UPDATE -

News from the LS User Group

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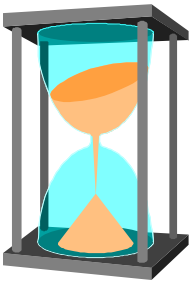
This newsletter is designed to provide information on the ONS Longitudinal Study (LS) and a forum for the exchange of users' views and comments. It is produced by the LS User Support Programme at the Social Statistics Research Unit (SSRU), City University. All comments and contributions should be sent to Rosemary Creeser, LS User Support Programme, SSRU, City University, Northampton Square, London EC1V 0AR (tel: 0171 477 8487 email: rc@ssru.city.ac.uk) Contributions on IBM-formatted floppy disk are always welcome and should be sent, clearly documented (file name, word-processing package and version used) along with a hard copy of the text.

1 Diary



This section highlights forthcoming events of interest to LS Users. If you are arranging an event and wish to publicise it in future issues of *Update* you should send details to Dina Maher, the LS Administrative Secretary at SSRU (email: dm@ssru.city.ac.uk).

LS workshop

SSRU hold regular 2-day workshops. These provide detailed information on the study and enable researchers to gain practical hands-on experience of accessing the data. They are also an ideal opportunity to meet members of the LS Support Team and to discuss the suitability of the LS for exploring specific research questions. The next LS Workshop will be held on 1st/2nd April 1998.

As part of the hands-on element of the workshop participants are able to specify a statistical analysis of their choice using a small sub-set of variables and a test data-set based on 1% of the LS data. The number of places is limited to ensure that participants get sufficient individual attention and hands-on experience. A non-refundable fee of £50 (or £20 for students) is charged to cover documentation, lunch, refreshments and administrative costs. If you are planning to carry out analyses of LS data in the forthcoming year please contact Dina Maher to reserve a place (tel: 0171 477 8487 or email: dm@ssru.city.ac.uk).

LS move to Bloomsbury

In September 1998 the LS User Support Programme will be relocating to the Centre for Longitudinal Studies, University of London Institute of Education, Bedford Way, London WC1. The move will bring us much closer to ONS' offices in Pimlico, where all LS support work is carried out. Details of our new address, telephone and fax numbers will be included in the June 1998 issue of *Update*.

With the move to Bloomsbury we have decided to postpone our regular Autumn 2-day *LS Workshop* until a later date. If you are planning to use the LS in the coming months and cannot attend the April 1998 LS Workshop please contact LS Administrator Dina Maher on 0171 477 8487 (email: dm@ssru.city.ac.uk) as soon as possible. Numbers permitting, in the interim period we hope to provide small group tuition to all individuals whose project has been passed by the LS Research Board.

2 The revised ONS Social Classification

Brian Dodgeon, with grateful acknowledgement to Dr. Mel Bartley (Goldsmith's College), and Professor David Rose (ESRC Research Centre, Essex University)*

The practice of officially classifying the British population according to occupation and industry began in 1851, and in 1857 the Assistant Registrar General first put forward the idea that, for mortality analyses, the population might be divided into broad groups based on social standing.

However, it was not until the 1911 Census that the government recognised that occupation and industry should be recorded separately, and in 1913 the first Registrar General's Social Classification (RGSC) was produced.

This was an 8-fold grouping based broadly on the concept of Upper, Middle and Working Classes, with two intermediate classes between these, and an additional three industrial groups for those working in mining, textiles and agriculture.

In 1921 the scheme was substantially revised and collapsed into 5 groups, re-distributing the three industrial groups amongst the others. This new classification was used for the analysis of infant and occupational mortality and fertility. Not only did the revision give stronger emphasis to "skill", but there is persuasive evidence that it was constructed in the light of knowledge of mortality rates (Rose, 1995). Thereby it produced the mortality gradients so familiar to those who use RGSC for this purpose.

Since that time, although individual occupations have often been reallocated to different classes, the overall shape of the model has changed very little. Throughout this century RGSC has played a major role in analysing socio-economic inequalities in health, housing, educational achievement, etc.

However, the measure has often been criticised, especially as society has changed so much during the second half of the century while the conceptual basis of RGSC has remained largely unchanged.

Various alternative measures of socio-economic status have been tried (e.g. Socio-economic Group (SEG), Cambridge Scores, Erikson-Goldthorpe-Portocarero) as sources of explanation for inequalities in health and other areas. None have gained unequivocal universal acceptance, and in 1994 the Office for National Statistics (ONS, then OPCS) commissioned the Economic and Social Research Council (ESRC) to carry out a review of the measurement of social circumstances with the aim of developing an improved measure for use in the 2001 Census, referred to as the revised Socio-Economic Class (SEC).

Despite a concern for the increasing proportion of the population outside the labour market, the review concluded that a classification based on occupation was essential.

