

Chapter 7

Low Income Dynamics

- Less than ten per cent of the population remained in the same quintile of the income distribution for the whole of the period 1991-99.
- The majority of individuals who were in the bottom and top quintiles in 1991 spent five or more years in that quintile from 1991-99. In contrast, the majority of those individuals in any of the middle three quintiles at the start of the period spent five or more years in other quintiles.
- In 1999, the majority of individuals who were no longer in the same quintile as they had been in 1991 had finished up in an adjacent quintile. Those who had finished in a higher quintile had spent the majority of their time above their original quintile and vice versa for those finishing in a lower quintile
- Individuals in the top and bottom quintiles in 1991 were more likely to be in the same quintile in 1999, and to have spent the majority of their time in that quintile over the period, than those in the middle three quintiles.
- Over any four year period from 1991-1999, around a third of individuals spent at least one year, 1 in 10 spent three or more years and 1 in 20 spent all four years below 60 per cent of median household income.
- Over the nine year period 1991-99, just under half of individuals spent at least one year, just over ten per cent spent at least five years and two per cent spent all nine years below 60 per cent of median household income.
- From 1991-99, there was little change in persistent low income, as defined by spending three or more years out of any four year period in a household with below 60 per cent of median income, for working-age adults. There was a suggestion of a slight rise in persistent low income for pensioners and a slight fall for children.
- Single pensioners, those living in single-parent families, workless households, the social rented sector or with no qualifications were more likely to experience persistent low income, as defined above, than other groups. There is some evidence that, during the 1990's, the incidence of persistent low income fell for single-parent families and workless households, with a slight rise for pensioners.

Introduction

Analysis elsewhere in this report is based on the Family Resources Survey (FRS), which is a cross-sectional survey. Therefore, the same people are not interviewed in consecutive years and it is not possible to trace the incomes of particular individuals over time.

The extent to which individuals living in low-income households at a point in time are simply experiencing transitory fluctuations in income, or are persistently experiencing low income, is clearly an important issue and one that can only be addressed using longitudinal data. The question of income mobility and the extent of persistence of low incomes experienced by different groups are therefore addressed in this chapter using data from the longitudinal British Household Panel Survey (BHPS).

The results presented here provide a picture of income mobility in the 1990s and are based on data from nine waves of the BHPS, from 1991 up to and including 1999. Particular attention is given to the examination of the characteristics of those who are persistently observed as living in low-income households. Details of the methodology employed in analysis of BHPS data can be found in Appendix 2.

Income in real terms between 1991 and 1999

Table 7.1 is based on all nine waves of BHPS data and shows income levels for the mean, median and various percentiles over time, in December 2000 prices. Broadly speaking, it shows income growth in real terms that is not inconsistent with FRS based results. This table has been presented in order to allow users to assess the robustness of BHPS income data presented in this chapter and is not intended to supersede equivalent FRS based analysis presented elsewhere in this report.

With nine waves of data it is possible to look at how the characteristics of those with persistently low incomes have changed over time.

The nine waves have been divided into three subsets of four waves covering each year from 1991 to 1994, 1995 to 1998 and 1996 to 1999 (see Appendix 2 for details of the methodology employed). To be considered for inclusion in a particular period, individuals/households must have responded in both wave one (1991) and each wave of the four year period in question.

Given the relatively small sample size of the BHPS (there are around 4000 households in the longitudinal data set we are analysing for any four year period), changes over time must be interpreted with caution as they are likely to be small in relation to measurement error.

For this publication we have introduced thresholds based on 60 per cent of the median and 70 per cent of the median, in line with the indicators of persistent low income as presented in the Government's annual report on poverty and social exclusion, Opportunity For All. The 20 per cent and 30 per cent of overall income measures have been retained for comparison and to validate results based on thresholds of median as these are vulnerable to measurement error given that this part of the distribution is particularly densely populated.

All results from the BHPS relate to income Before Housing Costs.

Comparison of FES/FRS based low-income estimates with their BHPS equivalents

Table 7.2 compares estimates of the percentage of individuals below 60 per cent of median household income with the BHPS longitudinal and cross sectional equivalents. Cross sectional estimates derived from the FES/FRS are systematically slightly higher than their cross-sectional BHPS equivalents, by around a percentage point.

