

The dynamics of low income in rural areas^a

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Abstract

This paper provides a picture of the dynamics of low income in rural areas by comparing a rural sample with a non-rural sample using the British Household Panel Survey. The paper considers income distributions and inequality, low income mobility, the distribution of low income spells, the characteristics of those on low incomes and possible trigger events associated with low income entry and exit across the two samples. Although in absolute terms somewhat less important than in non-rural areas, the results confirm that low income in rural areas is significant and emphasise a number of important dynamic aspects of the problem, such as the extent of persistent low income among the rural poor.

Keywords: Rural, low income, dynamics, longitudinal data.

1. Introduction

The extent and importance of low incomes in rural areas in the 1980's and 1990's has been emphasised by the studies of MCLAUGHLIN (1985), CLOKE, MILBOURNE and THOMAS (1994) and SHUCKSMITH, CHAPMAN and CLARK (1996). The significant incidence of rural poverty reported in these studies has been an important catalyst for the wider debate on rural deprivation, as low rural incomes are argued to represent a vital link in the 'cycle of deprivation'. That is, those on low incomes in rural areas tend to be also excluded from, or experience difficulty with access to a range of facilities and services, e.g. housing and transport (SHAW, 1979).

Given the stated commitment of the UK government to 'tackle social exclusion' as one of its 'highest priorities' (SOCIAL EXCLUSION UNIT, 1998), rural poverty has a particular policy relevance, especially as the case that rural deprivation is 'substantial' and requires a policy response appears to have been accepted by policy makers (EAGLE, 1998; SCOTTISH OFFICE 1997). More generally, rural economic issues such as rural incomes and poverty are increasingly becoming an issue for EU policy makers, as the EU 'agricultural policy' agenda moves from purely agricultural issues to a broader concern about 'rural development' (EU COMMISSION, 1997a, 1997b).

Recent research has criticised the deprivation concept and its over-emphasis on material conditions, for example incomes, rather than how 'rural people feel marginalized by a lack of power, choice and opportunity' (CLOKE *et al*, 1995, p.358; WOODWARD 1996). Despite these limitations, there is continued need for quantitative and normative measures of rural deprivation – not least because policy makers seem less than convinced by 'subjective'

accounts of rural deprivation (CLOKE, MILBOURNE and THOMAS, 1997).

While the quantitative work in the studies by MCLAUGHLIN (1986), CLOKE, MILBOURNE and THOMAS (1994), and SHUCKSMITH, CHAPMAN and CLARK (1996) provided evidence of the extent of low income in rural areas, these studies were limited to cross-sectional surveys in rural areas only. As a result, information on the comparative dynamics of those experiencing low incomes in rural areas is limited to possible inferences from qualitative data describing individual experiences, (as in CLOKE *et al*, 1995), and also from other proximate information, e.g. the impact of the changes in rural service provision (HIGGS and WHITE, 1997; LOWE, BRADLEY and WRIGHT, 1986). Although such sources of information are valuable, there is clearly a lack of direct quantitative information in this area.

The principal aim of this article therefore is to provide quantitative information on both the dynamics of rural low incomes and how it compares with that observed for non-rural residents. This information is generated, following the general approach of JARVIS and JENKINS (1997,1998), from the first five waves (1991-1995) of the British Household Panel Survey (BHPS),¹ through a comparison of the income dynamics of a 'rural' sub-sample against that of a 'non-rural' sub-sample.

The use of nationally collected survey data does, however, pose a number of problems and constraints. Much previous research on rural deprivation has emphasised the cultural and social reasons that mean that poverty is hidden in rural areas (see for example SCOTT, SHENTON, and HEALEY, 1991). These are not captured in the available survey data. The impact of the heterogeneity of rural areas (or 'rural context') has also been an important strand in this literature. However, the nature of the available data (and the

analyses undertaken) means that no differentiation between rural areas is possible. These shortcomings are, it is argued, outweighed by the advantage offered by the longitudinal nature of the BHPS in allowing the dynamics of the income of individuals to be explored.

The plan of the paper is as follows. In the next section, the BHPS and the rural and low-income definitions used are discussed, and some summary statistics presented. The static distribution of income in the rural and non-rural sub-samples are also considered, providing a basic comparison of the extent of low incomes and inequality. In Section 3 an overview of the income dynamics in the two sub-samples is presented. Here the longitudinal information on individuals is used to construct a Markov matrix that traces movements between income categories and location over the five years (or waves). Section 4 further exploits the dynamic information to provide a more detailed picture of the degree of heterogeneity of those experiencing low income by detailing the distribution of low income spells and the typical characteristics of those who experienced low income ‘temporally’ and ‘persistently’ during the five year period. Finally, much research has emphasised the notion of ‘trigger’ events, which help explain why individuals enter or exit low income or poverty (BANE and ELLWOOD, 1986; BERGHMAN, 1995; JARVIS and JENKINS, 1997; ROOM, 1995). As the identification of such ‘trigger’ events is clearly of importance in understanding the process of low income, Section 5 considers the degree to which certain economic and demographic events coincide with individuals moving from or into low income. Section 6 concludes.