A draft version of the revised SEC was supplied by the ESRC to the LS Unit in the autumn of 1996 for testing, and in November 1997 the ESRC and ONS jointly published a volume *Constructing Classes* (Rose and O'Reilly, 1997), which reported details of the review and progress to date on the initial testing using health and earnings data.

The revised SEC is still described as being an "interim" classification, and so may undergo further refinements before the 2001 Census.

In the revised SEC, allocation of individuals to categories requires two pieces of information: occupation unit coded according to the ONS standard classification of occupations (SOC), and employment status (i.e. employer; self-employed with or without employees; manager in large or small establishment).

The SEC is produced in both an expanded and more concise form, with 22 and 8 categories respectively. The concise form is as follows:

1	Higher Professional/senior managers	(sub-divisible into 5 categories)
2	Associate professionals/junior managers	(sub-divisible into 6 categories)
3	Other administrative and clerical workers	(1 category)
4	Own-account non-professional	(sub-divisible into 2 categories)
5	Supervisors, technicians and related workers	(sub-divisible into 2 categories)
6	Intermediate workers	(sub-divisible into 4 categories)
7	Other workers	(1 category)
8	Never worked/other inactive	(1 category)

NB: In some research references the "never worked" category is omitted, resulting in a total of 21 categories, or 7 in the shortened form.

In the results from the LS project, conducted by Mel Bartley, and reported in *Constructing Classes*, the revised SEC was shown to be able to distinguish more subtle contours in mortality gradients which were not apparent using RG Class. For instance, (admittedly on limited numbers of deaths), "own-account" non-professional workers had a relatively low mortality risk compared to routine office workers and even lower professionals (see tables 1 and 2 below). This could indicate that autonomy in relation to work is an important factor in understanding health variations, which is not discernible from more traditional measures of social status enshrined in the "white collar/blue collar" dichotomy.

Table 1: Distribution of men in the 1981 LS cohort classified by the interim revised SEC and relative risk of death in the period 1986-90

SEC	No. of men	No. of deaths	Relative risk (95% CI)
1 Higher professionals/senior managers	15,680	463	0.70 (0.64-0.77)
2 Lower professionals/junior managers	28,700	1,081	0.94 (0.88-1.00)
3 Other administrative and clerical workers	7,687	316	0.99 (0.88-1.11)
4 Own account non-professionals	9,130	304	0.86 (0.77-0.97)
5 Supervisors, technicians and related	39,783	1,351	1.02 (0.96-1.08)
6 Intermediate workers	29,711	1,377	1.13 (1.06-1.21)
7 Other workers	12,491	665	1.26 (1.16-1.38)
All deaths		**5,557**	

Source: Rose and O'Reilly (1997) Constructing Classes - towards a new social classification for the UK, Swindon: ONS/ESRC, table 7.1, page 96

Table 2: Mortality in SC classes the period 1986-90

	1981 cohort	
Social class based on occupation	**No. of deaths 1986-89**	**Relative risk (95% CI)**
I Professional etc	136	0.66 (0.56-0.78)
II Management and technical	793	0.84 (0.78-0.90)
IIIN Skilled non-manual	428	0.99 (0.90-1.09)
IIIM Skilled manual	1,361	1.04 (0.98-1.10)
IV Partly skilled	814	1.13 (1.05-1.21)
V Unskilled	321	1.30 (1.16-1.46)
N=	**3,853**	

Source: Rose and O'Reilly (1997) Constructing Classes - towards a new social classification for the UK, Swindon: ONS/ESRC, table 7.2, page 96

In LS analyses using event data such as the above, a problem arises from the fact that the revised SEC is derived from the SOC occupational codings. LS members can only acquire a SOC coding if they were present at the 1991 Census, as the occupational coding from earlier Censuses was different. (In the 1981 Census, the system used was the 320-category Operational Occupation Code, OPOCCST8.) This restricts the number of years of deaths available for analysis.

Luckily, though, a method was devised of mapping 1981 occupations onto the revised ONS SEC, so that an extra ten years' worth of death data became available. By using a variable OCC809, which maps 1991 SOC classification onto the 550-category KOS ('Key List') classification of occupations, and combining these with employment status, we found that, of the resulting 1,246 possible combinations, all but 34 mapped into a

unique category of the ONS SEC for the 1991 Census LS population. In 22 of those combinations, the vast majority of cases mapped into one predominant ONS SEC category, with a handful going to the other.

This left only about 1-2% of the LS population for whom there was any substantial ambiguity, so to all intents and purposes we had a one-to-one look-up table.