Earlier estimates derived from the longitudinal BHPS were systematically around one percentage point below BHPS cross sectional estimates. This difference is indicative of the extent of the attrition bias of the longitudinal low-income analysis presented in this chapter.

As explained above, the longitudinal data set contains only those individuals who are present in each of the nine waves, and is therefore subject to attrition bias over time (as progressively more and more individuals drop out of the survey). In order to compensate for this, and allow for the production of robust cross-sectional estimates, households that have dropped out of the sample are replaced each year. Consequently, the replacement households will feature in the cross sectional analysis presented in Table 7.2, but will not feature in longitudinal BHPS analysis presented in this chapter as they have not been present for each wave of the survey.

Income mobility

Table 7.3 shows the number of times individuals moved between quintiles over the period 1991 to 1999, by their original quintile in 1991. It highlights that:

- There is movement – the majority (over 90 per cent) of the population moved quintiles at least once over the period.
- Those individuals who started in the bottom and, even more so, the top quintile in 1991 were more likely to remain in the same quintile throughout than those who started in the middle three quintiles.

Table 7.4 shows where individuals spent the majority of the nine-year period 1991-1999 in relation to their original quintile in 1991. From this we can conclude that relative to their position in 1991:

- The majority of individuals who originated in the top or bottom quintiles spent five or more years there over the period.
- Conversely, the majority of individuals who originated in the middle three quintiles spent five or more years in other quintiles. Of these, those individuals starting in the:
 - i) Second quintile were more likely to spend the majority of the time in a higher quintile(s).
 - ii) Third quintile were as likely to spend the majority of their time in a higher quintile as in a lower quintile.
 - iii) Fourth quintile were more likely to spend the majority of their time in a lower quintile(s).

Table 7.5 outlines the position of individuals at the beginning and end of the nine-year period 1991-1999, and also looks at where these individuals spent the majority of their time. It shows that:

- Not everyone finished and ended the period in the same quintile, i.e. there was movement both up and down the income distribution over the period.
- Of those individuals who didn't finish the period in the quintile in which they had started, the majority had finished in an adjacent quintile.
- Around 5 per cent of those in the bottom quintile in 1991 were in the top quintile in 1999; a similar number moved from the top quintile to the bottom.
- For those individuals who started and finished the period in the same quintile, the majority spent five or more years in that quintile, more so for individuals in the top and bottom as opposed to the middle three quintiles.
- For those individuals who finished in a higher quintile in 1999, the majority spent five or more years above their original quintile, although less so for those who started in the fourth quintile.
- For those individuals who finished in a lower quintile in 1999, the majority had spent five or more years below their original quintile, although less so for those who started in the second quintile.

In summary, whilst it would appear that the picture painted of income mobility is a complicated one, for the majority of individuals, their position in 1999 in relation to 1991 was generally indicative of where they had spent the majority of the nine-year period. For example, if they started and finished in the same quintile, they were more likely than not to have spent

the majority of their time there. Similarly, if they had finished in a higher or lower quintile they were more likely to have spent the majority of their time above or below their original quintile respectively.

Persistent low income

One possible measure of 'persistence' of low incomes would be to consider only those individuals whose income was 'low' in each year of the period in question. However, this would exclude people who experienced very short periods with a slightly higher income and whose long-term living standards were not actually very different from those captured by the above definition of persistence.

This issue is particularly relevant because the income distribution is particularly dense around the second and third decile and the 60 and 70 per cent of median income markers. In addition, some short periods of recorded high income may be due to measurement error and not reflect any real improvement in living standards.

Therefore other definitions of persistence are also considered which involve experiencing a low income for the majority of the period:

- i) Regardless of how high their income was in the remaining year(s). This approach is adopted in the Government's report on Poverty and Social Exclusion, Opportunity For All (OFA) which defines persistence as spending three or more years out of any four-year period below low-income thresholds.
- ii) With an income just above this level (in the bottom 40 per cent of the income distribution) for the remaining year(s). This excludes from the definition of 'persistence' those with relatively high incomes for any period of time.

Table 7.6 shows the number of years that people spent below various low-income thresholds over a nine-year and several four-year periods from 1991-1999.