2. Definitions and Sample Statistics

The British Household Panel Survey

The British Household Panel Survey (BHPS) is a national representative sample of approximately 5,500 households recruited in 1991, containing a total of around 10,000 individuals (see TAYLOR (1996) for a complete description). These same individuals are re-interviewed each year (wave). Because part of the analysis presented below requires the examination of income sequences for all five years, only those individuals who were interviewed in all five waves, i.e. 1991 to 1996 were included. Further, as no consistent rural indicator was available for Scotland and the rest of Britain, all individuals based in Scotland were also dropped from the sample. After the exclusion of certain individuals due to missing or inconsistent data, this left a ‘balanced’ panel of 6,543 individuals (adults and children).²

Rural and non-rural sub-samples

There is no general agreement in the literature of the appropriate definition of rurality (CLOKE and EDWARDS, 1986; ERRINGTON 1990). Here an entirely pragmatic approach is followed taking the definition used widely by the Rural Development Commission (ROYAL COMMISSION, 1997; WILSON, 1997). This defines rural individuals as those residing in non-urban postcode sectors which fall in areas with a population of less than 3,000. Although ultimately arbitrary, this is the most relevant definition for rural policy in England.³ In principle, the availability of each individual’s postcode within the BHPS would have allowed the use of a definition which allowed for various degrees of ‘rurality’ (see e.g. CRAIG, 1987; ERRINGTON, 1990) but in practice, the need for reasonable sample sizes and for a classification which made the dynamic analysis manageable required the use of a

simple definition. The remainder of the sample is then classified as 'Non-rural' (rather than 'Urban') as it contains a number of individuals, living in postcode sectors which fall in urban areas with a usually resident population of between 3,000 and 10,000, who are neither classified as strictly urban nor strictly rural by the Rural Development Commission. Table 1 reports sample sizes for the Rural and Non-rural sub-samples, plus the number of rural to non-rural migrations that occurred through the five waves. Because the number of individuals in the sample who migrate between rural and non-rural areas is so small, the main focus of the analysis is on individuals who do not migrate over the course of the five waves.

Low income definition and income distributions

All income measures have conceptual problems of one sort or another (DEPARTMENT OF SOCIAL SECURITY, 1993; PIACHAUD, 1993). While gross measures have been used previously in comparative studies (O'HIGGINS, SCHMAUS and STEPHENSON 1990), the more normal practice for low income studies is to use a net income measure, often after deduction of housing costs (DEPARTMENT OF SOCIAL SECURITY, 1993; JARVIS and JENKINS, 1997). However, given the somewhat arbitrary nature of the choice and the focus on the comparative income dynamics of a *given* set of individuals, it was decided that the use of simpler gross measure was unlikely to unduly bias the results obtained.

While the basic income variable used is gross household income, the unit of study is the individual. Therefore, as is standard practice (DEPARTMENT OF SOCIAL SECURITY, 1992), household income is deflated (here to January 1991 values), adjusted using the McClements equivalence scale, and then, assuming income pooling (PIACHAUD,

1993), attributed to each individual in the household.

The analysis which follows is based around six income groups constructed relative to mean income: less than half mean income, half to three quarters mean income, three quarters to mean income, mean income to one and a quarter times mean income, one and a quarter times to one and a half times mean income, and greater than one and a half times mean income. Mean income is defined in two different ways: as the mean value of income in 1991, and as the mean value of income in each year of the survey. The first of these is an absolute measure of mean income, the second a relative measure. Hence, the difference between them will reflect any effect of increases in the general standard of living.

As in the cases of the rural or income definition, there is no general agreement of the appropriate definition of low income or 'poverty'. Rather it is accepted that there is 'scope for a wide variety of opinion' (Atkinson, 1989, p.13). Here two definitions of those on 'low income' are used, namely, (a) those whose incomes fall into the lowest absolute income category and (b) those whose incomes fall into the lowest relative income category.⁴ While the thresholds used here have no explicit relationship with any definition of 'needs' (PIACHAUD, 1993), measures of this type are widely used (O'HIGGINS, SCHMAUS and STEPHENSON, 1990; SMEEDING *et al*, 1990) and reflect the idea that 'poverty as absolute is...inappropriate' (TOWNSEND, 1979, p.38). Moreover, the use of two thresholds, and two different measures of mean income, provides an indication of the sensitivity of the results to the definition of low income used.

