for in terms of all the variables included in the model measured prior to them. The program also gave the standardized regression coefficients, or 'path' coefficients, between the variables measured at different time-points, indicating the strength of each of the longitudinal relationships in the model, holding constant the effects of all other variables. Variables were included only if they had been measured in the same way in both BCS70 and NCDS (Table 1). Full details are given in Bynner (1997).

Table 1: Adult outcomes of childhood poverty: variables included in the model

- At 21 (BCS70) and at 23 (NCDS): amount of unemployment experienced since leaving school;
- 16 up to 21 (BCS70) and 16 up to 23 (NCDS): school leaving examinations score at 16, adult literacy score, adult numeracy score, age left full-time education, number of jobs, malaise (measure of depressive mood), whether experienced any work based training;
- At 10 (BCS70) and at 11 (NCDS): maths test score, reading test score, mother's interest in education, father's interest in education, overcrowding, rented housing;
- At birth: age mother left full-time education, age father left full-time education, family social class (assessed from father's occupation).

There were two notable results from the analysis of particular relevance to our interest here. First, in relation to the explanation of adult unemployment outcomes, there were marked differences between the cohorts. 16+ attributes and experiences played a larger part in explaining unemployment in the 1970 cohort than in the 1958 cohort as reflected in the percentages of variance explained -11% in the case of BCS70 and 5% for NCDS. This suggested that personal attributes were more at a premium in employability for the 1970 cohort than for the 1958 cohort for whom unemployment was much more labour market dependent. Those attributes to do with education (exam score, numeracy and literacy), as we know, are rooted in childhood experience, so we can conclude that the effects of childhood poverty on the experience of unemployment was stronger in the younger cohort.

The second result of interest is the relationships between variables at the other end of the model, i.e. those relating the antecedent conditions at birth to attributes at age 10 (BCS70) and at age 11 (NCDS). In the 1958 cohort there were much stronger connections between the two, especially between social class and the 10-year (BCS70) and 11-year (NCDS) outcomes. Maths and reading scores, mothers interest in education, fathers interest in education, overcrowding and rented housing were all predicted by family social class at birth in the 1958 cohort. In contrast, in the 1970 cohort, the relationships were much weaker or non-existent. For example, there was no connection between family social class at birth and the mother or father's interest in education, and there were weaker relationships with maths and reading. For the 1970 cohort these interest variables were more strongly related to the age the mother had left full-time education. Only overcrowding and housing tenure were related to social class in the 1970 cohort but more weakly than in the 1958 cohort.

These results point to a greater degree of separation of class-based origins from subsequent experiences and achievements in the younger cohort – a greater degree of fluidity in life chances than was the case for the older NCDS cohort.

Conclusion

This paper started with a consideration of the various meanings of childhood poverty, and the different approaches to measuring it in the 1958 and 1970 British birth cohort studies. It ended with models of the effects of childhood poverty on adult life chances. The variety of approaches presents problems in drawing firm conclusions about whether it is poverty, deprivation, general disadvantage or social class that lies behind educational difficulties and subsequently adult social exclusion. Indexes constructed from a number of indicators simplify analysis but obscure some of the nuances in relationships that may be particularly significant for policy. For this reason single indicator variables which can be mapped across studies are for most purposes preferred.

Overall though the patterns of relationship are consistent in pointing repeatedly to the damaging effects of childhood poverty on later educational achievement and adult employment prospects and that such poverty is strongly associated with social class. The weakening of the class effect in the younger (BCS70) cohorts points to a possible loosening of old boundaries and weakening of structural imperatives which can be seen as encouraging for policy interventions. Whether this trend will persist remains an open question for which further research, e.g. on cohort members' children, is needed to resolve. In the meantime we can conclude that resources directed at families and children, including the provision of educational opportunities for the parents, are likely to break more effectively into the vicious circle of class, poverty and educational disadvantage than was the case in the past.

References

Bynner, J. (1998) 'Education and Family components in the transition from school to work', *International Journal of Behavioural Development*, 22, 29-53.
Bynner, J. and Steedman, J. (1995) *Difficulties with Basic Skills.* London: Basic Skills Agency.
Bynner, J , Ferri, E. and Shepherd, P. (eds.)(1997) *Twenty-Something in the 1990s: Getting on Getting By, Getting Nowhere.* Aldershot: Ashgate.
Douglas, J. W.B. (1964) *The Home and the School*, London MacGibbon and Kee
Endean,R. and Harris, T. (1998) 'A Picture of Poverty in the UK', *Social Trends Quarterly Pilot edition*, Office of National Statistics
Feinstein, L.(1998) *Pre-school Educational Inequality? British children in the 1970 cohort*, Discussion Paper 404, Centre for Economic Performance, London School of Economics.
Ferri, E. (ed.) (1993) *Life at 33.* London: National Children's Bureau.
Gregg, P., Harkness, Machin, S. and Thomas, J. (1998) *Child Development and Family Income Report for the Joseph Rowntree Foundation*, mimeo.
Hobcraft, J. (1998) *Intergenerational and Life Course Transmission of Social Exclusion: Influences of Childhood Poverty, Family Disruption and Contact with the Police*, Case-paper 15, Centre for the Analysis of social Exclusion, London School of Economics.
Kuh, D. and Wadsworth, M. (1991) 'Childhood Influences on Adult Male Earnings, *British Journal of Sociology*, 42, 537-55.
Kumar, V. (1993) *Poverty and Inequality in the UK: The Effects on Children*, London: The National Children's Bureau.
Organisation for Economic Co-operation and Development (1996) *Our Children at Risk*, Centre for Educational Research and Innovation, Paris: OECD.
Osborn. A.F. and Milbank, LE. (1987) *The Effects of Early Education.* Oxford: Clarendon Press. Parsons, S. and Bynner, J. (1998) Influences on Adult Basic Skills. London: Basic Skills Agency.
Pilling, D. (1990) *Escape from Disadvantage.* Basingstoke: the Falmer Press.
Sen, A. (1978) *Three Notes on the Concept of Poverty*, Geneva: International Labour Organisation.
Wedge, P. and Prosser, H. (1973) *Born to Fail.* London: Arrow Books.

'Early childhood interventions and outcomes'

Jane Waldfogel, Columbia University and Centre for Analysis of Social Exclusion, London School of Economics

Introduction

Recent advances in brain research have provided new evidence that experience in the earliest days, weeks, and years of life matters. The human brain, we now know, grows very rapidly in the first three to five years of life, and what happens in those first years can either promote development or curtail it.[1]

This new evidence from brain research has greatly increased interest in the effects of early childhood interventions on outcomes for children. In this paper, I lay out some ground rules for the analysis of early childhood interventions and outcomes. Then I consider what we know about potential benefits and ill effects, and then conclude with comments about what we don't know.

Ground rules for the analysis of early childhood interventions and outcomes

Before reviewing the evidence on early childhood interventions and outcomes, it is important to establish some ground rules for the analysis.

The first is that one must be clear about what type of intervention one is analysing. Early childhood intervention and childcare are not synonymous. Early childhood intervention refers to programs such as childcare or home visiting that are designed to promote the development of children from birth through the time they enter school, and typically these programs are targeted to children identified as high-risk for poor development. Childcare, in contrast, is not always designed primarily as an early childhood intervention, and may be targeted to other groups (for instance, the children of employees or students). Childcare is very heterogeneous, with provision ranging from childminders, babysitters, and nannies to playgroups and nurseries and pre-schools.[2] Moreover, we do not know very much about the quality of childcare being offered in most childcare settings.[3] Yet, we know that quality of childcare matters for child outcomes.[4] Thus, in reviewing any study of early childhood intervention and outcomes, it is important to establish what model of intervention was provided, whether it included childcare, and, if so, what, if anything, we know about the quality of that care. It is also important to think about what the intervention was meant to provide; some models, for instance, place more weight on cognitive development than others.

The second ground rule is that one must be clear about when the intervention was provided. In the case of childcare, there is a great deal of evidence that childcare begun in the first year of life has a different effect on later emotional adjustment than care begun thereafter (Haskins, 1985; Belsky and Eggebeen, 1991; Baydar and Brooks-Gunn, 1991; Smith, 1994; Bates et al, 1994). The same may be true of cognitive development, with childcare begun in the first year of life appearing to have negative effects for some groups (Desai, Chase-Lansdale, and Michael, 1988; Blau and Grossberg, 1990; Baydar and Brooks-Gunn, 1991; Smith, 1994), while care after the first year of life seems to have positive effects (Blau and Grossberg, 1990; Baydar and Brooks-Gunn, 1991; Brooks-Gunn, Liaw, and Klebanov, 1992; Brooks-Gunn et al, 1993).[5] The few studies that have been able to control for childcare quality find that it plays an important mediating role (Vandell, Henderson, and Wilson, 1988; Field, 1991; NICHD, 1997), as does the type of care (Howes, 1988 and 1990; Baydar and Brooks-Gunn, 1991; Field, 1991; Smith, 1994). It may also matter whether the care was full-time or part-time.

The third caution is that one must be clear about which children received the intervention. Again using childcare as an example, the age at which a child enters childcare is obviously a critical mediating factor, but so too are factors such as the child's attributes, family background, and current living situation. These characteristics may influence both the type of childcare used and the child's outcomes; thus, if child and family characteristics are not properly controlled, one may erroneously attribute outcomes as the result of childcare when they are in fact the result of other factors. Further complicating the analysis is the fact that childcare and family characteristics may have an interactive effect. For instance, many studies have found that children from families that are economically disadvantaged gain more from childcare in terms of their cognitive development than do other children (see, for example, Desai, Chase-Lansdale, and Michael, 1988; Vandell and Ramanan, 1992; Caughy, DiPietro, and Strobino, 1994).

The fourth point is that one must be clear about what outcomes one cares about. To a large extent, the outcomes one tracks will depend on the type of intervention being considered, the time at which it was delivered, and the type of children who received it, but it is important to remain open to unanticipated outcomes. Thus, in tracking the effects of early childcare, it is natural to focus on issues of separation and attachment, but it would be useful to look at later social and cognitive outcomes as well.

---

[1] See Carnegie Task Force on Meeting the Needs of Young Children (1994) and Shore (1997).

[2] To narrow the scope of this paper, I am specifically referring to childcare programs rather than to childcare policy more generally. There is a large literature on the effects of childcare costs on women's employment. For recent reviews, see Anderson and Levine (1998) and Han and Waldfogel (1998).

[3] Nor is there agreement on how to define quality of childcare. Childcare advocates tend to point to structural features of childcare programs such as the group size, child-staff ratio, and health and safety requirements, while parents tend to look for a caregiver who is warm and sensitive, and conveniently located. Researchers try to measure both types of characteristics, as well as the continuity and stability of the care.

[4] For recent evidence on this point, see Burchinal *et al* (1998) and the NICHD Early Child Care Network (1998).

[5] Very few studies have examined differences in outcomes associated with differences in timing within the first year of life. Baydar and Brooks-Gunn (1991) is an important exception.

And, in assessing cognitively-orientated programs for older pre-schoolers, it makes sense to look at school outcomes but it is also important not to lose sight of other outcomes that may be affected. Implicit in this discussion is the notion that it makes sense to look at long-term as well as short-term outcomes, and at potential benefits for society as a whole in addition to those that may accrue to the child and his or her family.

With these ground rules in mind, let us now turn to the evidence on the potential benefits, and the potential ill effects, of early childhood interventions.

Potential benefits

We now know a good deal about what types of interventions at what time can have positive effects for what types of children and in what respects. Much of the evidence comes from the United States so the summary that I present will have a very American flavour.[6] I will have more to say on this point later.

There have been several excellent reviews of the U.S. research on early childhood interventions and outcomes. The most recent, and the most useful for the purposes of this paper, is the RAND study which rigorously assessed nine early intervention programs (Karoly et al, 1998).[7] In order to be included in the RAND review, studies had to meet high scientific standards; in particular, they had to have used random assignment or other techniques to control for pre-existing differences between treatment and controls and they had to follow the treatment and control groups over time so that they could assess long-term as well as short-term outcomes. The results of the RAND review, summarized in Table 1, show that well-designed early intervention programs can make a positive difference in the lives of children. The results also show that the effects of programs vary by what specific type of program was offered. Eight of the nine programs were cognitively oriented and all of these programs were successful at raising children's cognitive test scores or school achievement as measured by higher IQ scores, higher school achievement test scores, less time in special education, better grades, less grade repetition, or higher rates of graduation from high school. But the gains of these programs were not limited to cognitive outcomes. The High/Scope Perry Pre-School Project, for instance, led to higher employment, earnings, and income; it also led to lower rates of crime and delinquency, as did two other programs (the Syracuse FDRP and the Chicago CPC programs). Interestingly, although most programs were child-focused, many were successful at changing parents' behaviours in positive ways: the Elmira PEIP home visiting program reduced abuse and neglect and also reduced parental welfare use; the Houston PCDC and the IHDP home visiting and day care programs improved mother-child interaction and the HOME score (an index of how well the home environment promotes child development); the Syracuse FDRP home visiting and day care program and the Carolina Abecedarian program raised mothers' level of education; the Carolina Abecedarian and IHDP programs raised maternal employment; and the Chicago CPC day care and follow-through program raised parents' involvement in their child's school.[8] Some of these effects on parents were intended but most were not.

Program outcomes varied by when services were delivered. In general, programs that intervened earlier and that were more intensive (such as Carolina Abecedarian and IHDP) had stronger effects than those that intervened later and less intensively. Programs (such as Carolina Abecedarian and the Chicago Child-Parent Centers) that included a follow-through component were more successful at sustaining gains than those that didn't. Consistent with prior research, some programs were more beneficial for higher-risk children. For instance, the IHDP program produced the greatest IQ gains for the children with the least educated parents.

The Rand study did not include Head Start because no Head Start evaluation met the Rand criteria for scientific rigour. However, Head Start is an important example: it is the single largest American childcare program and probably the best known. Early studies of Head Start concluded that the program had positive effects on children's cognitive abilities and school achievement but these effects seemed to "fade out" over time (McKey et al, 1985). However, the most recent evidence on Head Start reveals a more nuanced story (Lee et al, 1990; Currie and Thomas, 1995, 1996a, and 1996b). Children who attended Head Start have higher test scores at the end of the program than siblings who stayed at home or attended another type of pre-school. Head Start children are also more likely to be immunized than siblings who stayed home. While the test score effects for African-American children fade out fairly rapidly, perhaps because they go on to attend poor schools, the effects for white and Hispanic children are longer-lasting. White and Hispanic children who attended Head Start have higher test scores at age 10 than comparable children who did not attend Head Start. White Head Start children are also less likely to have repeated a grade by age 10 than comparable white children who did not attend Head Start.