We then took the 1981 occupation variable OPOCCST8 (320 categories) and combined it with employment status in 1981 (TEMST8) to derive the 550 KOS categories for the 1981 LS Population. These were combined with a "modified" employment status, which incorporates 1981 SEG in order to distinguish between managers of large and small businesses. These were then mapped for the 1981 population onto the revised ONS SEC categories using the one-to-one look-up table.

This algorithm may be used again on slightly modified versions of the ONS SEC. When the final classification is approved, there will be scope for studying LS death and fertility data from 1981 onwards in the light of this extra discriminatory tool.

References:

Rose D (1995) "Official Social Classifications in the UK", *Social Research Update* , Vol. 9, Guildford: University of Surrey, Summer 1995

Rose D and O'Reilly K (1997) *Constructing Classes - towards a new social classification for the UK'* , Swindon: ONS/ESRC

3 Press cuttings

The LS User Support Programme would like to hear from you if any of your research based on the LS has been reported in the press. In the future the regular LS Publication "trawls" will cover copies of press cuttings, as well as LS articles, chapters in books etc.

Please send a copy of any relevant LS press cuttings to Dina Maher, LS Administrator, LS User Support Programme, SSRU, City University, Northampton Square, London EC1V 0HB

4 Technical issues

Increased software availability at ONS: Kevin Lynch, SSRU

Over the past number of years the lack of software available for use in the MVS mainframe computing environment at ONS has restricted researchers working with the LS. Packages such as GLIM, Mln, STATA etc are no longer written or supported in MVS, while the functionality available on PC/UNIX versions of SPSS and SAS is not available on the mainframe version.

Because of these continuing frustrations a case was put to ONS to allow subsets of raw LS data be transferred to a separate "analysis platform". This request led to a major review of access to the data taking both ongoing and future user requirements and confidentially/ security concerns into account. It was decided to upgrade all of the LS to Windows NT running off a powerful NT server. The server, located in a secure room allows for physical security and the NT operating system ensures security of access. Data is transferred from the mainframe at Titchfield via DAT tapes as transferring it across the network was seen as a security risk. This has not proved a problem as most requests for a tape are turned around in under 24 hours. It also ensures a documentation trail for all transfers as no data sets can be released without written authorisation.

The software suite now available to researchers includes SAS and SPSS (both mainframe and PC versions), GLIM, STATA, MAPINFO and MLn (Mlwin will be available soon). Depending on the nature and scale of the analysis a charge may be necessary for work using MLn. There are limited facilities for researchers to carry out their own analysis at ONS, especially those wishing to use modelling software. All work is subject to approval by ONS and staff/space availability.

Updated *Windows* LS Data Dictionary containing post-1992 event variables: Brian Dodgeon, SSRU

In *Update* Issue no.15 (October 1996) we drew the attention to the new *Windows* LS Data Dictionary, which, for the first time provided streamlined information on all 3,300 LS variables, backed up by detailed appendices available in hypertext at the click of a button. This version was complete in terms of the three Census time-points and events up to December 1992.

During the last year, ONS has added an additional 450 variables to the Model 204 database in connection with the "Data Capture" project, which updates the Model 204 Database with events occurring from 1st January 1993. SSRU has been documenting these "third decade" event variables and cross-referencing them against their "second" and "first-decade" counterparts.

The Data Dictionary documentation on the existing event variables has now been altered to include references to their "third-decade" counterparts. During this process we found that the cross-referencing between the first and second decades was by no means exhaustive. Changes in variable naming conventions and in the methods of classification of cause of death, produce a rather confusing picture for those embarking on research of LS event data. Accordingly, a lot of tightening-up has been done. Each "first-decade" variable is now cross-referenced against the nearest meaningful "second-decade" variable (and vice versa), as well as to the newer ones added by the Data Capture process.

The updated files include those recording the following events:

- Death of LS member
- Widow(er)hood of LS member
- Infant Death of LS member
- New Birth of LS Member
- Live Birth to Sample Mother
- Still Birth to Sample Mother

Additionally, a number of extra variables not connected with Data Capture have been added and documented in the LS Data Dictionary. Further work has also been done to resolve queries connected with miscellaneous entries.

The work is now nearing completion, and the newly-revised Data Dictionary should be available to users from April. Copies can be obtained from Dina Maher, the LS Administrator at SSRU (tel: 0171 477 8486 or email: dm@ssru.city.ac.uk) for a one-off charge of £10. Individuals who place an order for the LS Data Dictionary with the LS User Support Programme will be sent full documentation covering its installation and use. Future versions of the LS Data Dictionary will be sent at no additional cost.

Alternatively, from April updated copies of the LS Data Dictionary may be downloaded from the LS web pages maintained by SSRU:

http://ssru.city.ac.uk/Ls/ddict.htm

5 Publications

Social change and innovation in the labour market: Evidence from the census SARs on occupational segregation and labour mobility, part-time work and student jobs, homework and self-employment: Catherine Hakim, Oxford University Press, March 1998

ISBN 0-19-829381-X 320pp £45 hardback

This book presents the results of the first analysis of the labour market data in the SARs, drawing comparisons with research results from the USA and other Western European countries.