The basic income distributions for the rural and non-rural sub-samples are reported in Table 2. The reported figures are obtained by 'pooling' the five waves and constructing the appropriate weighted average values. The first two sections of the table give the proportion

of individuals who, on average over the five waves, fall into the six absolute and six relative income groups. The bottom panel of the table reports a number of commonly used inequality measures (COWELL, 1977).

The table shows that significant numbers of the rural sample fall below the two low-income thresholds, but the absolute proportion of those in low income is less than the non-rural sample. Thus, on average 18% of the rural sample had income levels below one half of the overall wave 1 mean income, while 25% of the non-rural sample fell into this category. Similarly, for the second income category (between 0.5 and 0.75 of overall wave 1 mean income), the incomes of 18% of the rural sample fell in this group against 21% of the non-rural sample. The three inequality indices reported suggest that overall inequality is slightly less in the rural sample than for the non-rural case.

Table 2 also shows that the use of a relative rather than an absolute measure of mean income makes very little difference to the proportion of individuals in each income group. The relative income measure increases (very slightly) the proportion of individuals in lower income groups, because the mean income measure used is now higher for waves 2 onwards.

3. Income Mobility

The picture presented in Table 2 is static in that it only reports the average proportions in the various income categories over the five-year period. It does not provide any information about movements into and out of the various income categories during the period and, in particular, the movements into and out of the low-income categories. To provide a picture of

these, the probability of movement between income groups over the five waves is presented in Tables 3 and 4. This table is generated from the matrix of transitions from any possible combinations of location (rural/non-rural) and income category in one period to the next, i.e. the estimate of the appropriate Markov transition matrix (StataCorp 1997, p.652). As Table 1 showed, individuals who migrate between rural and non-rural areas between waves constitute an extremely small proportion of the sample. Therefore only transitions within rural and non-rural samples are shown. Thus, each row represents an income group for an initial time period, each column an income group for the subsequent period, with each cell the proportion on average who 'move' from one income group to another between periods.

Hence, for example, of the individuals in the sample who began a period in a rural area and are in the lowest absolute income group, on average 70.9% were still in a rural area and in this income group at the beginning of the next period. Of those in this category in a rural area, 16.8% moved up one income group, 6.2% moved up two income groups, 2.1% moved up three, 0.3% moved up four and 1.1% moved to the highest income category, while the residual (2.6% in this case) moved to a non-rural location. The highlighted figures in the leading diagonal give the average proportion of individuals who remain in the same income group between two periods. For both rural and non-rural areas the greatest degree of income immobility occurs in the lowest and highest income groups, with over 70% remaining in the same income group. In contrast, in the middle income groups large proportions change income group from year to year.

While some care must be taken as the results are sensitive to the income group definitions, overall they appear consistent with those of JARVIS and JENKINS (1998) who conclude that while there is a significant amount of general and low income mobility, the

majority of it is short range. For example, for the lowest rural income category, while over 16% of individuals move up a single group, only 3.5% (2.1%+0.3%+1.1%) move up more than two groups, while for the second-lowest income group 30% of all individuals move up or down one income group but only 7.1% move by more than one group.

Comparing the overall mobility of the lowest rural income group (row 1 Table 3) with that of the non-rural area (row 7 Table 3), some differences are apparent with marginally fewer remaining in the lowest income group in the rural sample and more moving up by two income groups or more. Differences are also observable in terms of the proportions who ‘drop’ into the lowest income category with the rural rates apparently less than the non-rural ones. For example, on average 14.5% of individuals who start the year in the second lowest income group drop into the lowest group by the beginning of the next year, while the rate is 21.7% in the non-rural area. A similar picture emerges for movements into the second-lowest income group.

Table 4 repeats the analysis of Table 3, but uses the relative rather than the absolute measure of income. It is reassuring to note that any differences between the two methods are small. The main effect of using a relative income measure is that it increases very slightly the probability of moving down between income groups between one year and the next, because the measure of mean income increases with each year. For the same reason, the relative income measure tends to reduce the probability of moving up between income groups. The static analysis presented in Table 2, and the dynamic analysis presented in Tables 3 and 4 show that the measure of income does not affect the results unduly. The remainder of the analysis therefore uses only the absolute income measure.⁵

4. Characteristics of those on low incomes in rural areas

While Tables 3 and 4 illustrate the overall mobility of those on low incomes in rural areas, they implicitly assume that all individuals in the low income groups are identical, with equal exit and entry chances. In reality, those on low incomes are an extremely heterogeneous group both in terms of their characteristics and their propensities to ‘escape’ or remain poor. This section therefore considers in more detail the pattern of low income and the characteristics of those who experienced low income persistently during the five-year period.