Head Start continues to enjoy broad public and bipartisan support in the United States, and the program is now being expanded in two directions. First, Early Head Start is now delivering services to children under the age of three, reflecting the emphasis on interventions in the first three years of life (and also reflecting the fact that older pre-school age children are increasingly likely to be served by the public schools or other pre-schools). Second, Head Start Follow-Through programs are now following Head Start children into the school years, to see whether Head Start gains can be better maintained if follow-through services are provided.

---

[6] For evidence on Sweden, see Andersson (1989) and Hwang (1990).

[7] See also recent reviews by Barnett (1995), Crane (1998), Ramey and Ramey (1998a, 1998b, and in press).

[8] Unfortunately, not all programs tracked parental outcomes, and those that did tended to track outcomes for mothers only. Thus, we do not know very much about the effectiveness of early childhood interventions in changing the behavior of fathers.

Potential ill effects

There is also a fairly large body of research on the potential ill effects of early childhood interventions, although this research has tended to focus on a very narrow question, namely, whether maternal employment and early childcare – childcare begun in the first year of life – have adverse outcomes for children. Much of the emphasis in this line of research has been on socioemotional rather than cognitive outcomes, with a particularly vigorous debate about attachment. Several studies found differences in attachment between children who had been in early childcare and those who had not, but experts disagreed about how to interpret these results. If children who had been in early childcare engaged differently with their mothers, this might be a symptom of attachment problems (Belsky, 1988) or it might be a mature, adaptive response to the child care experience (Clarke-Stewart, 1988). Nor was it clear how such attachment differences might affect later outcomes.

This line of research, and the associated debate, dominated the childcare research agenda in the United States for many years.[9] Only recently has it given way to interest in how specific types of child care early in a child's life affects outcomes for specific types of children.

The progress in this area, at least in the U.S., is to a large extent a result of the formation of the NICHD early childcare network. This unprecedented initiative brings together many of the country's leading developmental psychologists, including prominent representatives from both sides of the attachment debate, in a unique national longitudinal study of the effects of early childcare on child outcomes. Results from this study, which is still ongoing, are shown in Table 2. These results suggest that one can not make sweeping conclusions about whether early childcare harms, or helps, children; rather, the effects of early childcare on a child's attachment, child-mother interactions, and cognitive and behavioral outcomes depend critically on the characteristics of that care (including the quality of the care, its continuity, and the number of hours that the child is in care) and the characteristics of the child and family.[10] Thus, increasingly, interest is shifting from the question of whether early childcare (or maternal employment) harms children to the question of what types of early childcare can be most helpful for what types of children.

What don't we know about early childhood interventions and outcomes

In this concluding section, I want to particularly focus on what we don't know about early childhood interventions and outcomes in Britain. Much of the evidence I have cited comes from the United States which probably at least in part reflects my lack of knowledge about the British research base but also reflects the smaller size of that base.[11] I want to focus on two knowledge gaps in particular.

One, we don't know enough about who is minding the children while mothers work in Britain. The labour force participation of women with young children, and especially those with infants, has increased sharply over the past few decades and is likely to increase further in future.[12] This trend presents both a challenge and an opportunity, and the outcomes for children will depend to a large extent on the type and quality of the care they receive. Yet we know very little currently about what forms of childcare these mothers are using, and the quality of that care.[13] Nor do we know which children begin care early, how young they are, and how many hours a week they are in care. Before we can begin to analyze the effects of childcare on outcomes for these children, we need to understand who they are, when they are beginning care, and what types of care they are in.

Two, we don't know enough about the effects of childcare and other early childhood interventions as delivered in Britain on outcomes for children. Although we can learn a great deal from carefully conducted research in other countries, we do need to be careful to compare like to like. We noted earlier that childcare is very heterogeneous, and of course there is even more variation across countries than there is within them. Moreover, the effects of childcare may also be sensitive to the broader policy context. For instance, we have seen in recent research that the long-run effects of pre-school intervention may depend on how supportive the child's later school is and on whether follow-through programming is provided. Thus, research on British children, receiving British early childhood interventions and then entering British schools, is essential if we are to learn which early childhood interventions would be most effective and whether follow-through programming will be necessary to ensure that effects do not fade out over time.

In summary, we now have enough evidence to conclude that early childhood interventions can make a difference, but we need to learn more about what types of childcare children in Britain are currently using and about what types of childcare and other early childhood interventions, delivered at what time and for which children, would achieve the best outcomes for disadvantaged children in Britain.

---

[9] There has been a very active debate on these topics in Britain as well (McGurk *et al*, 1993). Studies in Britain have produced mixed results about early childcare and socioemotional development; for instance, Osborn and Milbank (1987) found negative effects but Melhuish and Moss (1991) didn't. The results for cognitive development have been more consistently positive; for instance both Osborn and Milbank (1987) and Melhuish and Moss (1991) report positive effects, as do recent reviews by Ball (1994) and Zoritch and Roberts (forthcoming), but see also Morgan (1996).

[10] Early results from the NICHD study of early child care, which is following a total of 1364 children from 10 sites across the U.S., have been reported by the NICHD Early Child Care Research Network (1996, 1997, 1998 and in press).

[11] For recent reviews of the British research, see Oliver, Smith, and Barker (1998) and Sylva (1994). See also the recent research by Francesconi and Ermisch (1998a, 1998b and 1998c) on the effects of maternal employment on later child outcomes.

[12] The share of infants with working mothers has risen from 20% in 1981 to 36% in 1990 to 47% in 1997 (Gregg and Wadsworth, 1998). Current policy initiatives such as increased rights to parental leave, the childcare tax credit, and the New Deal for lone parents are expected to lead to further increases in the share of women working and using childcare while their children are very young.

[13] In the 1991-92 GHS, 46% of families with a child under the age of one used some form of non-parental child care, with about 16% using unpaid informal care, 10% using nurseries, and 20% using other forms of paid care. The share of infants in care has probably risen a good deal since then.

References

Anderson, P. and P. Levine (1998). "Child Care and Mother's Employment Decisions". Paper presented at the Conference on Labour Markets and Less-Skilled Workers, Washington, D.C., November 5, 1998.

Andersson, B.-E. (1989). "Effects of Public Day Care: A Longitudinal Study". Child Development, 60, 857-867.

Ball, C. Start Right: The Importance of Early Learning. London: Royal Society of the Arts.

Barnett, W.S. (1995). "Long-Term Effects of Early Childhood Programs on Cognitive and School Outcomes". The Future of Children, 5(3), 25-50.

Bates, J.E., D. Marvinney, T. Kelly, K.A. Dodge, D.S. Bennett, and G.S. Pettit (1994). "Child-Care History and Kindergarten Adjustment." Developmental Psychology, 30, 690-700.

Baydar, N. and Brooks-Gunn, J. (1991). "Effects of Maternal Employment and Child Care Arrangements in Infancy on Preschoolers' Cognitive and Behavioral Outcomes: Evidence from the Children of the NLSY."Developmental Psychology, 27, 918-931.

Belsky, J. (1988). "The 'Effects' of Infant Day Care Reconsidered." Early Childhood Research Quarterly, 3, 235-272.

Belsky, J. and D. Eggebeen (1991). "Early and Extensive Maternal Employment/Child Care and 4-6 Year Olds Socioemotional Development: Children of the National Longitudinal Survey of Youth." Journal of Marriage and the Family, 53, 1083-1099.

Blau, F. and A. Grossberg (1990). "Maternal Labour Supply and Children's Cognitive Development." NBER Working Paper.

Brooks-Gunn, J., F. Liaw, and P. Klebanov. (1992). "Effects of Early Intervention on Cognitive Function of Low Birth Weight Preterm Infants." The Journal of Pediatrics, 120(3), 35-358.

Brooks-Gunn, J., C. McCarton, P. Casey, M. McCormick, C. Bauer, J. Bernbaum, J. Tyson, M. Swanson, F. Bennett, D. Scott, J. Tonascia, and C. Meinert. (1994). "Early Intervention in Low-Birth-Weight Premature Infants: Results Through Age 5 Years From the Infant Health and Development Program." Journal of the American Medical Association, 272(16), 1257-1262.

Brooks-Gunn, J., P.K. Klebanov, F. Liaw, and D. Spiker (1993). "Enhancing the Development of Low-Birthweight, Premature Infants: Changes in Cognition and Behavior over the First Three Years." Child Development, 64, 736-753.

Burchinal, M. R., J.E. Roberts, R. Riggins, Jr., S.A. Zeisel, E. Neebe, and D.Bryant (1998). "Relating Quality of Center Child Care to Early Cognitive and Language Development Longitudinally", paper presented at the International Conference on Infant Studies, Altanta, Georgia.

Carnegie Task Force on Meeting the Needs of Young Children (1994). Starting Points: Meeting the Needs of Our Youngest Children. New York: Carnegie Corporation.

Caughy, M.O., J. DiPietro, and D. Strobino (1994). "Day-Care Participation as a Protective Factor in the Cognitive Development of Low-Income Children." Child Development, 65, 457-471.

Clarke-Stewart, K.A. (1988). "'The 'Effects' of Infant Day Care Reconsidered' Reconsidered: Risks for Parents, Children, and Researchers." Early Childhood Research Quarterly, 3, 293-318.

Crane, J. (editor) (1998). Social Programs That Work. (New York: Russell Sage Foundation).

Currie, J. and D. Thomas (1995). "Does Head Start Make a Difference?" American Economic Review, 85(3), 341-364.

Currie, J. and D. Thomas (1996a). "Head Start and Cognition Among Latino Children". Mimeo, University of California at Los Angeles, Los Angeles, CA.

Currie, J. and D.Thomas (1996b). "Could Subsequent School Quality Affect the Long Term Gains from Head Start?" Working Paper, National Bureau of Economic Research, Cambridge, MA.

Desai, S., L. Chase-Lansdale, and R. Michael (1988). "Mother or Market?: Effects of Maternal Employment on Cognitive Development of Four Year Old Children." Demography, 26, 545-561.

Field, T. (1991). "Quality Infant Day-Care and Grade School Behavior and Performance." Child Development, 62, 863-870.

Francesconi, M. and J. Ermisch (1998a). "Mother's Behaviour and Children's Achievement". Working Paper Number 98-3, ESRC Research Centre on Micro-social Change, University of Essex.

Francesconi, M. and J. Ermisch (1998b). "Mother's Employment, Lone Motherhood and Children's Achievements as Young Adults". Working Paper Number 98-9, ESRC Research Centre on Micro-social Change, University of Essex.

Francesconi, M. and J. Ermisch (1998c). "Family Structure and Children's Achievements". Mimeo, ESRC Research Centre on Micro-social Change, University of Essex.

Gregg, P. and J. Wadsworth. (1998). "Gender and the Labour Market". Forthcoming in P. Gregg and J. Wadsworth, The State of Working Britain.

Han, W.J. and J. Waldfogel (1998). "Child Care Costs, Regulations, and the Employment of Married and Unmarried Mothers". Paper presented at the Annual Meeting of the Population Association of America, Chicago, IL, April 1998.

Howes, C. (1988). "Can the Age of Entry into Child Care and the Quality of Child Care Predict Adjustment in Kindergarten?" Developmental Psychology, 1990, 26(2), 292-303.

Howes, C. (1990). "Relations Between Early Child Care and Schooling." Developmental Psychology, 24(1), 53-57.

Hwang, P. (1990). "Day Care in Sweden". In P. Moss and E. Melhuish (eds) Current Issues in Day Care for Young Children. London: HMSO.

Karoly, L.A., P.W. Greenwood, S.S. Everingham, J. Hoube, M.R.Kilburn, C. P. Rydell, M. Sanders, and J. Chiesa (1998). Investing in Our Children: What We Know and Don't Know about the Costs and Benefits of Early Childhood Interventions. (Santa Monica, CA: RAND).

Lee, V., J. Brooks-Gunn, E. Schnur, and F-R. Liaw (1990). "Are Head Start Effects Sustained? A Longitudinal Follow-Up comparison of Disadvantaged Children Attending Head Start, No Preschool, and Other Preschool Programs." Child Development, 61, 495-507.

McGurk, H. M. Kaplan, E. Hennessy, and P. Moss (1993). "Controversy, Theory, and Social Context in Contemporary Day Care Research". Journal of Child Psychology and Psychiatry, 34, 3-23.

McKey, R.H., L. Condelli, H. Ganson, B.J. Barrett, C. McConkey, and M.C. Plantz (1985). The Impact of Head Start on Children, Families, and Communities. Washington, D.C.: U.S. Government Printing Office.

Melhuish, E.C. and P. Moss (1991). Day Care for Young Children: International Perspectives. London: Tavistock/Routledge.

Mooney, A. and A. Munton (1997). Research and Policy in Early Childhood Services: Time for a New Agenda. London: Thomas Coram Research Unit.

Morgan, P. (1996). Who Needs Parents? London: Institute for Economic Affairs.

NICHD Early Child Care Research Network (1996)."Characteristics of Infant Child Care: Factors Contributing to Positive Caregiving". Early Childhood Research Quarterly, 11, 269-306.

NICHD Early Child Care Research Network (1997). "The Effects of Infant Child Care on Infant-Mother Attachment Security: Results of the NICHD Study of Early Child Care". Child Development, 68, 860-879.

NICHD Early Child Care Research Network (1998). "When Child-Care Classrooms Meet Recommended Guidelines for Quality". Paper presented at a meeting on Child Care in the New Policy Context, U.S. Department of Health and Human Services, Bethesda, Maryland, April 30, 1998.

NICHD Early Child Care Research Network (in press). "Early Child Care and Self-Control, Compliance, and Problem Behavior at 24 and 36 Months". Forthcoming in Child Development.

Oliver, C., M. Smith, and S. Barker (1998). "Effectiveness of Early Interventions", supporting paper for the Comprehensive Spending Review: Cross-Departmental Review of Provision for Young Children, HM Treasury, July 1998.

Osborn, A.F. and J.E. Milbank (1987). The Effects of Early Education: A Report from the Child Health and Education Study. Oxford: Clarendon Press.

Ramey, C.T. and S.L. Ramey (1998a). "Early Intervention and Early Experience". American Pyschologist, 53, 109-120.

Ramey, S.L. and C.T. Ramey (1998b). "The Effects of Early Childhood Experiences on Developmental Competence". Paper presented at the Conference on Investing in Children, Columbia University, New York, New York, October 15-17, 1998.