For any four-year period:

- Around a third of all individuals spent at least a year below the 60 per cent of median threshold.
- Just over one in ten spent at least three years out of any four living in households with below 60 per cent of median income. This figure falls only very slightly if the definition is tightened to include only those individuals who spend the remaining year living in a household in the bottom 40 per cent of the income distribution.

7 Low Income Dynamics

- Around 1 in 20 spent all four years living in households with below 60 per cent of median income.
- There is no significant change over the duration of the period 1991-1999.
- The figures obtained using 60 and 70 per cent of median as low-income thresholds are broadly consistent with those obtained using the bottom 20 and 30 per cent of the distribution respectively.

For the full nine-year period:

- Just under half spent at least one year below the 60 per cent of median threshold.
- Just over 10 per cent spent at least five years with below 60 per cent of median income, very slightly less so if the definition is constrained to include only those individuals who spent all but one of the remaining years in the bottom 40 per cent of the income distribution.
- Only two per cent of individuals spent all nine years living below the 60 per cent of median threshold.
- Again, figures obtained using 60 and 70 per cent of median as low-income thresholds are broadly consistent with those obtained using the bottom 20 and 30 per cent of the distribution respectively.

In conclusion, as we consider more restrictive definitions of 'persistence', we see significant falls in the proportion of the population who might be described as persistently poor. This finding corroborates those of Hills (1998) who examined different types of low-income trajectories and found that a considerable proportion of the population were 'blipping' in and out of low income or experiencing repeated spells of low income.

Opportunity for All persistent low-income indicators

Table 7.7 presents the persistent low-income indicators for pensioners, children and working-age adults that are included in the Government's annual report on tackling poverty and social exclusion 'Opportunity for All' (OFA), with figures for all individuals being presented for comparative purposes, although they don't appear in the report proper.

The definition of persistence used in OFA is 'at least three years out of four below thresholds of 60 or 70 per cent of median income'. An alternative definition, that does not appear in OFA, using bottom 20 or 30 per cent of the income distribution as opposed to thresholds of median income is also included for validation purposes. This is useful as OFA results may be subject to variation due to the density of the income distribution around the 60 and 70 per cent of median markers.

For the period 1996 to 1999 the table shows that:

- 11 per cent of individuals lived in households with below 60 per cent of median income for at least three years. This figure has showed little change since 1991.
- 16 per cent of children lived in households with below 60 per cent of median income for at least three years. This figure has shown little change since 1992, but has possibly shown a slight fall since 1991.
- Seven per cent of working-age adults lived in households with below 60 per cent of median income for at least three years. This figure has remained broadly constant over the period 1991-1999.
- 18 per cent of pensioners lived in households with below 60 per cent of median income for at least three years. This would appear to have risen slightly over the period 1991-1999, having followed a rising trend from 1992, and is consistent with the broad pattern observed in the figures for pensioners persistently in the bottom 20 per cent of the income distribution.

Composition of persistent low-income groups

Table 7.8 outlines the family and household characteristics of those individuals who experienced 'persistent' low income, where persistence is expressed as three years out of any four below low-income thresholds. From 1996-99, for those individuals living in households with below 60 per cent of median income in at least three years out of four it shows that:

- Just over half lived in families with children.
- Just over one-third were pensioners, with one in five being single pensioners.
- Just over two in five lived in workless households.
- More than half lived in families where no adults had any educational qualifications.
- Just under half lived in social housing.

The above conclusions are supported when validated against figures for the bottom 20 per cent of the income distribution.

Whilst, due to small sample sizes and risk of measurement error, changes over time should be interpreted with caution, there is perhaps evidence to suggest that, since 1991 for those individuals persistently below 60 per cent of median income:

- There has been a fall in the proportion who live in families with children, and an increase in the proportion living in pensioner families. For both of these groups, this partly reflects similar changes in the share of the overall population that they occupy as captured in this analysis.

- There has been a fall in the proportion who live in workless families or in social rented accommodation and families where the adults have no qualifications.

In Tables 7.8 and 7.9, individuals are defined by their characteristics in the first year of the period covered. Although some will experience changes in the composition of their household over the period, this is not considered here. For example, not all those individuals recorded as living in a lone-parent family in 1991 will still be living in a lone-parent family in 1994.