Table 5 provides information on the overall distribution of periods spent in low income, including those who never experience low income, plus (in brackets) the distribution of periods spent in low income for those who fall below the low income threshold in at least one period during the five waves. For example, in terms of the absolute low income threshold (0.5 overall wave 1 mean income), 8.5% of the rural sample fell below this threshold in all five periods, i.e. they experienced ‘persistent low income’, 4.8% fell below the threshold in 4 periods, and so on. As a proportion of those who experienced at least one period of low income during the five years, 25.7% fell below the low income cut-off in all periods, 14.5% in four periods, and so on.

In absolute terms the results are consistent with Table 2, with lower proportions of the rural sample experiencing persistent low income, considerably higher proportions never experiencing low income, but similar proportions experiencing low income in a single period than for the non-rural case. Hence, while the overall incidence of rural low income in general and persistent low income is significant, e.g. 33% of all rural individuals fell below

the absolute income threshold in at least one period, it is less than the comparable figure for the non-rural sample. However, for those who experienced low income a different picture emerges, with higher proportions in low income for a single period in the rural sample, while the proportion of those on persistently low income appears similar. Hence, for those falling below the low income threshold the results suggest that while they may have a greater chance of escaping after a single period in the rural sample, the likelihood that they will remain on low income is just as great as for the non-rural case.

Table 5 illustrates that the low income category in any period contains both individuals who are persistently poor, but also a substantial number who are in the low income category for a short period. It is of obvious interest to determine whether the typical characteristics of those experiencing persistent low income differ from those in the low income category in general, and whether there are discernible differences in low income characteristics between the rural and non-rural samples.

Tables 6 and 7 provide more detailed information on the characteristics of the sub-samples and those who experienced low income. To provide a baseline for comparison, Table 6 summarises the characteristics of the entire sample, split by rural/non-rural status,⁶ while Table 7 reports the characteristics for those individuals experiencing low income in at least one period, and those experiencing low income in all five waves. Characteristics are grouped into three categories: person type, household type and household economic status.

Table 6 reports actual proportions. For example, 26.5% of the rural sample are females of working age, compared to 29.2% in the non-rural. The figures illustrate some expected differences between the two sub-samples. For example, in the rural sample there is a slightly greater proportion of the retired, of couples in general but also a lower proportion

of households without an earner. The values reported in Table 7 are normalised. That is, the values reported for the low income category represent the proportion of those on low income with a given characteristic divided by the proportion with this characteristic in the relevant sub-sample. Similarly, the values for the persistent rural low income represent the proportions of those experiencing persistent low income with a given characteristic divided by the proportion with this characteristic in the relevant low income category. Hence, the values reported in the low income category (columns 1 and 2) may be interpreted as the degree to which the given characteristics are over- or under-represented among those experiencing low income. Analogously, the values reported in the persistent low income categories (columns 3 and 4) represent the degree to which the given characteristics are over- or under-represented among the group of individuals who experienced at least one period in low income. Thus, for example, the proportion of those experiencing at least one period on low incomes that were retired rural females was 1.999 times the proportion of retired females in the entire rural sample, while the proportion of those experiencing persistent low income that were retired females was 1.090 times the proportion of retired females in the whole rural sample.

Qualitatively, the typical characteristics of those who experience low income are remarkably similar in both the rural and non-rural sub-samples. Thus, not unexpectedly, Table 7 shows that the retired, dependent children, single elderly households, lone parents with dependent children, households without any earners and single earner households are all over-represented in the low income group. Quantitatively, however, there are some differences between the two sub-samples, with, for example, single elderly households and lone parents with dependent children over-represented to a greater extent in the rural than the

non-rural sample.

For those experiencing persistently low incomes, the qualitative nature of the results is also broadly similar across the rural and non-rural samples. Again the female retired and dependent children, single elderly households and lone parents with dependent children, households without any earners and single earner are all over-represented relative to the characteristics of the general low income category. However, some differences are apparent. For example, in contrast to the non-rural case, retired rural males are under-represented while rural couples with one full time earner are over represented. This latter result is perhaps particularly notable and reflects the general result - which is not immediately apparent from Table 7 - that a higher proportion of rural low income households participate in the labour market. That is, 38% of rural households in the general low income category had at least one earner against 31% in non rural, while 33% of rural households in the persistent low income category contained an earner in the rural against only 18% in the non-rural case.

Given that average rural wages are lower than those in non-rural areas, these observations are in line with the research which suggests that that low-pay employment is a particularly important determinant of rural low income (MCLAUGHLIN, 1986), especially as low pay appears to be more persistent in the rural context (CHAPMAN *et al* 1998; PHIMISTER, SHUCKSMITH and VERA-TOSCANO, 1999). However, it is possible that they also reflect differences in the strategies typically used by rural low income households relative to their non-rural counterparts. More specifically, the lack of rural opportunities may increase the 'cost' of not being employed and decrease (from an economic perspective) reservation wages (or minimum required returns to self-employment) leading to increased rural labour market participation.