Ramey, C.T. and S.L. Ramey (in press). Right from Birth: Building Your Child's Foundation for Life. New York: Goddard Press, forthcoming.
Shore, R. (1997). Rethinking the Brain: New Insights into Early Development. New York: Families and Work Institute.
Smith, J. (1994). "Maternal Employment and the Young Child." Ph.D. thesis, Columbia University.
Sylva, K. (1994). "The Impact of Early Learning on Children's Later Development" in C. Ball Start Right: The Importance of Early Learning. London: Royal Society of Arts.
Vandell, D., V.K. Henderson, and K.S. Wilson (1988). "A Longitudinal Study of Children with Day-Care Experiences of Varying Quality." Child Development, 59, 1286-1292.
Vandell, D. and J. Ramanan (1992). "Effects of Early and Recent Maternal Employment on Children from Low-Income Families." Child Development, 63, 938-949.
Zoritch, B. and I. Roberts (forthcoming). The Health and Welfare Effects of Preschool Daycare: A Systematic Review of Randomised Controlled Trials. London: Institute of Child Health.

Table 1

The Effects of Early Childhood Interventions: Selected U.S. Studies

Program	Statistically Significant Difference between Treatments and Controls	No Statistically Significant Difference between Treatments and Controls
Prenatal/Early Infancy Project (PEIP) Elmira, New York, 1978-1982 N=304, Random Assignment (RA) First births to young, single, or low SES mothers, served ages 0-2. Home visiting.	Emergency room visits at ages 2-4. Crime/delinquency by age 15.* Reports of abuse/neglect by age 15. Mom's welfare use by age 15.	IQ at age 3 and 4. HOME score at age 4. Mom's education by age 4. Mom's employment by age 15.
Early Training Project (ETP) Murfreesboro, TN, 1962-1965 N=65, RA Low SES children, ages 4-6. Summer part-day (PD) pre-school & home visiting.	IQ at age 6. Achievement at age 7. Special education by age 18. High school (HS) completion after pregnancy by age 18.	IQ at age 7 and 17. Achievement at age 10 and 17. Grade repetition by age 18. HS completion by age 18. Teen pregnancy by age 18.
High/Scope Perry Pre-School Ypsilanti, Michigan, 1962-1967 N=123, RA Low SES & low IQ, ages 3-5. School-year PD pre-school & home visiting.	IQ at age 5 and 7. Achievement at age 9 and 14. Employment at age 19. Special education by age 19 and 27. HS completion by age 27. Crime/delinquency by age 27. Income at age 27. Welfare participation at age 27. Earnings at age 27.	IQ at age 8 and 14. Teen pregnancy by age 19. Grade repetition by age 27. Post-HS education by age 27. Employment at age 27.
Houston Parent-Child Development Center (PCDC) Houston, Texas, 1970-1980 N=291, RA Low SES, ages 1-3. PD day care & home visiting.	IQ at age 2. Mother-child interaction at age 3. HOME score at age 3. Behavior at ages 4-7. Achievement at ages 8-11. Bilingual education at ages 8-11.	IQ at age 3. Special education at ages 8-11. Grade repetition at ages 8-11. Grades at ages 8-11.
Syracuse Family Development Research Program (FDRP) Syracuse, New York, 1969-1975 N=216, control group but not RA Low SES, Ages 0-5. PD (for infants) & full-day (FD) family day care & home visiting.	IQ at age 3. Behavior at age 3. Mom completed HS by age 5. Crime/delinquency at age 15. Grades at age 15.** School attendance at age 15.** Teacher ratings at age 15.** Referred by probation by age 15.**	IQ at age 6. Behavior at age 6. Special education by age 15. Grade repetition by age 15.
Carolina Abecedarian 1 site in NC, 1972-1985 N=117, RA High-risk families, ages 0-8. FD year-round center-based educational day care for pre-schoolers, followed by parent program for school-age kids.	IQ at age 5 Mom's education by age 5. Mom's employment by age 5. IQ at age 8. Achievement at age 8. IQ at age 12. Achievement at age 15. Special education by age 15. Grade repetition by age 15.	HOME score at age 5. IQ at age 15.

Project CARE (Carolina Approach to Responsive Education) 1 site in NC, 1978-1984 N=65, RA High-risk families, ages 0-5. Home visiting & FD year-round center-based educational day care, or home visiting only.	IQ at age 1. IQ at age 3. IQ at age 5.	Childrearing attitudes at age 3. HOME score at age 5.
Infant Health and Development Project (IHDP) 8 sites, 1985-1988 N=985, RA Premature & low birth weight (LBW) infants, ages 0-3. Home visiting for infants followed by FD year-round center-based educational day care.	IQ at age 3. Behavior at age 3. Mother-child interaction at age 3. HOME score at age 3. Mom's employment at age 3. Behavior at age 5.*** IQ at age 5.*** IQ at age 8.*** Math achievement at age 8.***	Mom's education by age 3. Time on welfare by age 3. Subsequent pregnancy by age 3. Behavior at age 8. Grade repetition by age 8. Special education by age 8.
Chicago Child-Parent Center (CPC) Chicago, Illinois, 1967-present N=1539, statistical controls Low SES, ages 3-9. PD pre-school followed by FD kindergarten followed by extra support in classroom and after school in primary grades.	Achievement at age 9. Parents involved in school at age 9. Achievement at age 14. Grade repetition by age 14. Special education by age 14. Crime/delinquency by age 14.	Behavior at age 9. Crime/delinquency by age 16.

* Differences statistically significant for the high-risk group only.
** Differences statistically significant for girls only.
*** Differences statistically significant for heavier LBW children only.

Source: Karoly et al, 1998, Tables 2.1, 2.2, and 2.3.

Table 2

Results from the NICHD Study of Early Child Care

• Childcare per se neither helps nor harms attachment.
For children whose mothers are sensitive caregivers, childcare has no effect on attachment. For children whose mothers are not sensitive, care matters: high quality care leads to more secure attachment, while poor quality care, more than 10 hours per week of care, or more than 1 care arrangement by age 15 months leads to less secure attachment.
• Quality of care has an effect on mother-child relationships.
Higher quality care predicts greater involvement and sensitivity by the mother at 15 and 36 months and more positive interactions at 36 months. Low-income mothers using high-quality child care have more positive interactions with their children at age 6 months than those who do not use care or who use lower-quality care.
• The quantity of care seems to matter as well.
Longer hours of care in the first six months are associated with lower maternal sensitivity and less positive interactions at 36 months. Longer hours of care are also associated with more reported behavior problems at age 2. But, child and family characteristics are more important.
• The quality of child care in the first three years of life affects children's cognitive and language development.
The higher the quality of care – in terms of language stimulation and the type of interactions between the child and caregiver – the higher the child's language skills at 15, 24, and 36 months. Higher quality care also is associated with cognitive development at age 2 and school readiness at age 3. Children in day care centers that meet quality standards across all four domains assessed – child-staff ratio, group size, teacher training, and teacher education – have better language comprehension and school readiness, and fewer behavior problems, than children whose day care centers fail to meet the standards in all four domains.

‘Who divorces? and the legacy of parental divorce’

Kathleen Kiernan, Department of Social Policy and Centre for Analysis of Social Exclusion, London School of Economics

Who divorces?

The subject matter of this presentation was Divorce and Family Breakdown and we started by posing the question Who Divorces? as this has important ramifications for the study of the impact of divorce on children’s lives. Divorce is used as an inclusive short hand term which includes the break-up of marital and cohabiting unions.

In a recent research report (Kiernan and Mueller, 1998) we posed two broad questions: what are the characteristics of the currently divorced; and who divorces? In the first part of this study we used data from the Family Resources Survey to identify the characteristics of the divorced population. In the second part we used two longitudinal studies, the British Household Panel Survey (BHPS) and the National Child Development Study (NCDS) to address the question “Who divorces”.

The BHPS allowed us to examine this issue for individuals and couples of all ages whereas the data from the NCDS allowed us to examine background factors from childhood and adolescence associated with partnership dissolution in adulthood. A number of insights emerged from our longitudinal analyses as well as from the cross-sectional analysis of the Family Resources Survey.

We found that unemployment, reliance on state benefits and disability featured as characteristics of the currently divorced in the FRS and these factors, along with financial difficulties, were also found to be important precursors of divorce from our analysis of the BHPS. This suggests that poor economic and physical well-being may be important stressors in a relationship and that the selection of vulnerable groups into divorce may be an important aspect of the poverty observed amongst the previously partnered, as well as the deprivation that may be a by-product of the divorce itself.

There was also evidence from both the BHPS and the NCDS of an association between emotional factors and subsequent partnership breakdown. The analysis of the BHPS showed that men and women with lower psychological well-being were more likely to divorce in the ensuing few years and analysis of the NCDS data suggested that pre-existing emotional problems in childhood were important signposts for subsequent partnership breakdown. Again these two findings spoke to the possibility of selection effects as well as emerging emotional problems post-partnership being implicated in the lower emotional well-being of the divorced.

The legacy of parental divorce

Our research and that of others has shown divorce to be more likely to occur amongst couples with personal, social and economic problems. Thus one of the challenges in assessing the legacy of divorce for children is being able to sort out the conditions that lead couples to separate and the potential effects on children from the consequences of the dissolution itself.

For example, the non-random nature of the divorcing population implies that the effects of factors that existed prior to the divorce, for example, poverty, could be confused with its consequences. Additionally the selective nature of the population of children who experience parental divorce may lead to an over-stated impression of the effects of divorce by conflating pre-existing differences amongst children from disrupted families as compared with those from non-disrupted ones with the fallout from marital dissolution.

To begin to address this challenge we pursued three questions in our study of the legacy of parental divorce on social and economic and family experiences in adulthood (Kiernan, 1997). For this study we used the NCDS data and posed the following questions.

- To what extent does parental divorce during childhood (0-16 years) have long-term consequences for educational attainment, economic circumstances, partnership formation and parenthood behaviour in adulthood?

Specifically we examined the following outcomes:

Educational outcomes Qualifications attained by ages 23 and 33;

Economic outcomes: Earnings and Household Income at age 33. Receipt of benefits at age 33. Unemployment at age 33 and experience since leaving school;

Housing outcomes: In social housing and of experience in homelessness;

Demographic outcomes: Timing of first and type of first partnership; timing of parenthood and partnership context and partnership dissolution;

The control variables included in our analyses were measures of financial difficulties, test scores (reading and maths) and behavioural problem scores at ages 7 and 16 and social group at age 7.

- Secondly, when child and family characteristics before divorce are taken into account, does the link between the divorce and adult experiences become weaker?

To address this question we divided the sample who had experienced parental divorce during childhood into two groups: those whose parents divorced when they were under age 7 years and those who experienced parental divorce when they were between 9 and 16 years of age. We chose this strategy for a number of reasons. Firstly, age 9 unambiguously post-dates the age 7 interview which allows us to assess whether attributes that chronologically precede parental separation are implicated in later life experiences. Only children who were living with both their parents at age 9 were included in the analysis so that any changes in educational performance or behaviour that might be associated with parental separation should be excluded. However, we recognise that parental conflict prior to divorce may also have, for example, a dampening effect on a child's test scores at age 7 or increase behavioural problems, but we have no measure that allows us to control for this situation. We also examined the 7 year old attributes for those children who experienced parental divorce before age 7 to assess whether they moderated or amplified subsequent behaviour – but for this group we do not know whether differences were due to the aftermath of the separation or pre-disruption factors.

- Thirdly, if parents stay together until their children are grown up before separating does this reduce the impact of divorce on their adult children's lives?

To address this question we compared the experiences of children who experienced parental divorce at ages 20 and older with those who experienced parental divorce during childhood (0-16 years).

Here we highlight some of the findings from the analysis.

Educational attainment

First we focus in on the group with no qualifications. By the time they were 33, those who had experienced parental divorce as children (16 and under) were almost twice as likely as others to lack formal qualifications: 20 per cent compared with 11 per cent, and children who experienced parental divorce were under-represented amongst graduates. We also compared age 23 and 33 qualifications, and found similar proportions of children from divorced and non-divorced backgrounds had improved on their age 23 qualifications. However, it was the young people who already had qualifications that were most likely to improve their position. Children who experienced parental divorce during childhood were less likely than their peers to have any qualifications at age 23 and this continued to be the position at age 33. This suggests that remedial action with respect to educational underachievement amongst vulnerable groups may have greater returns if executed during the school years than in later years and that particular attention needs to be given to recruiting unqualified adults for further training and education.

Turning to the question of whether the lower educational attainment of children arises from divorce or to prior factors, Table 1 shows the odds ratios of having no qualifications relative to children brought up with both parents. The analysis was carried out in a series of steps to clarify whether particular factors were more or less important in lowering the chances of having no qualifications. So we entered the individual factors, financial hardship, test scores, behaviour scores and social class at age 7 separately and then in combinations. It is fairly clear from this table that financial hardship in the family at age 7 substantially

Table 1: Odds ratios for effects of parental separation by age of child on having no qualifications in adulthood

	Men			Women		
	9-16 years	0-6 years	0-16 years	9-16 years	0-6 years	0-16 years
Baseline	1.44*	2.11***	1.62***	2.04***	2.37***	2.16***
Financial hardship age 7	0.91	1.80*	1.19	1.30	1.53 +	1.44**
Behaviour scores age 7	1.20	1.38	1.20	1.83***	1.52	1.65***
Test scores age 7	1.34	1.71**	1.40**	1.89***	2.11***	1.88***
Social group at 7	1.33	2.09***	1.53**	2.05***	2.41***	2.14***
All age 7 factors	0.88	1.63	1.10	1.27	1.16	1.24
All age 7 and age 16 factors	0.63	1.19	0.80	1.12	1.04	1.11

Source NCDS.

Notes: + significant at the .10 level; * significant at the .05 level; ** significant at the .01 level; *** significant at the .001 level.

attenuates the difference between children from divorced families and those from intact families with respect to having no qualifications in adulthood. For example, the baseline odds ratio of 2.04 is reduced to 1.3 in the case of the women and in the case of the men where the relationship is somewhat weaker from 1.44 to 0.91. Controlling for the other individual factors namely: the child's cognitive test scores at 7 and behavioural problems led to some reduction in the odds of having no qualifications, but in the case of women controlling for these factors did not significantly attenuate the observed difference between women from intact and disrupted families. Turning to consider the children who experienced parental divorce prior to age 7 we see amongst the women that the chances of having no qualifications as compared with those who had not experienced a parental divorce by age 7 is also much less when we control for financial well-being and behaviour problem scores at age 7. Amongst the men the differences between those from intact and disrupted families is much less when we take into account level of behavioural problems at age 7. Where parental divorce occurred prior to age 7 we cannot disentangle whether differences in educational outcomes are due to parental separation or to selection or a combination of selection and an amplification of financial problems, but the findings with respect to the post age 9 group suggest that selection may be an important element, but not an exclusive one, in the interplay between the divorce process and the educational attainment of children. Poverty and behaviour problems reduce educational success and parental divorce can amplify both.

Adult income and employment

Turning to adult income and experience of unemployment we found that adult men who had experienced divorce during childhood had broadly similar earnings and family incomes to contemporaries whose families had remained intact.