Risk of falling into persistent low-income groups

Table 7.9 shows the risk for individuals of experiencing 'persistent low incomes' according to the characteristics of their family or household. This table varies from table 7.8 in that it is not showing the composition of low-income groups by household or characteristics, but rather the risk of persistent low income. For those individuals living in households with below 60 per cent of median income in at least three years out of any four, the table shows that:

- Those living in lone-parent or single-pensioner families were more at risk of persistent low income than other family types. In contrast there was a very small risk for childless non-pensioner families.
- Those living in workless families were most at risk of persistent low income.
- Individuals without qualifications and those living in the social rented housing sector also had a relatively high risk of low income.

Again, whilst, due to small sample sizes and risk of measurement error, changes over time should be interpreted with caution, there is perhaps evidence to suggest that, since 1991 there has been a reduction in the risk of low income for individuals in lone parent and workless families and a slight increase for pensioners.

Table 7.1: Equivalised income levels (in December 2000 prices)

fpw equivalised								Source: BHPS
Year	10th percentile	20th percentile	30th percentile	40th percentile	60% of median	70% of median	Median	Mean
1991	136	171	205	242	164	191	273	316
1992	130	162	193	228	157	184	262	304
1993	141	175	205	239	165	193	275	310
1994	144	178	209	240	164	192	274	317
1995	147	183	215	245	168	196	280	330
1996	152	186	219	255	175	204	291	331
1997	153	188	222	258	176	206	294	336
1998	158	196	231	266	183	213	304	346
1999	151	199	235	270	186	217	310	362
Percentage increase 1991 to 1999	10	16	15	12	14	14	14	15

Table 7.2: Comparison of FES/FRS based estimates of the percentage of individuals below 60% median household income and their BHPS longitudinal and cross-sectional equivalents

Percentage of individuals below 60% median, within each wave				
BHPS year	BHPS		HBAI (FRS/FES)	
	longitudinal	cross sectional	60% of median (BHC)	FES/FRS year
1991	18	19	20	90/91*
1992	18	19	21	91/92*
1993	17	18	20	92/93*
1994	16	17	18	94/95
1995	16	17	17	95/96
1996	16	16	18	96/97
1997	17	17	18	97/98
1998	17	17	18	98/99
1999	17	17	18	99/00

Note: HBAI data is taken from FRS and represents a financial year unless denoted by a * in which case it is taken from FES and represents two calendar years combined.

Table 7.3: The number of movements made by individuals between quintiles over the period 1991 to 1999

Number of movements between different quintiles	Original quintile in 1991					
	Bottom Quintile	Second Quintile	Third Quintile	Fourth Quintile	Top Quintile	All individuals
No movements from original quintile position	11	2	2	2	24	8
Moved once between 1991 and 1999	8	6	7	11	8	8
Moved twice between 1991 and 1999	17	14	13	14	16	15
Moved three times between 1991 and 1999	14	19	18	17	12	16
Moved four times between 1991 and 1999	19	20	20	19	16	19
Moved five times between 1991 and 1999	14	17	20	18	13	16
Moved six times between 1991 and 1999	11	15	13	12	7	12
Moved seven times between 1991 and 1999	4	5	6	4	4	5
Moved every year between 1991 and 1999	1	1	2	2	1	1
Total (all individuals)	100	100	100	100	100	100

Table 7.4: Where in the income distribution individuals spent the majority of their time relative to 1991

Source: BHPS

	Original position in 1991					All individuals
	Bottom	Second	Third	Fourth	Top	
	Quintile	Quintile	Quintile	Quintile	Quintile	
All years in the same quintile as 1991	11	2	2	2	24	8
Majority of years in same quintile as 1991	47	36	31	37	41	38
Majority of years above 1991 quintile	42	33	24	13	...	22
Majority of years below 1991 quintile	...	13	24	33	35	21
None of the above	...	15	18	15	...	10
All individuals	100	100	100	100	100	100

Table 7.5: Position of individuals in the income distribution by quintile in 1999 in relation to 1991, by where they spent the majority of their time