5. Economic and demographic events and low income escape and entry

To provide some insight into possible ‘trigger’ events important for exit and entry into the low income categories (BERGHMAN, 1995; ROOM, 1995), Table 8 reports the probability of various events and the related probability of entry into low income or exit from low income, pooled across the five waves. An event is defined as a change in a characteristic between two consecutive waves. As is standard practice, escapees and entrants are defined as those who cross the low income threshold between two consecutive waves and who have experienced at least a 10% change in their income (JARVIS and JENKINS, 1997; BANE and ELLWOOD, 1986).⁷

The first row shows the probability of entry and escape for the whole sample. The probability of an average individual in the rural sample who is below 0.5 mean wave 1 income ‘escaping’ is 0.204, slightly higher than the probability of an average individual in the non-rural sample escaping. Similarly, the probability of entry to low income for the rural sample is 0.048, lower than the probability of falling into low income in the non-rural sample (0.061).

Four types of event are specified: a change in the number of earners in the household, a change in the number of adults, a change in the number of children, and a migration between the rural and non-rural area. The first and fourth columns show the probability of the event itself occurring. For example, 12.9% of rural individuals were in households that lost an income earner between waves, compared to 11.7% of non-rural individuals. It is clear

that of the four possible events listed here, a change in the number of earners is the most common for both rural and non-rural samples. In contrast, changes in the number of dependent children and migration are relatively uncommon.

The remaining columns show the probability of an entry or exit associated with a particular event. While strictly not providing any causal information, these figures are suggestive as to which factors are important ‘associated events’ for exit from and entry to low income. The results for the impact of changes in the household composition or type match *a priori* expectations. In both sub-samples the probability of escape is increased by an increase in the number of earners from 20% to 25% in the rural sample and from 20% to 35% in the non-rural sample. Similarly, the probability of entry is reduced, though less dramatically. The reverse effect is also true: a reduction in the number of earners in the household reduces the probability of escape and increases the probability of entry to low income for an individual.

The probability of escape from low income is positively associated with an increase in the number of adults, while the probability of falling into low income is positively associated with a reduction in the number of adults and an increase in the number of children in the household. While the qualitative nature of the results is generally consistent across the rural and non-rural sub-samples, there are some quantitative differences. For example, there is some evidence that the probability of low income escapes in the rural sub-sample is less strongly affected by an increase in the number of earners or adults in the household. Some results are also qualitatively different between the rural and non-rural sub-samples. The impact of a change in the number of children, for example, appears to be different, with an increase in the number of children reducing the probability of escape in the non-rural sample,

but increasing the probability of escape in the rural sample.

Table 8 also reports the impact on probabilities of migrations between rural and non-rural areas. Because the characteristics of the individual relate to the first period, the rural sub-sample can move to a non-rural area, while the non-rural sample can move to a rural area. Interestingly, *none* of the individuals who move from a rural to a non-rural area escape and a higher proportion enter low income, although higher proportions of non-rural to rural migrants escape. In fact, migration is positively associated with both entry *and* exit for the non-rural sample, demonstrating that migration increases the probability of changing relative income in either direction. It should be noted, however, that the numbers who migrate are small.

6. Summary and conclusions

This paper has provided a picture of the dynamics of low income in rural areas by comparing the evidence on income mobility and low income from a rural sample with that from a non-rural sample using the first five waves of the BHPS. An initial analysis of the distribution of income among the individuals in the rural sub-sample confirms that low income in rural areas is significant, although in absolute terms it may be slightly less extensive than for non-rural areas. In particular, the comparison of the extent of rural low incomes against the non-rural case provides further evidence — supporting the original empirical work by MCLAUGHLIN (1985), CLOKE, MILBOURNE and THOMAS (1994) and SHUCKSMITH, CHAPMAN and CLARK (1996) — rejecting the idea that prosperity and

rural areas are synonymous.

However, the results also emphasise the heterogeneity of those on low incomes in terms of their characteristics, duration and the events associated with low income escape and entry. Hence, while the results on overall rural income mobility are consistent with JARVIS and JENKINS' (1998) conclusion that there is a significant amount of 'short range' income mobility in any given year, the distribution of time spent in the low income state indicates considerable variation between individuals across both samples. For example, although 33% of all rural individuals fell below the absolute income threshold in at least one period, 11% of these remained there for one period only while 9% were below the threshold for all five periods.

In terms of typical characteristics, not unexpectedly, the retired, dependent children, single elderly households, lone parents with dependent children, households without any earners and single-earner households are dominant characteristics among those on low and persistently low incomes in rural and non rural samples. Further — as one might expect — a number of key economic and demographic events such as changes in number of earners, adults or children in the household tend to be more prevalent for individuals moving into and out of low income than overall. For example, an increase in the number of earners in a household was associated with higher incidence of exit from and lower incidence of entry to low income than on average. In addition, although the sample sizes involved are small, migration from both the rural and non-rural samples is positively associated with entry, demonstrating that migration may increase the probability of decreasing relative income.