However, men with a background of parental divorce were at greater risk of unemployment at age 33 and of having been unemployed on more than one occasion since they left school. The odds of unemployment as an adult were greatest for boys whose parents had separated before they were 7 years old and introduction of financial hardship at age 7 reduced the odds slightly but they remained high and significant and this applied to all the individual age 7 controls and in combination. However, amongst the group of boys who experienced divorce between age 9 and 16 controlling for financial hardship at age 7 resulted in a reduction in the odds of unemployment to a level that was no longer statistically significant among men whose parents divorced during their later childhood. This suggests, as with our findings on qualifications, that family circumstances prior to divorce may be implicated in children having adverse employment experiences in adulthood. The income and employment histories of women are complicated by the timing of motherhood. Women who had experienced divorce as children were more likely to have begun child-bearing at an early age and this, in turn, affected their ability to earn. In general, women whose parents had divorced had lower earnings than others and were more likely to be receiving Income Support than women from intact families – although the latter link was relatively weak.

Housing

Adults who experienced parental divorce in childhood were more likely than others to be living in property rented from a local authority or housing association and less likely to be home owners. Women from divorced families were especially likely to be living in social housing at age 33. Once again, the links between a divorce background and living in social housing as an adult appeared largely to be indirect. Taking financial hardship, behavioural problems and other factors present at age 7 into account reduced the odds for both men and women.

First partnerships and parenthood

With respect to the demographic outcomes we found that men and women who experienced parental separation during childhood were more likely to form cohabiting rather than marital unions, and to cohabit or marry at a younger age than those whose parents stayed together. Men and women from divorced families were also more likely to become parents at a young age. Partnership break up was also greater amongst children who had experienced parental divorce. But across all these demographic outcomes, controlling for the influence of childhood and adolescent background factors produced no or only a modest reduction in the odds among men and women whose parents had divorced.

Post-childhood divorce

Surprisingly, little is known about the impact of parental divorce that occurs after childhood, although this is an increasingly common experience. In our study we compared outcomes for 33-year old adults who were aged over 20 when their parents divorced with those who parents separated during childhood and with those whose families remained intact. Women from later divorcing families were similar to their peers from intact families in terms of their educational attainment and economic situation in adulthood but there were indications that men these families still tended to experience some social and economic disadvantage. Both men and women from later divorcing families were similar to those brought up with both parents in their odds of forming partnerships or becoming parents at a young age. However, both men and women whose parents divorced when they were adults were more likely than those whose parents had not divorced to cohabit and to experience the break-up of their own partnerships or marriages.

Conclusions

The message from this research is that there are no simple conclusions to be drawn about the way that parental divorce during childhood is linked to behaviour in adulthood. The connection – when it exists – depends on which aspects of adult life are examined. It also depends on whether the children in question are boys or girls and, to some extent, on their age at the time of

separation. Pre-divorce factors, especially financial hardship, played an important part in explaining part of the increased odds that children whose parents divorced would lack qualifications, be unemployed or be living in social housing as adults. Pre-divorce circumstances were less influential in accounting for why children who experienced parental divorce differed in their personal relationships and parenthood behaviour in adulthood. It is undoubtedly the case that children benefit from being raised in an emotionally and economically secure two-parent family. But if that is not possible, there is evidence from this study which suggests that if we are concerned with children's long-term welfare then we should perhaps be as concerned with the conditions that precede, and may lead to parental separation such as poverty, economic uncertainty and other stressors, as with its consequences.

References

K. Kiernan and G. Mueller 1998. Who are the Divorced and Who Divorces? CASEpaper No7 ESRC Centre for the Analysis of Social Exclusion, London School of Economics

K. Kiernan 1997. The Legacy of Parental Divorce: Social, economic and demographic experiences in adulthood. CASEpaper No1 ESRC Centre for the Analysis of Social Exclusion, London School of Economics.

Intergenerational and Life-Course Transmission of Social Exclusion: Influences of Childhood Poverty, Family Disruption, and Contact with the Police

John Hobcraft, Centre for Analysis of Social Exclusion (CASE) and Department of Social Policy
London School of Economics & Political Science

Questions Posed

How far is social exclusion and disadvantage transmitted from parents to their children and from childhood into adulthood?

In particular, how far do childhood experiences of poverty, family disruption, and contact with the police link to adult outcomes?

What associations are there for a range of other parental and childhood factors – social class of origin, social class during childhood, housing tenure, father's and mother's interest in schooling, 'aggression', 'anxiety', and 'restlessness', and educational test scores?

How do these factors link to outcomes by age 33, including three indicators of demographic behaviour, one of psychological well-being, three of welfare position, two of educational qualifications and three of economic position?

Which childhood factors have a general influence on adult exclusion and are there specific 'inheritance' patterns?

This study uses data from the National Child Development Study (NCDS), a longitudinal study of children born in 1958, to examine these questions. Innovative methods are used to maximise the extent to which available information is used, including retention of missing information during childhood. Emphasis is placed upon the cumulation of childhood experiences, usually at ages 7, 11, & 16. Let's now turn to the wide range of childhood antecedents and adult outcomes considered.

Adult Outcomes by age 33 – restrict attention to ten negative outcomes for today

Early parenthood – Father by 22; Mother by 20
Extra-marital births
Three or more partnerships

Malaise (at risk of depression)

Social housing
Receipt of benefits
Homelessness

No qualifications
Low income – own for men; household for women
Unemployment (men only)

'Focal' childhood variables

Poverty
At ages 7, 11 & 16
Reports of serious financial difficulties
Reports of free school meals (11 & 16)

Police
By age 16
'in trouble with the police' (teacher)
'contact with police/ probation' (teacher)
'contact with police/ probation' (parent)

Family Type
covers experience at ages 0, 7, 11 &16
both natural throughout
both natural, some missing data

born outside marriage
ever in care or fostering

divorce, no remarriage
other one-parent, no remarriage
divorced & remarried
other one-parent & remarried

These childhood focal variables are themselves quite closely interrelated

- 44% of the poorest boys had contact with the police by age 16, compared with only 13% for the non-poor.
- 47% of children with divorced lone-parents experienced childhood poverty, as defined by family financial difficulties and free school meals, compared with only 8% in intact two-parent families.

'Control' childhood variables

Common approach – all summarised into four groups (low, middle, high & no information) to maximise information used (including partial or completely missing)

Social class of origin – two grandfathers
father at birth
Social class of father – ages 7, 11 & 16
Housing tenure – ages 7, 11 & 16
Father's interest in schooling – 7, 11 & 16
Mother's interest in schooling – 7, 11 & 16
'Aggression' scores – 7, 11 & 16
'Anxiety' scores – 7, 11 & 16
'Restlessness' scores – 7, 11 & 16
Reading and maths tests – 7,11 & 16

Summary groups used:
2/3 'adverse'
1 adverse
0 adverse,
0 or 1 'beneficial'
0 adverse,
2/3 beneficial
All information missing

CASEbrief 8 (distributed at the meeting) contains quite a number of specific illustrations drawn from the larger study, many of which I shall not repeat in this brief talk. I shall try to highlight some of the key issues that arise from the results, especially those that benefit from the broad compass of the childhood antecedents and the adult outcomes. The particular benefit of this interdisciplinary approach is that the associations found are more robust than usual, because of the depth and range of the control variables, the cumulation of childhood experiences, the handling of missing data, and not least the causal priority of the childhood measures.

The Pervasive Influence of the Focal Variables: Childhood Poverty, Family Disruption, and Contact with the Police

Childhood experiences of poverty, family disruption, and contact with the police are all powerful antecedents of adult disadvantage. The Table shows how many of the ten negative male and nine negative female adult outcomes are strongly related to the 12 childhood antecedents. The three focal variables and educational test scores prove to have the most pervasive strong influences on adult outcomes by quite a margin:

- educational test scores to 15 of 19
- childhood poverty is clearly linked to 15 of 19, contact with the police to 15 of 19,
- family type to 14 of 19.
- the next most pervasive is father's interest in schooling (8 of 19).

Numbers of clear associations of childhood variables with negative adult outcomes

	Men (of 10)	Women (of 9)	Both sexes (of 19)
Tests	7	8	15
Poverty	6	9	15
Police	7	8	15
Family Type	7	7	14
Dad Interest in School	3	5	8
Mum Interest in School	2	4	6
Aggression	2	3	5
Social Class of Origin	1	4	5
Social Class of Father	3	1	4
Tenure	2	2	4
Anxiety	3	1	4
Restlessness	1	0	1

LARGE AND SPECIFIC INFLUENCES ON ADULT OUTCOMES

The next Table addresses a different question. It shows, for each childhood antecedent, the adult outcome with largest odds ratio. **Specific continuities** (in the sense that the childhood antecedent is directly transmitted into closely related adult outcomes) among these largest odds ratios are picked out in bold type. I note that some specific continuities are not possible, since several of the childhood antecedents have no direct counterpart among the adult outcomes considered here (contact with police, social class of origin and social class of father during childhood, aggressiveness, and restlessness). What is remarkable is how frequently the largest odds ratio occurs for these specific transmissions, despite the wide range of adult outcomes considered.

Adult negative outcomes showing largest odds ratio for each childhood variable

	Men		**Women**	
Childhood factor	**Outcome**	Odds Ratio	**Outcome**	Odds Ratio
Poverty	No qualifications	2.8	No qualifications	2.6
Police	No qualifications	3.7	No qualifications	2.4
Family Type				
Born-out-of-Wedlock	**Extra-Marital Birth**	**2.0**	**Extra-Marital Birth**	**2.5**
Ever in Care	Malaise	2.1	Extra-Marital Birth	3.7
Divorce	**3+ Partners**	**3.2**	**3+ Partners**	**2.3**
Remarriage	Homelessness	2.8	Extra-Marital Birth	1.7
Tests	**No qualifications**	**45.9**	**No qualifications**	**26.8**
	Social Housing	4.3	Teenage mother	3.7
	Low Income	3.9	Social Housing	2.7
	Young Father	3.4		
Dad Interest	**No qualifications**	4.3	**No qualifications**	3.7
Mum Interest	Extra-Marital Birth	2.1	**No qualifications**	**2.5**
Tenure	**Social Housing**	**2.5**	**Social Housing**	**1.8**
Social Class of Origin	Malaise	1.5	Social Housing	2.4
Social Class of Father	Young Dad	2.5	Social Housing	1.4
Aggression	3+ Partners	1.8	Teenage mother	1.9
Anxiety	**Malaise**	**1.6**	**Malaise**	**1.7**
Restlessness	No qualifications	1.9	Homeless	1.7

SPECIFIC CONTINUITIES ONLY

Adult negative outcomes showing odds ratio for each childhood variable (including non-largest for poverty)

	Men		**Women**	
Childhood factor	**Outcome**	Odds Ratio	**Outcome**	Odds Ratio
Tests	**No qualifications**	45.9	**No qualifications**	26.8
Dad Interest Mum Interest	No qualifications	4.3	No qualifications	3.7
			No qualifications	2.5
Born Out-of-Wedlock	Extra-Marital Birth	2.0	Extra-Marital Birth	2.5
Divorce	3+ Partners	3.2	3+ Partners	2.3
Tenure	**Social Housing**	**2.5**	**Social Housing**	**1.8**
Anxiety	**Malaise**	**1.6**	**Malaise**	**1.7**
Poverty	Any Benefits	1.6	Any Benefits	1.4
	Low income Unemployment	1.5 1.4	Low income	1.5

Adult Outcomes

I now want to turn to a brief summary which looks at each of the **Adult Outcomes** in turn and highlights the main associations with the various childhood antecedents, which draws heavily on CASEbrief 8. (Some more detail is shown in CASEpaper 15, Table 21, pages 59-61, which includes all childhood antecedents which are statistically significant for each adult outcome in rough order of the 'strength of association' for each output.) The highlights mentioned here cover only associations that are substantively large.

Young parenthood: poorly socialised girls appear more likely to become young mothers (contact with the police, in care/fostering or born out-of-wedlock, aggressive, low performance on educational tests, and lacking maternal interest in schooling are the factors with the highest odds). Young fathers are quite likely to have had contact with the police, to come from a lower social class, and to have performed poorly at school.

Extra-marital births are more frequent for children of either sex who were themselves born out of wedlock, for girls who were in care or fostered and, to a lesser extent and less consistently, for men and women who experienced post-birth family disruption; there is also a heightened risk for those of either sex whose parents were less interested in their schooling and who had been in contact with the police.

Multiple partnerships are particularly common for men and women who had experienced parental divorce during their childhood, for 'delinquents' who had childhood contact with the police and for aggressive men.

Adult malaise is more common for anxious children, poor educational performance as a child, delinquent girls, children who were in care, poor children and aggressive and restless males.

Living in *social housing* as an adult is strongly associated with being in local authority housing as a child, coming from a lower social class background, poor performance on educational tests, being poor and delinquent.

Receipt of benefits in adulthood is linked to poor educational testing as a child, poverty and delinquency.

Adult homelessness is most common among those with step-parents in childhood, but also for delinquents, girls who were poor or in care, and boys who were not sons of owner-occupiers.

Adult unemployment is more likely for boys who were delinquent, poor, in care, or had mothers who were not interested in their schooling.

Educational failure is dramatically increased by lack of parental interest in schooling, by childhood poverty, and by delinquency; girls who were in care or from lower social class of origin, and boys who were fidgety or restless also fail educationally.

Low income in adulthood is related to poor performance at school and lack of paternal interest in schooling, more sharply for men; and, to a lesser extent, to childhood poverty for both sexes.

CONCLUDING REMARKS

Family disruption is most related to demographic outcomes and homelessness and social housing.

Childhood experience of care or fostering has pervasive association with **all** negative adult outcomes for females.

Educational test scores are powerful predictors of a wide range of adult outcomes.

Father's interest in schooling is important and relatively more so than mother's interest, although there is also a greater reinforcing effect of mother's interest for females.

There is a tendency for social and parental factors to be more related to adult exclusion for females and for external and structural factors to be more related to exclusion for males.

There is a pervasive association of most negative adult outcomes with educational tests, poverty, contact with police and family type.

A large number of specific life-course and inter-generational continuities in transmission of social exclusion are identified, including education, social housing, out-of-wedlock births, partnership breakdown, anxiety, and poverty.

There is little doubt that social exclusion, as captured by the adult outcomes and childhood factors used here, is transmitted across the generations and through the life-course. There is also little doubt that there are a large number of very specific continuities from childhood experience into adulthood. But it is essential to emphasise that all of the associations captured here are just aggregate tendencies and in no sense determinist. Specific and general disadvantage during childhood is echoed in adulthood in specific and general forms. There is huge scope for many, if not most, individuals to escape from the patterns and tendencies observed. An important potential area for further research is to examine more closely the characteristics of individuals who escape the general tendencies. Such work will involve much more detailed examination of individual records and of clusters and combinations of childhood factors (and intervening experience during adulthood) than has so far been possible.