Source: BHPS

Percentage of individuals	Position in 1991				
	Bottom Quintile	Second Quintile	Third Quintile	Fourth Quintile	Top Quintile
Position in 1999					
Quintile 1	46	24	15	10	6
Quintile 2	26	30	22	15	6
Quintile 3	15	24	26	22	13
Quintile 4	9	14	23	31	24
Quintile 5	5	8	14	22	51
Total	100	100	100	100	100
Of those individuals who were in the same quintile in 1991 and 1999					
All years in original/final quintile	25	7	7	7	46
At least five years in original/final quintile	58	68	56	61	45
Majority of time above original/final quintile	17	9	10	9	...
Majority of time below original/final quintile	...	5	9	14	9
None of the above	...	10	19	9	...
All	100	100	100	100	100
Of those individuals who were in a higher quintile in 1999 relative to 1991					
Majority of years spent above original quintile	62	61	55	44	...
Majority of years in same quintile as original	38	20	22	25	...
Majority of years spent below original quintile	...	4	5	4	...
None of the above	...	15	18	28	...
All	100	100	100	100	...
Of those individuals who were in a lower quintile in 1999 relative to 1991					
Majority of years spent above original quintile	...	7	4	2	...
Majority of years in same quintile as original	...	28	24	26	37
Majority of years spent below original quintile	...	42	54	59	63
None of the above	...	23	18	13	...
All	...	100	100	100	100

Table 7.6: Number of years spent in the bottom of income distribution, measured by percentiles and thresholds of median, over four and nine year periods

Percentage of individuals				Source: BHPS	
Number of years below median thresholds	Below	Below	In bottom	In bottom	
	60% median	70% median	20%	30%	
1991 to 1994					
No years	66	56	63	51	
At least 1 year	34	45	37	49	
At least 2 years	20	30	23	35	
At least 3 years	12	19	14	23	
At least 3 years, remainder in bottom 40%	10	16	11	19	
All 4 years	5	10	7	13	
1995 to 1998					
No years	69	58	64	52	
At least 1 year	31	42	36	48	
At least 2 years	18	28	22	34	
At least 3 years	11	19	14	24	
At least 3 years, remainder in bottom 40%	10	16	13	19	
All 4 years	6	11	8	15	
1996 to 1999					
No years	67	58	64	52	
At least 1 year	33	42	36	48	
At least 2 years	19	29	23	34	
At least 3 years	11	20	14	24	
At least 3 years, remainder in bottom 40%	10	17	12	19	
All 4 years	5	11	7	15	
1991-1999					
At least one year	46	57	50	62	
At least 5 years	13	22	16	27	
At least 5 years, with no more than 1 year outside bottom 40%	11	17	13	19	
At least 7 years	6	13	9	17	
At least 7 years, with no more than 1 year outside bottom 40%	6	12	9	16	
At least 8 years, remainder in bottom 40%	4	9	6	12	
All 9 years	2	4	2	6	

Table 7.7: Opportunity for All indicators

Percentage of individuals	Source: BHPS			
	Below threshold in at least 3 out of 4 years			
	OFA definition		Alternative definition	
	Below 60% of median	Below 70% of median	In bottom 20 %	In bottom 30 %
All individuals				
1991 to 1994	12	19	14	23
1992 to 1995	11	19	14	24
1993 to 1996	10	19	14	24
1994 to 1997	10	19	15	24
1995 to 1998	11	19	14	24
1996 to 1999	11	20	14	24
Children				
1991 to 1994	19	28	21	33
1992 to 1995	17	28	21	32
1993 to 1996	16	26	20	33
1994 to 1997	16	25	21	31
1995 to 1998	17	26	20	31
1996 to 1999	16	26	20	31
Working-age adults				
1991 to 1994	8	12	9	15
1992 to 1995	7	13	9	16
1993 to 1996	7	13	9	16
1994 to 1997	7	12	9	16
1995 to 1998	7	12	9	15
1996 to 1999	7	12	9	15
Pensioners				
1991 to 1994	16	32	20	40
1992 to 1995	14	31	20	40
1993 to 1996	15	30	22	40
1994 to 1997	15	32	24	41
1995 to 1998	16	32	23	41
1996 to 1999	18	34	23	42

Table 7.8: Composition of persistent low-income groups by characteristics of family or household