This diversity in the 'typical' low income experience observed in the data reinforces the argument that the use of simple normative measures — such as an income

threshold — are rather blunt instruments and tend to obscure important individual differences. Further, while the hidden nature of rural poverty may require rural-specific policies, these aggregate results emphasise rather the need for ‘client’ based measures, i.e. addressing the needs of the specific groups such as the elderly.

Beyond the differences in the overall incidence of low income, there are a number of other notable differences between the results from the rural and non-rural sub-samples. For example, there appears to be a lower rural rate of downward low income mobility, a lower overall incidence of persistent rural low income, (although similar rates were found among those who experienced low income), higher rural labour market participation rates for those on low and persistently low income, while the probability of rural low income escapes seems less affected by increases in the number of earners or adults in the household.

From the mass of information reported it is clear that while there are many differences between the rural and non-rural sample, there are also many similarities. Given the long literature emphasising the distinctiveness of rural deprivation (its hidden nature, isolation, lack of mobility and other opportunities etc.), in some ways this is surprising. However, the obvious heterogeneity of the nature of low income experience and the descriptive nature of the material means that general conclusions concerning the relative severity of rural poverty are difficult to draw. Rather, the data presented suggest a number of avenues for future research. For example, the coincidence of migration with downward income mobility is perhaps counter-intuitive. Whether this is simply due to changes in household composition, e.g. young person exits from the household, or whether it is a more general phenomenon remains to be investigated. Further, although

somewhat unclear, the implications of the results for the long-run rural income distribution perhaps also conflict with what is often assumed and need further investigation. A number of authors have argued that the current process of counter-urbanisation is leading to an improvement in rural incomes at a price, with ‘richer’ incomers forcing out part of the indigenous but less well off rural population (for a review, see MONK and HODGE, 1995). However, a number of the reported results do not seem consistent with such a process. Not only do the above mentioned migration results tend to contradict this notion, but also — for example — there is no evidence that the persistently poor in rural areas have a greater propensity to migrate. That is, contrary to what is reported here, if it was the case that the poor in rural areas escaped to urban centres, among those had experienced low income, one might expect to observe a lower rural proportion of persistent low incomes.

More generally, if the widely held assumption of the distinctiveness of rural disadvantage is accepted, one would not only expect the results to suggest differences in the low income outcomes etc. but also differences in the behaviour or ‘survival’ strategies of those on low incomes. For example, the higher levels of (household) labour market participation for those on low income in rural areas might be suggestive of such a response. Are these simply accounted for by lower rural wages or does the rural context lower reservation wages and hence increase participation?

The general issue of differences in behaviour between rural and non-rural residents is also somewhat related to the question of how sensitive the results are to the gross income measure used. Not only does this measure ignore variations in costs of living, e.g. housing, food etc, but also the ‘cost equivalents’ of the various types of

disadvantage encountered by those on low incomes in rural areas. Both these types of effect are likely to induce different behavioural responses and hence affect the results obtained. These issues suggest the need for more formal statistical modelling of the processes that underlie observed low income. At the very least the statistical modelling of low incomes would allow all the measurable factors affecting the low income outcome to be integrated into a single framework. This approach would then allow the determination of how far rural/non-rural differences observed in the raw data were due to differences in the observed characteristics rather than some residual rural effect due to the nature of rural areas and rural disadvantage.

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Table 1: Sample Summary Statistics

	<i>Wave</i>				
	1	2	3	4	5
Rural	1045	1048	1054	1061	1082
Non-Rural	5498	5495	5489	5482	5461
<i>Of which:</i>					
Rural to Non-rural	–	26	33	37	36
Non-rural to Rural	–	29	39	44	57

Table 2: Income Distributions

	<i>Whole Sample</i>	<i>Rural</i>	<i>Non-Rural</i>
<i>Absolute income groups^a</i>			
<0.5	0.236	0.184	0.246
0.5 – <0.75	0.203	0.181	0.207
0.75 – <1	0.171	0.201	0.166
1 – <1.25	0.129	0.138	0.128
1.25 – <1.5	0.081	0.081	0.081
≥ 1.5	0.179	0.214	0.172
<i>Relative income groups^b</i>			
<0.5	0.240	0.185	0.250
0.5 – <0.75	0.203	0.184	0.207
0.75 – <1	0.172	0.203	0.167
1 – <1.25	0.127	0.136	0.126
1.25 – <1.5	0.082	0.081	0.082
≥ 1.5	0.175	0.210	0.169
<i>Inequality Measures</i>			
Gini Coefficient	0.343	0.332	0.345
Coefficient of variation	0.697	0.638	0.708
Theil entropy	0.198	0.181	0.202