Another open question arises with respect to whether the timing of particular forms of disadvantage during childhood is crucial or at least further aids the understanding of how people reach adult outcomes. This study of pathways is again more complex and raises greater difficulties with respect to missing information.

Despite the general, but not complete, causal priority of our explanatory variables both in time and in their measurement, we remain cautious about attaching causality to the associations observed, regardless of the plausibility of the links. Without a much more thorough understanding of pathways and protective factors it is extremely unwise to jump to facile policy implications from this work. The problems studied here have been the focus of much social policy and governmental intervention over the years. Just to give one interpretational difficulty, let us look at education.

Everyone agrees that improving the effectiveness of schooling is an important and desirable goal. But there are a number of possible policy levers which may have differing appeals to differing political persuasions: increasing parental interest in schooling; a sub-theme for some would then be to try to prevent family disruption and retain interested fathers, and for others would be to accept family breakdown but intervene to keep both parents more engaged. Making education super-efficient may also fail to prevent some of the associations examined here. Since all of our educational test scores are relative, dividing the scores into quartiles, it is clear that this distribution cannot change very much. Indeed, it is quite likely that the differentials would sharpen rather than reduce with greater educational efficiency, since sorting on potential would become more efficient.

What is overwhelmingly clear from this work is the extent and pervasiveness of both specific and general continuities across the generations and across the life-course in the transmission of aspects of social exclusion. Interpretation depends heavily on assumptions about causality, on debates about nature versus nurture, and on debates about structural constraints and individual opportunity. It is hardly surprising that we have not answered such thorny questions.

Next Steps using NCDS

Explore pathways and links of changes during childhood to process of social exclusion over the life course
More on protective factors
Outcomes at 23 and the timing and sequencing of experiences in early adulthood
Intermediate outcomes – contact with police, educational performance, behavioural change etc
Links to participation in civil society

Session 5: Childhood poverty and family structure: Discussion

NCDS evidence on early years

Professor Bynner started off by reminding us about the sources used and looked at some broad and not so broad definitions and how you needed to be certain about when interpretating this data what the definitions of poverty were all about and what they meant.

He then went on to talk about cohort shifts, namely whether each cohort experiences the same kind of environment as the previous one and the clear implications for the use of cohort data when making policy. For example, we need to be aware of the danger of basing policies for current children on evidence on children born in 1958.

Thirdly, he talked about the importance of early childhood influences (which was picked up again by Jane Waldfogel later on), emphasising how differences between children start early and get worse. This work highlights the importance of policies for early intervention to prevent downward cycles of deprivation and create upward cycles.

Childcare and outcomes

Professor Waldfogel reviewed nine studies of the impact of childcare on future life chances. The evidence from these studies was immensely reassuring – there are programmes that actually have an effect. She raised the interesting issue of "follow-through" – she mentioned one expansion at the top end but we've also had early Head Start introduced at the bottom end. The evidence from Head Start is quite encouraging but it does raise another issue which we ought to think about ie follow through. All the evidence shows that you do need to persist if you are going to have an effect. She reviewed some of the work based on the US National Childcare Study.

Turning to the importance of quality, it would be interesting to have a debate about what quality is. Jane Waldfogel mentioned some of the factors. However there is a dispute between economists' views of what constitutes quality in childcare and the professionals' view of what constitutes quality. Economists tend to look at what parents want and professionals tend to look at what on professional grounds is good for the child. This debate has not really been entered into over here. We now have a National Childcare Strategy but childcare for what is still a bit unclear. It would be good to make sure we don't get swept into a sort of "bums on seats" approach to childcare setting targets without quite asking what it is that the childcare consists of. That debate has still to be opened up.

Divorce/family breakdown

Dr Kiernan concentrated on issues concerning the extent to which divorce per se has an independent effect from all those factors that go along with any tendency to divorce and used both cross sectional and longitudinal data to look at the factors affecting divorce.

The conclusions were that allowing for financial hardship attenuates the measured impact of divorce but there still remains an impact of divorce beyond that. She then looked at the consequences of divorce. Generally demographic factors were more clearly associated with divorce, factors such as subsequent marital breakdown, cohabiting and so on. They were rather more robust to divorce than were some of the economic type factors. She then went on to talk about the longitudinal impacts, looking at the effects by age 33. Again the impact of the father's interest in the child is extremely important.

It is important to look at the impact conditional on poverty; is there anything you can do and indeed is there a feedback from what you can do the likelihood of being in poverty. For example, some of these programmes aren't just affecting children but are also affecting their parents. Will any of that have an impact on the likelihood of remaining in poverty, for example are mothers likely to acquire skills in the context of a programme like Sure Start or the kinds of programmes that are already in existence that resemble Sure Start? And will programmes to combat maternal depression, for example, have any impact on divorce, have any impact on future participation in the labour force, and so on? These are issues that show again that while children are very important and where you start from on all these sorts of programmes, the impact on parents and the two way flow in all of this is just as important and something that we need to get right.

A number of the results Dr Kiernan showed from other work on NCDS raised the importance of the father's interest in education and of fathers' influence generally. This is an area which is very hard to come to grips with. Most childcare tends to be discussed in terms of the mother and the needs of the mother and so on, and yet clearly programmes will make more of an impact if they affect fathers' behaviour as well as mothers'. However, getting dads to feel that programmes of this kind that are about, for example, teaching them to read to their children or enabling them to read to their children or to spend time with their children, is really quite hard and something which we don't know much about.

Session 6: Education and Poverty

‘Poverty and Education: evidence for education’s role in combating the transmission of poverty’

Ralph Tabberer, Department for Education and Employment

Introduction

Education has a crucial part to play in combatting persistent poverty. This paper has presents research evidence which supports this proposition. Policy ramifications will be examined in subsequent papers and discussion.

First, the paper establishes the link between education and adult life chances. Second, a question is raised about why those concerned with poverty have so often been blind to education’s role. This is changing. Third, the paper explores the evidence about how poverty is transmitted. Not enough is known in this area.

Fourth, the evidence from school effectiveness and school improvement research is used to underline that education can make a difference. Effective approaches are identified. The paper concludes by emphasising the strategic value of the position that schools hold in the battle with persistent poverty.

The effect of education on life chances

There is a clear relationship between education and life chances. Hobcraft (1998) demonstrates with the longitudinal National Child Development Study (NCDS) data that educational test outcomes are powerful predictors of adult outcomes. In fact, education is well represented among the five ‘most powerful and consistent predictors’ he identifies: childhood poverty, family disruption, contact with the police, educational test outcomes and father’s interest in schooling.

Researchers have demonstrated that the relationship is strong. NCDS data show that, compared with those with high skill levels, three times as many women and five times as many men with very low literacy and numeracy did not work full-time between 23 and 33. By the age of 37, men in the very low skills group were six times more likely to be out of work than those men with high skills. Studies in the United States reinforce this message. Murphy and Welch (1989) show that education strongly influences socio-economic status. Manski (1992) emphasises the place of a parent’s education in influencing that of their child.

U.S. data additionally suggest that the effect strengthens during periods of economic difficulty. Osterman (1991) shows that whereas in 1973, the average wage of male college graduates was 41 per cent greater than the average for high school graduates, in 1991 the difference was 56 per cent. Corresponding UK data show that between 1979 and 1994/5, the net income of the top decile of earners – after housing costs – grew by 68 per cent, while those of the bottom tenth fell by eight per cent.

Furthermore, in deprived areas where poverty and social exclusion have been more intensely concentrated in recent years, education looks an even starker issue. A 1995 survey (Social Exclusion Unit, 1998) showed that in the secondary schools serving ‘difficult to let’ estates:

- one in four children gained no GCSEs;
- this is between four and five times the national average;
- truancy was four times the national average.

Education also features strongly in the report of the Social Exclusion Unit on neighbourhood renewal (SEU, 1998). The report indicates that in the difficult estates, roughly a quarter more adults have poor literacy and numeracy skills.

The fact that on these estates, twice the nursery/primary schools and five times the secondary schools are deemed to be failing (i.e. they have been placed ‘on special measures’ after OFSTED inspection) suggests that, in too many areas, educational provision is unable to overcome deprivation. Indeed, it might unkindly be said that education is part of the problem rather than part of the solution. This is sobering, especially when it is recognised that on such estates, child density is one-fifth higher than the national average.

Under-expectations of education

Given the strong relationship between education and adult outcomes, perhaps it is surprising that, in this country, education’s place in anti-poverty strategies has been repeatedly under-stated. Schools are too rarely mentioned in traditional treatments of poverty. Textbooks address diet, health, housing, homelessness, family disruption, age, unemployment, income, ethnic origin, gender, and crime. Many key texts on poverty even fail to mention education or schools in the index.

Education is relegated to an inactive, almost invisible, role. Schools are merely places where poverty is played out. A few authors, of course, expressly deny education any significant position. Famously, this was the conclusion of the Coleman Report (1966). Snow *et al*. (1991) also argue that the effectiveness of schooling depends on the quality of the home environment.

More recent observers have argued that tackling economic not educational issues will raise standards.

This amounts to 'schools-blindness': persistent under-expectation regarding the role of schooling in helping to tackle poverty and deprivation. The answer is not to ignore education but to ascribe it a suitable and positive place.

There is evidence of changing attitudes to the importance of education, and there may be several reasons for the change:

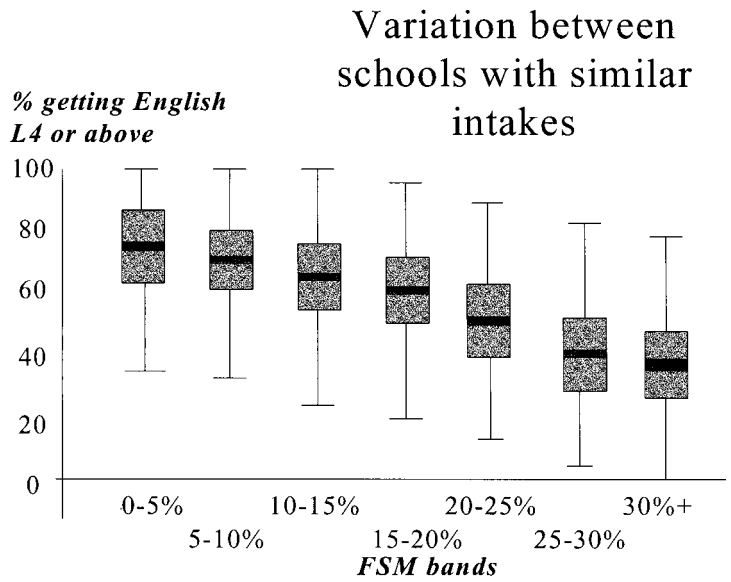
The importance of raising productivity

In many areas of business and industry, the United Kingdom lags behind our leading competitors in terms of productivity – improved education and training will not be sufficient to raise productivity but they are now perceived as a necessary part of the solution.

The evidence of higher performing schools in disadvantaged areas

Benchmark tables produced annually now show the range of performance of schools in different socio-economic categories – and it is striking that, while the distribution demonstrates the overall impact of background on performance, it also indicates that some schools in poor areas perform about as well as the top 25 per cent of performers in the most affluent areas (see Figure 1).

Figure 1



(Source: *Excellence in Schools* White Paper, July 1997)

The 'schools make a difference' movement

Since educators first reacted to the Coleman Report (1966), research has been pursued to demonstrate the extent to which individual schools make a difference to the educational outcomes of their pupils – evidence has built up about more and less effective schools.

The importance of integrated services

Anti-poverty strategies have increasingly recognised the need for locally-coherent, concerted action on several fronts to combat social exclusion (OECD, 1995 and 1996) and so education increasingly comes into the frame as a possible partner.

Looking for educational solutions

To present education as the solution to the transmission of poverty, either between generations or between infancy and adult life, would be as unhelpful as to deny education a role. And, in practice, too little is known about *how* poverty and low performance are associated in the experience of children and young people going to school.

We are not clear what makes the difference in the poor child's day: is it whether or not they had breakfast; how well they slept; what they wear; whether or not the child has high self esteem; if they had somewhere to do their homework; if they bring to school anxieties based on family arguments and disruption; whether or not their parents heard them read; if they were distracted at home or in the school; or simply if they bothered to attend, or truanted? There is a strong argument for more ethnographic research, designed to reveal some of the key mechanisms for transmitting poverty into low educational outcomes and, subsequently, low outcomes, into poor adult life chances.

A few things are known:

- **school, teacher, parent and peer expectations matter** – as has been demonstrated by studies of ethnic differences (see the Swann report, 1985 and Skellington and Morris, 1992) which show how under-expectations of certain groups affect performance;

- **children's own expectations of work matter** – as has been demonstrated when young people depress their aspirations because of low employment prospects (Wilson, 1987);

- **some institutional barriers exist** – for example, ethnic minority groups point out the bias that lies within ethnocentric assumptions about the curriculum and within national assessments;

- **low basic skills at an early age can obstruct performance later** – studies underline the importance of basic literacy and numeracy for school success (Murnane, 1994);

- **pupil disaffection can lead to low attendance and truancy** – attitude surveys provide evidence of increasing disaffection especially through the first years of secondary schooling (e.g. Keys, 1994);

- **family stress and emotional insecurity are factors** – difficulties at home can be brought into school in the form of higher anxiety and insecurity (Venezky,1987; Snow et al, 1991);

- **poor education resources at home matter** – studies reveal an association between fewer books and other resources at home, and poor performance at school (Dossey et al, 1988 Snow et al., 1991);

- **living in care is a major issue** – there is evidence of a devastating relationship between growing up in care or being fostered and poor educational outcomes (House of Commons, 1998);

- **there is an increasing link with crime** – Metropolitan Police data reveal a close relationship between youth, truancy and crime (House of Commons, 1998);

- **father's/mother's interest in schooling matters** – recent research underlines the importance of parental attitudes to schooling (Hobcraft, 1998).

Despite these findings, we are not clear which are the antecedents and which are the consequences, let alone which are the causes and which are the effects.

And at this point, we must be careful to draw upon the evidence about persistent poverty. It is not simply the case that a readily-defined group, or under-class, abides in poverty, transmitting their culture and experience from one generation to the next.

Bradshaw and Holmes (1989) studied poor families in [North Tyneside] and concluded:

"… it is of crucial importance to recognise that these families, and probably many millions more like them living on social security benefits, are in no sense a detached and isolated group cut off from the rest of society. They are just the same people as the rest of our population, with the same culture and aspirations but with simply too little money to be able to share in the activities and possessions of everyday life with the rest of the population."