	Percentage of individuals															Source: BHPS
	Whole population			3 years out of 4 years below threshold						3 years out of 4 in the						
	1991-4	1995-8	1996-9	Below 60% median			Below 70% median			Bottom 20%			Bottom 30%			
	1991-4	1995-8	1996-9	1991-4	1995-8	1996-9	1991-4	1995-8	1996-9	1991-4	1995-8	1996-9	1991-4	1995-8	1996-9	
GENDER AND ADULTHOOD																
Children	22	22	21	37	34	31	33	30	27	35	31	30	31	29	27	
Men	37	37	38	23	24	25	25	26	27	24	25	26	25	27	28	
Women	41	41	41	40	42	43	42	44	45	41	43	44	44	44	45	
FAMILY TYPE																
Pensioner Couple	9	10	11	9	12	14	12	15	16	11	14	14	12	15	16	
Single Pensioner	8	10	10	14	17	20	17	19	21	15	18	20	18	19	21	
Couple with children	39	36	36	42	36	36	39	34	33	39	34	35	38	35	33	
Couple without children	21	21	20	6	6	4	6	7	7	6	6	6	6	7	7	
Single with children	7	7	7	22	19	17	19	16	15	22	17	16	17	15	14	
Single without children	15	16	15	7	10	9	8	9	9	8	10	9	8	9	9	
EDUCATIONAL QUALIFICATIONS (adults)																
Above A-level	25	30	31	6	9	10	7	10	10	6	10	10	7	11	12	
A-level or below	41	40	40	32	36	36	33	35	36	34	35	35	33	35	35	
No qualification	34	30	30	62	54	54	60	55	64	60	55	55	60	54	53	
TYPE OF TENURE																
Owner-occupied	70	70	70	41	42	45	42	43	44	42	42	44	42	43	46	
Social rented	23	22	22	51	48	46	51	47	47	50	48	47	50	47	46	
Private rented	7	8	8	8	10	9	7	10	9	8	9	9	8	9	8	
ECONOMIC STATUS OF HOUSEHOLD																
Fully employed	32	29	30	7	5	6	10	7	7	7	6	7	10	9	9	
Partially employed	25	25	24	12	15	13	15	15	16	13	14	15	16	17	16	
Workless	13	14	13	46	47	41	37	39	34	44	43	37	34	36	32	
Pensioner	14	17	18	21	28	30	26	31	33	23	30	32	27	32	33	
Self-employed	16	15	16	14	5	10	12	8	9	13	6	10	13	8	9	
Whole population	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	

Table 7.9: Risk of population groups experiencing persistent low income

Percentage of individuals	Source: BHPS											
	3 out of 4 years below threshold						3 out of 4 years in the					
	Below 60% median			Below 70% median			Bottom 20%			Bottom 30%		
	1991-4	1995-8	1996-9	1991-4	1995-8	1996-9	1991-4	1995-8	1996-9	1991-4	1995-8	1996-9
GENDER AND ADULTHOOD												
Children	19	17	16	28	26	25	21	20	20	33	31	31
Men	7	7	7	13	14	14	9	10	10	16	17	18
Women	11	11	12	20	21	22	14	15	15	25	26	27
FAMILY TYPE												
Pensioner Couple	12	13	14	26	27	28	16	20	18	32	35	36
Single Pensioner	20	19	21	39	38	40	24	26	27	50	47	48
Couple with children	12	11	11	19	18	18	13	13	14	23	23	22
Couple without children	3	3	2	5	6	7	4	4	4	6	8	8
Single with children	38	30	27	56	46	43	44	37	32	62	53	50
Single without children	5	7	6	10	11	11	7	9	8	13	14	14
EDUCATIONAL QUALIFICATIONS (adults)												
Above A-level	3	3	3	5	6	6	3	5	4	6	7	9
A-level or below	7	9	9	14	16	16	9	11	11	17	24	20
No qualification	17	17	18	29	32	34	20	24	24	36	37	41
TYPE OF TENURE												
Owner-occupied	7	7	7	12	12	12	8	9	9	14	15	16
Social rented	26	23	23	43	41	41	30	31	30	51	51	51
Private rented	13	13	13	19	23	22	16	16	15	25	28	25
ECONOMIC STATUS OF HOUSEHOLD												
Fully employed	2	2	2	6	5	5	3	3	3	7	7	8
Partially employed	6	6	6	12	11	13	7	8	9	15	16	16
Workless	40	35	34	55	53	51	45	43	39	61	59	59
Pensioner	17	18	19	36	36	37	22	26	25	46	46	46
Self-employed	10	4	7	15	10	11	11	6	9	18	12	14
Whole population	12	11	11	18	19	20	14	14	14	23	24	24