Notes:

^a Proportion of wave 1 mean income

^b Proportion of each wave's mean income

Table 3: Income groups transition matrix: absolute income measure^a

<i>Rural</i> ^b		1	2	3	4	5	6
<0.5	1	0.709	0.168	0.062	0.021	0.003	0.011
0.5 – <0.75	2	0.145	0.573	0.159	0.050	0.005	0.016
0.75 – <1	3	0.061	0.171	0.491	0.188	0.040	0.019
1 – <1.25	4	0.018	0.026	0.272	0.471	0.087	0.105
1.25 – <1.5	5	0.010	0.002	0.075	0.221	0.371	0.286
≥1.5	6	0.012	0.015	0.045	0.038	0.081	0.769
<i>Non-rural</i> ^b		1	2	3	4	5	6
<0.5	1	0.726	0.202	0.031	0.016	0.006	0.011
0.5 – <0.75	2	0.217	0.549	0.169	0.034	0.012	0.014
0.75 – <1	3	0.063	0.019	0.514	0.168	0.041	0.023
1 – <1.25	4	0.037	0.062	0.194	0.465	0.172	0.062
1.25 – <1.5	5	0.022	0.027	0.080	0.201	0.371	0.291
≥1.5	6	0.012	0.017	0.022	0.056	0.106	0.777

Notes

^aRows represent an income group for an initial time period, columns an income group for the subsequent period. Cells represent the proportion who on average move from one income group to another between consecutive periods.

^bExcludes individuals who move between rural and non-rural areas between waves. Rows do not therefore sum to one.

Table 4: Income groups transition matrix: relative income measure^a

<i>Rural</i>		1	2	3	4	5	6
<0.5	1	0.710	0.178	0.050	0.021	0.003	0.011
0.5 – <0.75	2	0.147	0.574	0.166	0.041	0.007	0.014
0.75 – <1	3	0.065	0.174	0.494	0.184	0.034	0.017
1 – <1.25	4	0.018	0.026	0.288	0.472	0.073	0.102
1.25 – <1.5	5	0.010	0.003	0.084	0.213	0.382	0.273
≥1.5	6	0.012	0.015	0.045	0.039	0.089	0.760
<i>Non-rural</i>		1	2	3	4	5	6
<0.5	1	0.733	0.196	0.031	0.015	0.007	0.010
0.5 – <0.75	2	0.227	0.546	0.164	0.032	0.012	0.014
0.75 – <1	3	0.065	0.193	0.515	0.160	0.040	0.022
1 – <1.25	4	0.037	0.068	0.209	0.452	0.168	0.058
1.25 – <1.5	5	0.022	0.028	0.080	0.207	0.376	0.278
≥1.5	6	0.012	0.018	0.022	0.059	0.110	0.768

Notes:^aSee notes for Table 3.

Table 5: Distribution of periods in low income

	<i>Periods spent in low income^{a,b}</i>					
	0	1	2	3	4	5
<i>Rural</i>						
<i>0.5 wave 1 mean income</i>	0.670	0.114	0.037	0.046	0.048	0.085
		(0.346)	(0.111)	(0.140)	(0.145)	(0.257)
<i>Non-rural</i>						
<i>0.5 wave 1 mean income</i>	0.584	0.103	0.086	0.058	0.063	0.104
		(0.249)	(0.208)	(0.139)	(0.153)	(0.251)

Notes:

^a Excludes individuals who move between rural and non-rural areas.

^b Figures in brackets give the proportions experiencing low income for given number of periods of those who experience low income in at least one period.

Table 6: Characteristics of the rural and non-rural samples^a

	<i>Rural</i>	<i>Non-rural</i>	<i>Rural and non-rural (migrants)</i>
<i>Person type</i>			
Male working age	0.305	0.311	0.354
Female working age	0.265	0.292	0.335
Male retired	0.093	0.071	0.052
Female retired	0.149	0.142	0.092
Dependent child	0.187	0.184	0.167
<i>Household type</i>			
Single non-elderly	0.035	0.056	0.064
Single elderly	0.087	0.103	0.062
Couple no children	0.305	0.253	0.255
Couple with dependent children	0.402	0.380	0.380
Couple with non-dependent children	0.082	0.091	0.119
Lone parents with dep. children	0.042	0.068	0.063
Lone parents with non-dep. Children	0.022	0.030	0.023
2+ unrelated adults	0.004	0.011	0.013
Other household type	0.021	0.009	0.021
<i>Household economic status</i>			
No earners	0.273	0.306	0.206
Single person in work	0.020	0.032	0.031
Couple: 1 full-time and 1 not in work	0.089	0.079	0.078
Couple: 1 full-time and 1 part-time	0.141	0.106	0.127
Couple: both full-time	0.104	0.109	0.155
Single or couple: 1 part-time only	0.123	0.095	0.093
2+ unrelated adults, 1 at work	0.027	0.040	0.028
2+ unrelated adults, 2+ at work	0.214	0.220	0.267
Others	0.010	0.014	0.015
Sample size (at each wave)	927	5340	276