This may be over-stating the case but, for many, the experience of poverty is indeed intermittent. Regularly, families emerge from poverty, some to escape and others to fall back quite quickly, perhaps due to a new bout of unemployment or the birth of a new child. We need to understand the impact of temporary as well as recurrent poverty on educational experiences and outcomes, before we can best judge how to change education to improve the prospects for specific individuals and groups.

Schools make a difference

While too little is known about how poverty and failure are experienced or related at school, there is a strong body of knowledge about what contributes to effective schooling. Over twenty years, a considerable body of evidence has been generated to support the contention that a school can make a real difference to the educational achievement of its intake.

There are many studies, most of them in North America but with several significant studies in the UK, the Netherlands and Australia as well. There are many research reviews.

For instance, the main studies include:

- Brookover and Lezotte (1977) who provided early evidence of the relative effectiveness of eight primary schools in Michigan, USA;

- Rutter *et al.* (1979) who provided evidence of school effectiveness in 12 secondary schools in this country;

- Mortimore *et al*. (1988) who covered 49 primary schools;
- Tizard, B. *et al.* (1988) who addressed effectiveness in infant schools; and

- Smith and Tomlinson (1989) who examined effectiveness in relation to ethnic minorities.

The effectiveness studies put the size of the school effect at about eight to ten per cent. There is some debate about this figure and about what it means. Gray *et al.* (1990) found the difference between schools at the upper as opposed to the lower quartile, to be around four points per pupil at GCSE, and that has been described as giving young people a 'competitive edge'. The range of difference between the most and least effective schools was, of course, much wider. Reynolds *et al.* (1996) points out that the size of the school effect is much greater in countries like the USA and UK than it is on the Pacific Rim.

The studies have helped clarify those factors which are associated with more effective schools, where effectiveness is primarily measured on educational test scores. The conventional list of key factors is provided by Mortimore (1991):

Leadership

A leader who is purposeful, neither too authoritarian nor too democratic, who is able to share ownership of the school with colleagues, who can delegate to a deputy without feeling threatened, and who can involve staff in planning and management.

Management of pupils

Pupils are involved, they can be rewarded for effort; control of behaviour is by methods neither too weak nor too harsh; teaching sessions are structured, work-centred and include intellectually challenging teaching.

Management of teachers

Teachers are involved in the corporate life of the school; they pursue consistency in their approach to pupils, and are encouraged to be good models of punctuality, politeness and consideration; classrooms have positive psychological climates in which pupils are encouraged to communicate frequently with teachers; there is a broad and balanced curriculum which recognises the academic but also values the special needs students – and in primary, there is a limited focus in teaching sessions to avoid teachers and students being pulled in different directions.

Pupil care

Pupils are treated with dignity and encouraged to participate in the organisation of the school; there are positive signals that pupil are valued; rewards are used rather than punishment to change behaviour; parents are involved in the life of the school and there is increasing confidence of the community in the school; systematic records of pupil progress enable the curriculum to have coherence for pupils.

School environment

Attractive and stimulating, with trouble taken over class displays and removing graffiti.

School climate

Consensus is sought on values shared by the school, the general attitude towards learning is positive as is the attitude to young people; there are clear rules and guidelines for pupil behaviour; high expectations are maintained for all pupils.

In its study of schools which were successful in disadvantaged areas, achieving good results 'against the odds', the National Commission on Education (1995) emphasised the importance of:

- leadership fostering a team approach;
- a vision of success, and pride in achievement;
- policies and practices which encourage planning and the setting of targets;
- improvement of the physical environment;
- common expectations about pupil behaviour and success;
- investment in good parental and community relationships.

School improvement programmes have built on the school effectiveness research, especially in the USA (see Comer, 1980; Levin, 1988; Sizer, 1992; and Slavin 1989). These school-based reforms attempt to change the daily experience children have of school. Indicative of the approach is that taken by Slavin under the 'Success for All' programme. This emphasises: an early years focus, a literacy core including a literacy instruction hour, proven instructional and cooperative learning techniques, regular assessments which lead to immediate or early recovery for those failing, a parental support programme, and appropriate teacher training.

Schools taking part need to have an 80 per cent majority of teachers in favour of adopting the approach. The adoption of each element in the approach is based on research evidence about what works, and Slavin underlines the importance of 'high fidelity' implementation, and relentlessness.

These programmes have informed system-wide reforms around the world: in California, Kentucky, Texas and North Carolina in the USA; in Victoria, Australia; and now in the UK. Again, the logic is that no single measure will change the daily experience of children; only the sustained implementation of several measures will be enough.

Knowing education has an important role is not enough

Based on his primary school researches, Mortimore (1997) points out the possibility and the limitations of education's role:

"… in no school did we find evidence of whole groups of the disadvantaged outperforming whole groups of the advantaged. We did find, however, that disadvantaged students in the most effective schools sometimes made more progress than relatively advantaged students in the least effective schools".

The challenge for education, if it is to be a successful part of an anti-poverty strategy is to find out which improvement programmes achieve the twin goals: of raising standards and closing the gap between top and bottom.

Understandably, this is difficult. In a report based on the first four years of secondary school inspection in England, OFSTED (1998) reported that although the quality of management and leadership improved between 1993 and 1997, the quality of teaching improved, *and* standards of achievement were raised, the gap between high performing and low performing schools widened.

The simple truth is that those who start with an advantage are usually better placed to exploit any new system or initiative. There is, however, some evidence about the educational measures which favour those who come from disadvantaged backgrounds. For example, Murnane (1994) identifies initiatives which have particularly worked to improve standards among the poor in the USA, including:

- pre-school programmes for disadvantaged children based on Head Start (Barnett, 1992);
- vocational training which is integrated with traditional subjects in order to provide better preparation for work (Resnick, 1987);
- greater incentives to teachers in urban districts, e.g. providing college grants in return for service in disadvantaged areas (Arfin, 1986).

There are more. For example:

- the Project STAR class size experiment in Tennessee revealed that markedly lower class sizes in the early years led to greater gains for pupils from disadvantaged areas (Nye et al., 1993; Achilles *et al*., 1993);
- the 'Success for All' programme (Slavin, 1990) has delivered some of its highest gains where pupils enter school with poor language acquisition;
- Edmonds (1989) reports that an emphasis on basic skills instruction (reading and mathematics) favours more disadvantaged pupils;
- two-generation family literacy programmes have been effective both in the USA and the UK (see Brooks *et al*., 1996).

These research findings support many elements in the Government's current strategy for raising standards and closing the gap between low and high performers. The task is now to consider what further action might be appropriate to achieve even greater leverage.

Schooling is a key life experience

15,000 hours of schooling is more than a passage in the life of the poor, an unimportant sequence of events somewhere between childhood poverty and diminished adult life chances.

Schools are significant institutions in their localities and represent a valuable capital and human resource investment for their communities. In the most difficult areas, starkly, they may even be the only moral community to which young people ever belong. The State has few mechanisms which have as a matter of course so much access to the young and poor.

The experience of school can be neutral: a time when inherited poverty is transmitted into low skills and high risks of reduced adult life chances. The experience of schooling can even be negative: a time when disadvantages are exacerbated by even more disadvantaged educational opportunities. Or the experience can be to some extent positive and, with other measures, compensatory.

It is wise to consider education as part of the solution. It may even be wise to start to think of schools as a more important base for the combined, inter-agency and community solutions that will be needed to improve cultural capital in deprived areas, to combat local poverty and to tackle social exclusion.

This is not to argue that schools should be diluted. The teaching function must remain targeted at educational test outcomes. Teachers should not be distracted and try to become social workers, youth workers, counsellors, mentors, care workers and adult literacy tutors.

But the school's work in raising standards may be enhanced by being more closely located alongside other community resources. Then, integrated and localised services may be able both to raise standards and combat the transmission of poverty from childhood to adult life.

References

Achilles, C.M. et al. (1993). 'The Lasting Benefits Study (LBS) in grades 4 and 5 (1990-1991): A Legacy from Tennessee's Four Year (K-3) Class Size Study (1985-89).' Paper to North Carolina Association for Research in Education.
Arfin, D.M. (1986). 'The use of financial aid to attract talented students to teaching: lessons from other fields', Elementary School Journal, 86, p405-23.
Barnett, W.S. (1992). 'Benefits of compensatory preschool education', Journal of Human Resources, 21 (Winter), p1-23.
Bradshaw, J. and Holmes, H. (1989). Living on the Edge: a Study of the Living Standards of Families in Benefit in Tyne and Wear. Tyneside: CPAG.
Brooks, G., Gorman, T., Harman, J., Hutchison, D. and Wilkin, A. (1996). Family Literacy Works. London: Basic Skills Agency.
Brookover, W. and Lezotte, L. (1977). Changes in School Characteristics Co-incident with Changes in Student Achievement. East Lansing Institute for Research on Teaching, Michigan State University.
Coleman, J.S. et al. (1966). Equality of Educational Opportunity. Washington DC: Department of Health, Education and Welfare.
Comer, J.P. (1980). School Power: Implications of an Intervention Project. New York: Free Press.
Dossey, J.A. et al. (1988). The Mathematics Report Card: Are We Measuring Up? Report 17-M-01. Princeton, NJ: Educational Testing Service.
Edmonds, R. (1989). 'Effective schools for the urban poor' in B. Cosin, M. Flude and M. Hales (eds.). School, Work and Equality. London: Open University Press.
Hobcraft, J. (1998). Intergenerational and Life-Course Transmission of Social Exclusion: Influences of Childhood Poverty, Family Disruption, and Contact with the Police. Centre for Analysis of Social Exclusion Casepaper 15. London: LSE.
Gray, J., Jesson, D. and Sime, D. (1990). 'Estimating differences in the examination performances of secondary schools in six LEAs: a multi-level approach to school effectiveness', Oxford Review of Education, 16, 2, p137-58.
Keys, W., Harris, S. and Fernandes, C. (1995). Attitudes to School, Slough: NFER.
Levin, H.M. (1988). Accelerated schools for at-risk students. Centre for Policy Research in Education. Report Series RR-010. Ruttgers Univ, Brunswick, NJ.
Manski, C.F. et al. (1992). 'Alternative estimates of the effects of family structure during childhood on High School graduation', Journal of the American Statistical Association, 87, p25-37.
Mortimore, P. et al. (1988). School Matters: the Junior Years. Salisbury: Open Books.
Mortimore, P. (1991). 'The nature and findings of research on school effectiveness in the primary sector'. In: Riddell, S. and Brown, S. (eds.) School Effectiveness Research: Its Messages for School Improvement. Edinburgh: HMSO.
Mortimore, P. et al. (1997). 'Can effective schools compensate for society?' in A.H. Halsey et al. (eds.). Education: Culture, Economy and Society. Oxford: Oxford University Press.
Murnane R.J. (1994) 'Education and the well-being of the next generation', in S.H. Danziger, G.D. Sandefur and D.H. Weinburg (eds.). Confronting Poverty. Prescriptions for Change. London: Harvard University Press.
Murphy, K.M. and Welch, F. (1989). 'Wage premiums for college graduates: recent growth and possible explanations', Educational Researcher, 18 (4), p17-26.
National Commission on Education (1995). Success Against the Odds: Effective Schools in Disadvantaged Areas. London: Routledge.
Nye, B., et al. (1993). 'Tennessee's bold experiment', Tennessee Education, 22/3, p10-17.
OECD. Centre for Educational Research and Evaluation (1995). Our Children at Risk. Paris: OECD.
OECD. Centre for Educational Research and Evaluation (1996). Successful Services for our Children and Families at Risk. Paris: OECD.
OFSTED (1998). Secondary Education 1993-97. A Review of Secondary Schools in England. London: OFSTED.
Osterman, P. (1991). 'Is there a problem with the youth labor market; and if so, how should we fix it?'. Sloan School of Management. Massachusetts Institute of Technology. Mimeo.
Reynolds, D., Creemers, B., Stringfield, S. and Teddlie, C. (1996). 'World class schools: some further findings.' Paper presented at AERA annual conference. New York.
Sizer, T.R. (1992). Horace's School: Redesigning the American High School. Boston: Houghton Mifflin.
Skellington, R. and Morris, P. (1992). 'Race' in Britain Today. London: Sage.
Slavin, R.E., Karweit, N.L. and Madden, N.A. (1989). Effective Programs for Students at Risk. Boston: Allyn and Bacon.
Slavin, R.E.(1990). 'Class size and student achievement: is smaller better?', Contemporary Education, 62/1, p6-12.
Smith, D. and Tomlinson, S. (1989). The School Effect: A Study of Multi-Racial Comprehensives. London: Policy Studies Institute.
Snow, C.E. et al. (1991). Unfulfilled Expectations: Home and School Influences on Literacy. Cambridge, Mass: Harvard University Press.
Social Exclusion Unit (1998). Bringing Britain Together: a National Strategy for Neighbourhood Renewal. Cm 4045. London: HMSO.
Swann Report (1985). Education for All: the Report of the Committee of Enquiry into the Education of Children from Ethnic Minority Groups. London: HMSO.
Tizard, B. et al. (1988). Young Children at School in the Inner City. London: Lawrence Erlbaum Associates.
Venezky, R.L., Kaestle, C.F. and Sum, A.M. (1987). The Subtle Danger. Reflections on the Literacy Abilities of America's Young Adults. Princeton, NJ: Educational Testing Service.
Wilson, W.J. (1987). The Truly Disadvantaged: The Inner City, the Underclass and Public Policy. Chicago: University of Chicago Press.

‘Childhood poverty and post-compulsory participation and attainment. causal effect and impact on lifetime inequality’

David Soskice, No. 10 Policy Unit

Introduction

I want to change the tone of the discussion from this interesting and persuasive statistical discussion, to asking some questions – which actually relate closely to the previous discussion about the way in which incentives work for these groups of young people. I will do this by looking at the difference between UK experience and German experience to show how an environment very different to the UK creates reinforcing incentive structures for young people, for teachers, for parents. By incentive structures, 1 am not referring to short-term financial incentives (though they may have a part to play), but rather in the German case to the clarity of the links from educational performance to acceptance in apprenticeships and from performance in apprenticeships to well-rewarded employment. It is this linkage, and the fact that it is generally understood by students, parents and teachers, which leads to students of all ability levels taking education seriously. Some people say that the Germans are culturally predisposed to take education seriously: that is true but superficial. Culture reflects and is reinforced by embedded incentives; without those incentive structures, the culture quickly collapses.

The purpose of looking at the German case is to understand the importance of clear incentive structures linking education to employment. I will not argue that we should try and copy the Germans and build a major apprenticeship system in the UK: the second purpose of looking at Germany is to show that the institutions which underpin their system and the way their labour markets work cannot be copied in here. Rather, that our task is to build incentive structures for the bottom third of young people who cannot see credible links between education and good employment prospects.

The German system

I’m going to first talk about the way the German system works and then about the British system. Everything of course comes down to the relationship of the perception which young people have, of the relationship between taking school seriously and subsequent employment. In the German system there is a very clear understanding which almost all the participants have of the relationship between working hard in school and first training and then employment. How does that work? As I’m sure most of you know about the German system, about 60% of young people at the age of 16 or 18 do $3^1/_2$ year apprenticeships and apprenticeships more or less go down to the bottom 6 or 7% of the German age cohort. There are a group of children at the bottom who are largely from immigrant backgrounds who drop out of the system. Critically for incentive structures, there is a very big spectrum of apprenticeships: they go from very highly esteemed apprenticeships in major companies, the major banks, Daimler-Benz and so on down to low level apprenticeships in the so called hand work sector, the small company sector including the retail sector, garage mechanics and so on. Within any locality, parents, teachers and hence children have pretty good idea of this distribution of apprenticeships. There is moreover usually a close connection usually between companies and schools. Companies often have long term relations with local schools: they have therefore a good idea from teachers about which children work hard at school, as well as exam results. There is therefore an incentive structure for young Germans in relation to apprenticeships which is almost exactly the same incentive structure which we have in this country, not at the bottom or middle end of the educational process but at the top end when it comes to scoring A Level points to get into universities. In the UK, the better the A-level grades that you get the better the University you can go to. In Germany, at the bottom and middle end of the system there is exactly the same incentive structure: the better you do at school, the better you’re perceived to do by your teachers and the better the exam results you get at 16 and 18, the better the apprenticeship which you can get into. Thus even young people right at the bottom of the achievement ladder in German schools have got an incentive to do that much better and improve the apprenticeship which they get. (In Germany as it happens there is no such incentive structure at the top end as far as university entrance is concerned, you merely have to pass the Arbitur; with some exceptions the level of pass does not matter.) This means that teachers, children and parents are all highly aware from a pretty early age of the importance which attaches to teachers being persuaded that children take school seriously and that they get good exam results.

Now this sounds an ideal system and, of course, people have tried on many occasions to develop such a system in this country. The problem is that the apprenticeship system in Germany rests on important institutions, outside the education system and more or less outside the apprenticeship system, which enable the apprenticeship system to work well. The importance of these institutions can be seen in the answers to the following questions:

- Why do young people have confidence in the value of apprenticeships in Germany?
- Why are companies in Germany prepared to invest heavily in apprenticeships?

Young people have confidence in the value of apprenticeships because it is fully understood that the standards of training which you learn in your apprenticeship will be of use across a wide range of employers within the occupation. That’s because there are effective methods for employers to reach consensus on what the key training vocational standards are which they want their own employees to use. Behind that lies the fact that powerfully resourced employer associations can bring about consensus among employers, something which it is very difficult to imagine having in the UK.

A second reason why a young person has confidence in the value of an apprenticeship lies in the high regulation of German

labour markets and in particular the stability of German collective bargaining. If you go into one occupation you have a pretty good idea that the earnings you'll get in that occupation won't move dramatically down compared to other occupations, so you have a guarantee from the way in which the collective bargaining system works in Germany, that by investing in an apprenticeship you're investing in something which will insure that your wages more or less rise in relation to wages elsewhere in the economy. This very stable distribution of wages over time in the German economy depends on powerful unions operating with powerful employer associations. Again, there is no way in which such a development could take place in the modern British economy.

Thirdly there is relatively limited occupational mobility; people don't move around as they do in this country across a whole number of occupations, so that the value of the vocational training which they have is one which remains valid for a much longer period of time. Finally the training takes place half in companies, half in state vocational schools (dual system). Within the company strong employee elected works councils monitor the quality of the training which a young person is getting.

Why are companies prepared to invest in apprenticeships? The first reason is interesting because it contrasts very much with the UK. German companies know that they will be able to train young people relatively easily in complex skills since the apprentices they take on start off with a good basic educational level. Young people on the whole have reasonable literacy and numeracy capabilities before they start work related training. Secondly, companies in Germany have much less to fear from the poaching of skilled labour which takes place in this country; this results from regulated labour markets and again this comes back to powerful employer associations and unions. Thirdly, companies have access to long term finance in Germany and that means that they're prepared to take the relatively long term investment decisions which investing in apprenticeships implies without the immediate worry of their bottom profit line.

What can we learn from Germany?

In Germany institutions play a major part in constructing and supporting what might be described as a positive feed-back incentive structure for young people, as well as for their teachers and parents. This shows the value, in terms of subsequent employment, of taking education seriously; and it applies even to most children from low income backgrounds and their teachers. Because we do not have (and probably would not want) Gennan-type institutions, we should not think in terms of importing German solutions. What we can learn from Germany is the importance of effective incentive structures. We need to try and understand why the incentive structure for the bottom third of young people and their teachers in the UK is weak and appears to operate in a counter-productive way.

In particular, there is a lot of evidence which suggests that those who stay on between 16 and 18 or 19 in full-time education or highly structured training can make the transition into good employment. What is it about the incentive structures facing young people and/or their teachers or educational institutions which leads the bottom third of young people to leave education at 16, frequently with low or no GCSEs?

First, these most of these young people have grown up in an environment in which, if jobs are available at all, they are either unskilled or semi-skilled. The great likelihood is therefore that they will end up in this end of the labour market. Here the need for literacy and numeracy, and academic achievement in general, is much less great than it is in the German system. Typically of the bottom third only about a third of sixteen year old school leavers will actually get employment directly. Many will move into unemployment, or move out of the labour market, and some will move into Government training schemes. Its very clear that there is no requirement that you work hard at school in order to qualify for such career moves.

Secondly, if one looks at the incentive structures for schools up to the age of 16 (when most of these young people leave the education system), they have a very limited incentive to devote resources to these young people. The flindamental incentive structure for most secondary schools and many primary schools is to recruit middle class children. In order to do so, the secondary school needs to show it is successful in GCSE A to C passes. Therefore it makes little sense for a school to devote resources to moving children up from E's or F's to D's . It makes sense for the school to devote resources moving D's up to C's and to moving other children up higher.

Third, the same lack of incentive to invest in these children is true for school sixth forms, sixth form colleges and FE colleges. Trying to attract children who are low achievers at the age of 16, and devoting resources to literacy and numeracy and personal counselling is costly. There are different incentive structures for school sixth forms and for FE colleges, but they have similar implications. In general the incentive structure for school sixth forms is to devote resources to A Level children; their success depends upon attracting middle class children. The incentive structure for FE colleges is to pack as many children in as possible but ensuring that these are children who can pass courses so that the college can get its full payment.

Fourth, young people with low/no GCSEs at the age of 16 have very limited incentives to stay on in FE colleges or school sixth forms: If they can get employment they can earn money; if they move into work related training in Government supported training they can also earn money. But they receive nothing if they stay in full-time education. Hence they have little incentive to stay on at school or college in the post-16 phase if they are low GCSE achievers. This is reinforced by the attitude of schools and colleges.

Low literacy and numeracy makes difficult the move from insecure low-level labour markets in which little training takes place into more satisfactory employment. Moreover this low level employment environment, interspersed with unemployment or periods outside the labour market altogether, is not one in which social skills become developed. In an increasingly service

sector economy, social skills become ever more important. But social skills demand that young people grow up in a mixed social environment; and that is the critical role of education between 16 and 18 or 19 in the same institution – albeit doing different courses.

Until we can correct incentive structures for young people and educational institutions we are unlikely to be able raise staying on rates and achievement substantially for initial low achievers. It cannot be done be changing the nature of employment – unskilled low level jobs will only decline as the number of low achievers without social skills declines. We need therefore to operate on the incentives which face colleges and schools as well as the financial incentives for young people between 16 and 19.

Finally to underline this reinforced circle of low incentives in the UK companies have very limited incentives indeed in investing in children who are low achievers at the age of 16, the strong incentive for German companies that what they get from schools are young people even at a low level who have got good literacy and numeracy abilities and have shown themselves to be responsible and the like, companies simply do not have in this country in thinking about training and hence upgrading these sorts of children so you have a whole set of incentive structures all of which operate in the wrong direction and I feel rather strongly that this is in a way much broader and sketchier way than the previous speaker reinforces the points which he was making.

Session 6: Education and poverty: Discussion

Table 1 shows the obvious links between earnings and education.

Table 1: Crude Earnings by Highest Qualification (all ages)

£ per week	None	1-4 GCSEs grade A-C	5+ GCSEs grade A-C	2+ A levels	First degree
Men	**262**	**307**	**371**	438	**554**
Difference from previous column		*17%*	*21%*	*18%*	*26%*
Women	**127**	**174**	**210**	256	**345**
Difference from previous column		*37%*	*21%*	*22%*	*35%*

Source: Spring 1998 Labour Force Survey.

Education represents a critical part of the strategy to raise opportunity for all. But for any given intake of pupils (crudely measured by eligibility for free school meals) schools are not yet delivering the higher attainment for all which will have a significant impact on levels of poverty. How could the educational process be made more reliable ?

Second, how equal could opportunity be in practice across different school intakes? This in turn leads one to ask whether we need a distribution of resources even more skewed towards those schools or pupils who are not achieving.

In order to make the progress required in education, there needs to be complementary policies for family support to mitigate the impact on children of low educational attainment by their own parents or financial difficulties in the family, which Gregg and Machin[1] show has a major impact on the chances of young adults staying on in education.

Assuming these were in place, the potential benefits of education include:

- attainment at any stage of education mapping on to higher earnings (as indicated in the table comparing different attainments at GCSE);
- staying-on post 16 did likewise;
- socialisation and preparation for citizenship probably contributed to this; as did
- a greater likelihood, as attainment rose, that employers would spend more on an individual's training; and
- a likelihood of delay in starting a family.

Given the contribution education could make to earnings, it would help individuals to find the likeliest exit routes from poverty. Stephen Jenkins' analysis indicates that 63% of such exits are associated with changes in earnings.

The price of failure in education and associated family support policies included inter-generational transmission of poverty: Gregg and Machin show that children aged 6-9 of those in the NCDS study had lower test scores than average if one or both of their parents had had low school attendance, if the parent's family had suffered financial difficulty when s/he was a child, if s/he had been in contact with the police as a child or if s/he had ever been in care.

So are there three questions for policy:

i. We have the intention to level up standards; Ralph Tabberer's presentation had suggested that we have the knowledge. Do we have the leverage?

ii. How equal can opportunity be – do we have the methods and incentive structures to equalise?

iii. Are the complementary family support policies in place (or else even more interventionist schools, such as those now providing breakfast for their children)? The New Deal and the Working Families Tax Credit would contribute here.

Education is likely to be even more important in the future than it has been to date with the decline of manual employment and the diminution of other sources of comparative national advantage; we can measure a dispersion of outcome and seem able to identify necessary conditions for success; so we could choose priorities and set targets.

[1] Child Development and Success or Failure in the Youth Labour Market (Centre for Economic Performance discussion paper 397, 1998).

Discussion

A number of questions were raised from the floor.

- **How do we create a virtuous circle of good education and good jobs, or break out of the vicious circle of 'stepping stone' jobs which perpetually lead to other 'stepping stone' jobs?**

David Soskice identified staying on rates as crucial. He highlighted the importance of changing the incentive structure for 16-19s. One important vehicle for this would be the new Education Maintenance Allowance to be piloted later this year, which should be performance related.

Ralph Tabberer suggested addressing the problem using merit pay to attract the best and brightest to teaching, and reward success achieved despite difficult circumstances. This point was reinforced, citing the improvements achieved in Dallas, Texas through such schemes. The recent introduction of a programme allocating increased funding to FE colleges for recruiting from specific postcodes of areas of high deprivation was also referred to.

- **Are test scores appropriate measures of achievement – they may just reflect IQ? Is education as effective as is suggested, developing children rather than simply 'jumping through hoops'?**

The participants pointed out the importance of focussing on results as the best available indicator of performance.

- **In response to David Soskice's presentation, how is an appropriate political balance established with employers in Germany, particularly on issues such as curriculum control?**

David Soskice had emphasised the stake that employers had in ensuring the effective working of the system of apprenticeships, and the need of all parties involved to establish a balanced and effective working relationship. He went on to discuss the problems caused in the UK by labour market de-regulation and casualisation of employment. This was leading to a perception of employment as a less secure option than other activities, like crime.

CENTRE FOR ANALYSIS OF SOCIAL EXCLUSION
An ESRC Research Centre

CASE Publications

CASEpapers, a series of discussion papers produced by the ESRC Research Centre for Analysis of Social Exclusion at the London School of Economics, are available free of charge, as is our series of **CASEbriefs**, which summarise the research. Particular conferences and activities are summarised in our occasional **CASEreports** series.

All these are available either from Jane Dickson, the CASE Administrator (tel: 0171 955 6679; fax: 0171 242 2357; email: j.dickson@lse.ac.uk) or can be downloaded from our internet site: http://sticerd.lse.ac.uk/Case.