Notes:

^a*Average characteristics of sample over all five waves.*

Table 7: Characteristics of those experiencing low income

	<i>Low income^a</i>		<i>Persistent low income^b</i>	
	<i>Rural^c</i>	<i>Non-rural^c</i>	<i>Rural^c</i>	<i>Non-rural^c</i>
<i>Person type</i>				
Male working age	0.593	0.611	0.699	0.690
Female working age	0.635	0.769	0.896	0.816
Male retired	1.128	1.439	0.681	1.095
Female retired	1.999	1.780	1.090	1.216
Dependent child	1.322	1.254	1.319	1.157
<i>Household type</i>				
Single non-elderly	0.820	0.933	0.343	0.442
Single elderly	2.914	2.086	1.195	1.256
Couple no children	0.626	0.717	0.494	0.841
Couple with dependent children	0.815	0.816	0.984	0.909
Couple with non-dependent children	0.136	0.290	0.541	0.612
Lone parents with dep. children	3.665	2.520	1.695	1.288
Lone parents with non-dep. Children	0.666	0.972	0.000	1.000
2+ unrelated adults	1.458	0.797	0.000	0.036
<i>Household economic status</i>				
No earners	2.267	2.237	1.087	1.197
Single person in work	0.060	0.080	0.000	0.000
Couple: 1 full-time and 1 not in work	0.846	0.879	1.087	0.722
Couple: 1 full-time and 1 part-time	0.361	0.235	0.358	0.247
Couple: both full-time	0.134	0.033	0.000	0.366
Single or couple: 1 part-time only	0.606	0.849	0.675	0.471
2+ unrelated adults, 1 at work	2.229	1.289	1.580	0.714
2+ unrelated adults, 2+ at work	0.408	0.299	0.851	0.556

Notes

^aLow income defined as 0.5 wave 1 mean income. Characteristics of those on low income are an average over all periods in which the individual was on low income.

^bPersistent low income defined as low income in all 5 waves. Characteristics of those on persistent low income are average over all five waves.

^cExcludes those who migrate between rural and non-rural areas.

**Table 8: Coincidence of economic and demographic events
with low income escape and entry**

	<i>Rural</i>			<i>Non-rural</i>		
	<i>Pr(event)</i>	<i>Pr(escape)^a</i>	<i>Pr(entry)^b</i>	<i>Pr(event)</i>	<i>Pr(escape)^a</i>	<i>Pr(entry)^b</i>
Whole sample	–	0.204	0.048	–	0.196	0.061
No. of earners down	0.129	0.159	0.097	0.117	0.185	0.130
No. of earners same	0.769	0.202	0.040	0.765	0.172	0.050
No. of earners up	0.101	0.247	0.045	0.117	0.350	0.052
No. of adults down	0.070	0.185	0.128	0.068	0.263	0.100
No. of adults same	0.890	0.203	0.042	0.888	0.184	0.058
No. of adults up	0.040	0.242	0.037	0.044	0.419	0.044
No. of children down	0.028	0.188	0.042	0.023	0.186	0.040
No. of children same	0.949	0.204	0.048	0.947	0.197	0.060
No. of children up	0.022	0.238	0.058	0.029	0.182	0.094
Rural to non-rural migration	0.035	0.000	0.237	0.000	–	–
No move	0.965	0.209	0.041	0.992	0.195	0.061
Non-rural to rural migration	0.000	–	–	0.008	0.335	0.090

Notes.

^aAn Escapee has an income below the low income cut-off at wave t and an income at least 10% higher than the low income cut-off at wave $t+1$.

^bAn Entrant has an income above the low income cut-off at wave t and an income at least 10% lower than the low income cut-off at wave $t+1$.

^cAll characteristics related to period before change.

Endnotes

¹ The data used in this paper were made available through the ESRC Data Archive. The data were originally collected by the ESRC Research Centre on Micro-Social Change at the University of Essex. Neither the original collectors of the data nor the Archive bear any responsibility for the analyses or interpretations presented here.

² All reported values are weighted to account for attrition.

³ The Rural Development Commission is a government agency which has a statutory duty to advise the government on the economic and social development of rural areas in England.

⁴ Other low income definitions were also used - such as less than three quarters mean wave 1 income. However, the qualitative nature of the results was found to be relatively insensitive to the exact position of the low income threshold.

⁵ Results using the relative measure of mean income are available on request from the Authors.

⁶ Those who move between rural and non-rural areas during the course of the sample are summarised separately.

⁷ This latter condition prevents small changes in income being logged as an escape or entry to low income.