CASEpapers

CASE/1	Kathleen Kiernan	*The Legacy of Parental Divorce: Social, economic and demographic experiences in adulthood*
CASE/2	Tania Burchardt	*Boundaries between Public and Private Welfare: A typology and map of services*
	(more detailed report, *Private Welfare and Public Policy*, by Tania Burchardt, John Hills and Carol Propper, prepared for the Joseph Rowntree Foundation, January 1999)	
CASE/3 *Childbirth:*	Jane Waldfogel, Yoshio Higuchi and Masahiro Abe	*Maternity Leave Policies and Women's Employment after Evidence from the United States, Britain and Japan*
CASE/4	A B Atkinson and John Hills (editors)	*Exclusion, Employment and Opportunity*
CASE/5	Julian Le Grand and Phil Agulnik	*Tax Relief and Partnership Pensions*
	(version published in *Fiscal Studies*, vol.19, no.4, 1998)	
CASE/6	Simon M Burgess and Carol Propper	*Early Health Related Behaviours and their Impact on Later Life Chances: Evidence from the US*
CASE/7	Kathleen Kiernan and Ganka Mueller	*The Divorced and Who Divorces?*
CASE/8	Christian Schluter	*Income Dynamics in Germany, the USA and the UK: Evidence from panel data*
CASE/9	Simon M Burgess and Carol Propper	*An Economic Model of Household Income Dynamics, with an Application to Poverty Dynamics among American Women*
CASE/10	Didier Jacobs	*Social Welfare Systems in East Asia: A Comparative Analysis Including Private Welfare*
CASE/11	Mark Kleinman	*Include Me Out? The new politics of place and poverty*
CASE/12	Brian Barry	*Social Exclusion, Social Isolation and the Distribution of Income*
CASE/13	John Hills	*Thatcherism, New Labour and the Welfare State*
CASE/14	Irwin Garfinkel, Sara McLanahan, Daniel Meyer and Judith Seltzer	*Fathers under Fire: The revolution in child support enforcement in the USA*
	(This CASEpaper is a summary of the book by the same title and authors, published by the Russell Sage Foundation, 1998)	

CASE/15	John Hobcraft	*Intergenerational and Life-Course Transmission of Social Exclusion: Influences of Childhood Poverty, Family Disruption, and Contact with the Police*
CASE/16	Frank A. Cowell and Christian Schluter	*Measuring Income Mobility with Dirty Data*
CASE/17	William Julius Wilson	*When Work Disappears: New Implications for Race and Urban Poverty in the Global Economy*
	(to be published in *Ethnic and Racial Studies*, 22(3), May 1999)	
CASE/18	Ross Hendry	*Fair Shares for All? The development of needs based government funding in education, health and housing*
CASE/19	Nigel Campbell	*The Decline of Employment Among Older People in Britain*
CASE/20	Jane Falkingham	*Welfare in Transition: Trends in poverty and well-being in Central Asia*
CASE/21	Jane Waldfogel	*Early Childhood Interventions and Outcomes*
CASE/22	Howard Glennerster, Ruth Lupton, Philip Noden and Anne Power	*Poverty, Social Exclusion and Neighbourhood: Studying the area bases of social exclusion*

CASEbriefs

CASEbrief 1 *Boundaries between public and private welfare*
CASEbrief 2 *Maternity leave policies and women's employment after childbirth*
CASEbrief 3 *Exclusion, employment and opportunity*
CASEbrief 4 *Tax relief and partnership pensions*
CASEbrief 5 *The State of Welfare*
CASEbrief 6 *Who are the divorced and who divorces?*
CASEbrief 7 *Social Welfare in East Asia: Low public spending but low income inequality?*
CASEbrief 8 *Childhood experiences and the risks of social exclusion in adulthood*
CASEbrief 9 *The Decline of Employment Among Older People in Britain*

CASEreports

CASEreport 1	Anthony Lee and John Hills	*New Cycles of Disadvantage? Report of a conference organised by CASE on behalf of ESRC for HM Treasury*
CASEreport 2	John Hills (editor)	*CASE Annual Report 1997/98*
CASEreport 3	William Julius Wilson, Geoff Mulgan, John Hills and David Piachaud	*Welfare Reform: Learning from American Mistakes? Report of a seminar organised by LSE Housing and CASE*
CASEreport 4	Liz Richardson	*Tackling Difficult Estates: CASE/Social Exclusion Unit Seminar*
CASEreport 5		*Persistent Poverty and Lifetime Inequality: The evidence. Report of a seminar organised by HM Treasury and CASE)*

Table 1. Time spent in poverty over a six-year period[a]

Share of individuals in poverty for 1 to 5+ years[b] (%)

Post-tax and transfers

		1 year	2 years	3 years	4 years	5+ years	Average number of years in poverty
Canada	1990-95	35.9	27.0	14.4	9.2	13.5	2.4
Germany	1991-96	45.6	19.4	12.0	7.6	15.5	2.4
United Kingdom	1991-96	26.0	19.3	13.6	13.2	27.9	3.1
United States	1989-93	33.0	18.5	11.2	10.1	27.3	3.0

Share of total time spent in poverty[c] (%)

Post-tax and transfers

		1 year	2 years	3 years	4 years	5+ years	
Canada	1990-95	14.8	22.1	17.7	15.2	30.3	–
Germany	1991-96	19.2	16.3	15.2	12.8	36.4	–
United Kingdom	1991-96	8.3	12.3	13.0	16.9	49.6	–
United States	1989-93	11.1	12.4	11.2	13.5	51.8	–

a) The sample used includes all those individuals interviewed in each of the six years who have experienced at least one year in poverty.
b) The share of individuals spending one to five+ years in poverty as a share of all individuals touched by poverty over the period. For example, 35.9 per cent of those poor during the six-year period in Canada were poor for one year and 13.5 per cent for five years or more.
c) The following steps were used to calculate the values in each column. First, the values in each of the columns of the top panel were multiplied (weighted) by the number of years spent in poverty shown in the heading (distinguishing between five years and six+ years). A weight of six was given to groups which have six or more years in poverty, thus biasing downward the last column in the bottom panel. Second, these weighted values were then summed to estimate the total number of years spent in poverty by the total population. Finally, the values in the columns of the bottom panel are the results of the first step divided by the total calculated in the second step.

Source: OECD Secretariat.

Table 2. Poverty dynamics: "hazard rates"[a]

Probability of exiting poverty after[b]: (rate *100)

Post-tax and transfers

		1 year	2 years	3 years	4 years
Canada	1990-95	55.7	41.3	38.8	35.4
Germany	1991-96	52.7	42.7	32.0	19.1
United Kingdom	1991-96	45.4	37.0	32.3	25.8
United States	1989-93	45.6	31.9	23.1	20.2

Probability of re-entering poverty after[c]: (rate *100)

Post-tax and transfers

		1 year	2 years	3 years	4 years
Canada	1990-95	16.7	9.7	7.9	7.1
Germany	1991-96	25.6	13.0	17.5	15.5
United Kingdom	1991-96	32.8	18.2	11.0	10.0
United States	1989-93	31.8	21.5	18.3	18.6

a) Latest available six-year period. Includes all poverty spells or spells above the threshold where the beginning of the spell can be observed.
b) This is calculated as the ratio of those individuals, having just fallen below the threshold, who exit before the end of one, two, three or four years in poverty relative to those still poor at the beginning of each successive period. For example, in Canada, 55.7 per cent leave before the end of the first year and, of the 44.3 per cent who remain, 41.3 per cent leave between the first and second year.
c) The sample includes all those spells above the poverty threshold, conditional on the individual having exited poverty immediately before. The re-entry hazard is calculated as the ratio of those individuals observed to fall back below the threshold before one, two, three or four years above the poverty line over the population at risk. For example, of those who moved above the threshold and are still above the poverty line after one year, 9.7 per cent will fall back below the threshold in Canada between first and second years.

Source: OECD Secretariat.

Table 3. Characteristics of individuals above and below the poverty threshold
Per cent share of persons with a specified characteristic in each group

Household characteristics	Total population[a]	Above threshold[a]	Poor for 1 year[b]	Always poor[a]
CANADA				
Head gender				
Head male	83.7	87.9	70.6	72.4
Head female	16.3	12.1	29.4	27.6
Employment status				
No worker	18.3	13.6	45.3	36.4
One worker	31.2	27.9	42.3	43.9
Two workers	39.0	44.3	11.3	17.9
More than two workers	11.5	14.2	1.1	1.8
Family type				
Single adult, no children	19.4	16.1	34.3	24.9
Two adults, no children	30.1	32.4	15.5	26.7
Single adult, children	4.4	2.1	11.3	11.6
Two adults, children	31.5	32.4	33.2	29.2
Large families	14.6	16.9	5.7	7.6
Age of household head[c]				
Young-age head	28.3	25.0	38.2	28.6
Prime-age head	34.0	35.7	34.8	33.4
Older-working-age head	21.8	22.6	21.6	22.0
Retirement-age head	15.9	16.7	5.4	16.0
Education level[d]				
Low education	–	–	–	–
Middle education	–	–	–	–
Higher education	–	–	–	–
GERMANY				
Head gender				
Head male	75.2	79.1	53.1	16.7
Head female	24.8	20.9	46.9	83.3
Employment status				
No worker	18.5	14.9	49.4	71.8
One worker	39.4	37.6	44.1	28.2
Two workers	34.8	39.4	2.5	0.0
More than two workers	7.3	8.1	4.0	0.0
Family type				
Single adult, no children	14.4	12.3	27.6	34.2
Two adults, no children	40.9	43.2	31.7	14.9
Single adult, children	2.8	1.3	15.5	32.1
Two adults, children	33.6	34.7	19.0	16.7
Large families	8.4	8.4	6.2	2.2
Age of household head[c]				
Young-age head	12.8	10.1	24.9	31.0
Prime-age head	45.8	47.8	40.4	31.5
Older-working-age head	26.6	27.7	17.2	10.7
Retirement-age head	14.8	14.4	17.5	26.8
Education level[d]				
Low education	28.0	26.0	29.6	30.5
Middle education	52.3	52.7	60.9	63.0
Higher education	19.7	21.4	9.5	6.6

Table 3 *(cont'd)*. Characteristics of individuals above and below the poverty threshold
Per cent share of persons with a specified characteristic in each group

Household characteristics	Total population[a]	Above threshold[a]	Poor for 1 year[b]	Always poor[a]
UNITED KINGDOM				
Head gender				
Head male	67.7	74.3	53.7	38.4
Head female	32.3	25.8	46.3	61.6
Employment status				
No worker	25.0	10.7	42.7	91.0
One worker	27.2	26.6	33.9	9.0

Two workers	36.1	46.4	19.6	0.0
More than two workers	11.7	16.3	3.8	0.0
Family type				
Single adult, no children	10.9	6.2	18.1	40.5
Two adults, no children	42.8	49.9	43.2	14.6
Single adult, children	4.6	1.1	6.1	21.7
Two adults, children	32.4	35.3	21.3	17.3
Large families	9.2	7.6	11.3	6.0
Age of household head[c]				
Young-age head	15.5	13.3	17.6	23.5
Prime-age head	47.7	53.6	39.9	23.4
Older-working-age head	20.4	22.0	23.0	11.6
Retirement-age head	16.4	11.1	19.2	41.5
Education level[d]				
Low education	33.1	24.4	34.7	63.9
Middle education	36.9	38.0	38.9	29.1
Higher education	30.0	37.6	26.4	7.0
UNITED STATES				
Head gender				
Head male	79.5	86.8	70.4	26.9
Head female	20.5	13.2	29.7	73.1
Employment status				
No worker	10.7	6.6	17.9	51.3
One worker	32.3	29.0	52.6	40.3
Two workers	42.4	47.6	25.6	7.0
More than two workers	14.6	16.8	3.9	1.4
Family type				
Single adult, no children	12.3	10.6	20.0	21.5
Two adults, no children	29.8	34.3	21.6	8.4
Single adult, children	8.1	3.8	12.3	44.5
Two adults, children	35.5	37.7	29.8	14.4
Large families	14.3	13.6	16.4	11.3
Age of household head[c]				
Young-age head	19.7	16.0	33.3	37.1
Prime-age head	51.7	55.1	41.6	35.5
Older-working-age head	19.1	20.6	15.8	12.1
Retirement-age head	9.4	8.3	9.3	15.3
Education level[d]				
Low education	18.9	12.2	24.9	57.4
Middle education	36.9	35.6	43.2	31.6
Higher education	44.2	52.2	31.8	11.1

Note: Includes corrected values which differ from those found in *Eonomic Outlook 64*, Table VI.3. For definitions see Oxley, Antolin and Dang (*op. cit.*). Characteristics refer to the household head.

a) Characteristics defined at the beginning of the period.

b) Individuals who are poor only one year over the period, excluding spells occurring in the first and last year of the six-year period.

c) Young, prime-age, older-working-age, and retirement-age refer, respectively, to households with a head below 30, between 30 and below 50, between 50 and 65, and above 65 years old.

d) Low education is less than high-school; middle is completed high-school and higher is more than high-school education.

Source: OECD Secretariat.

Table 4. Frequency of "events" associated with poverty transitions
Per cent share of total transitions

	Entries		Exits	
	Total population	Household with working-age head[a]	Total population	Household with working-age head[a]
Canada				
Transitions by type[b]:				
Employment/earnings-related	26.1	28.1	38.4	44.4
Family-structure-related	19.0	20.4	16.1	28.1
Other factors[c]	37.9	33.7	28.2	19.7
Germany				
Transitions by type[b]:				
Employment/earnings-related	47.1	51.5	50.1	55.0
Family structure-related	24.7	25.2	8.9	9.5
Other factors[c]	23.4	17.9	33.3	27.1
United Kingdom				
Transitions by type[b]:				
Employment/earnings-related	27.5	34.2	41.2	51.6
Family structure-related	26.4	28.5	9.1	10.2
Other factors[c]	35.4	23.4	40.5	26.6
United States				
Transitions by type[b]:				
Employment/earnings-related	57.4	61.5	62.1	64.9
Family structure-related	19.0	20.1	12.8	13.9
Other factors[c]	13.8	8.2	11.2	7.5

Note: See Oxley, Antolin and Dang (forthcoming) for description. Covers most recent six-year period of available data.
a) Refers to individuals in households with a working-age head.
b) The per cent shares do not sum to 100 per cent. The remainder includes cases which could not be classified.
c) Households which were either employed or unemployed in both periods and where income changes were not dominated by movements in earnings. Largely transfer-related.
Source: OECD Secretariat.

Table 5. Changes in probability of entry and exit when an "event" occurs
Changes in probability points

	Canada[a]	Germany	United Kingdom	United States
Poverty entry[b]				
Change in employment status only				
Loss of all workers	0.26	0.41	0.28	0.37
Loss of some but not all workers	0.05	0.04	-0.01	0.08
One worker, fall in hours	–	0.15	0.12	0.22
More than one worker, fall in hours	–	0.00	-0.04	0.01
Change in family structure only				
Separations/divorce (spouse becomes head)	0.36	0.14	0.06	0.08
Child becomes head	–	0.09	0.09	0.16
Concomitant changes in employment and family status				
Separations/divorce (spouse becomes head)				
Loss of all workers	0.72	0.82	0.49	0.62
Loss of some but not all workers	0.47	0.31	0.05	0.25
One worker, fall in hours	–	0.58	0.28	0.45
Child becomes head				
Loss of all workers	–	0.75	0.55	0.73
Loss of some but not all workers	–	0.23	0.07	0.38
One worker, fall in hours	–	0.48	0.34	0.59
Poverty exit[b]				
Change in employment status only				
From zero to at least one worker	0.17	0.20	0.19	0.08
Additional workers in working households	0.03	0.40	0.36	0.37
One worker, increase in hours	–	0.43	0.08	0.34
More than one worker, increase in hours	–	–	0.30	0.47
Change in family structure only				
Marriage/partnership (head becomes spouse)	0.36	0.11	0.00	0.39
Child becomes spouse	–	–	0.12	0.37
Concomitant changes in employment and family status				
Marriage/partnership (head becomes spouse)				
From zero to at least one worker	0.44	0.30	0.19	0.46
Additional workers in working households	0.37	0.46	0.36	0.63
One worker, increase in hours	–	0.49	0.08	0.62
Child becomes head				
From zero to at least one worker	–	–	0.30	0.45
Additional workers in working households	–	–	0.45	0.62
One worker, increase in hours	–	–	0.20	0.61

a) Results for the Canadian data are less comparable to the other countries because information on labour-market and family status is more limited and some results may be affected by breaks in the data.
b) Changes in probability points are defined relative to a baseline which is, essentially, the probability of transiting when there is no change either in family or employment status.
Source: OECD Secretariat.