The detailed statistical results cover the characteristics of sex-segregated and integrated occupations; the relationship between social stratification, occupational segregation and the pay gap; the characteristics of women who dropped out of the labour force in the ten years preceding the 1991 Census; the diversification of part-time work into marginal, half-time and reduced hours jobs and how they compare with full-time jobs and workers; the new phenomenon of students in full-time education who also have part-time or full-time jobs; the relationship between homework and travel-to-work patterns; the characteristics of the new expanded self-employment workforce; and a case study of pharmacists.

The book includes a guide to the 1991 Census microdata on the labour market available through the LS and the 1% and 2% SARS.

6 LS research

Life after mining: Hidden unemployment and changing patterns of economic activity amongst miners in England and Wales, 1981-1991:

Edward Fieldhouse and Emma Hollywood, Faculty of Economic and Social Studies, University of Manchester

The large-scale pit closures of the 1980s and 1990s have led to the virtual destruction of the mining industry in Britain. In 1981 there were 218,800 miners working for British Coal in 211 collieries. By 1994 the figure had fallen to 10,800 in 19 collieries (British Coal Corporation Annual Reports). The rapidity of the decline matched with the geographical concentration of mining communities inevitably meant a major employment problem for coal mining areas. Reports by local authorities in the coalfields highlighted the effects of closures on the local economy in terms of the unemployment of miners and the knock-on effects on the rest of the work-force; and also on the social costs to the mining communities more generally (e.g. Hudson et al, 1985). A study by Guy (1994) of closures at five pits found that 46% classified themselves as being unemployed 12-18 months after losing their job. Such studies indicate the dramatic effect the pit closures have had on mining communities. According to one study by the Centre for Regional Economic and Social Research (CRESR) the energy sector (mainly coal mining) provided 28% of all jobs in the coalfield areas and 47% of jobs in the pit villages (Beatty and Fothergill, 1994).

However, the CRESR study also notes that the unemployment rates in the coal mining areas were actually lower in 1994 than in the mid 1980s. So what has happened to the 200K miners who lost jobs during the 1980s and early 1990s? Area level analyses using an "employment account" approach demonstrate the effects of population change, increases in employment in other industries and areas, and reductions in activity and employment in mining areas to balance the loss of mining jobs. The results suggest both an increase in jobs in other sectors, and an increase in hidden unemployment,

especially in the form of registered permanently sick (Beatty and Fothergill, 1994; Beatty et al 1997; see also Seabrook and Blackwell, 1993).

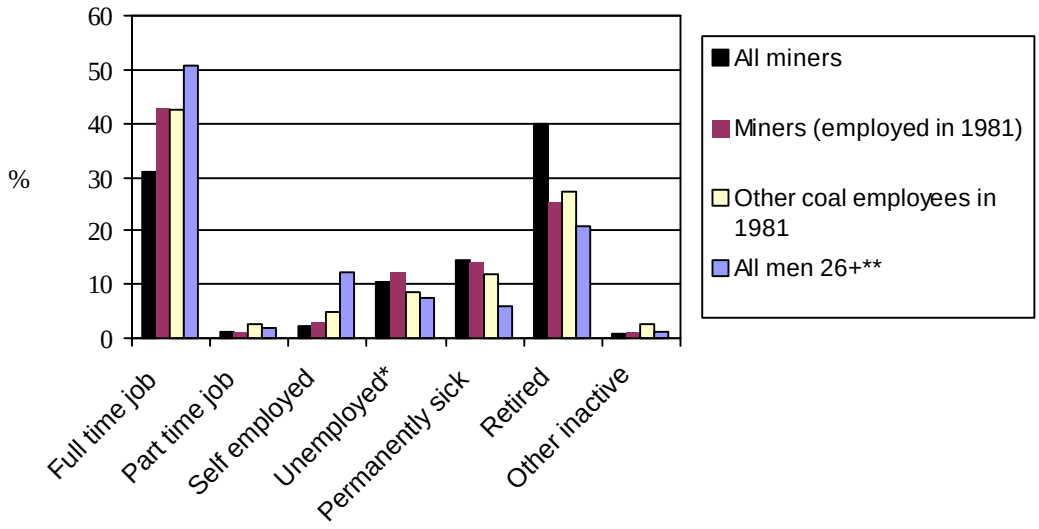
However, area based analyses are unable to *directly* measure the impact of the loss of mining employment on the coal miners and their families, or their employment prospects. Other research based on a survey of redundant miners has indicated that less than half of all miners made redundant were in employment (Guy, 1994). However, this only tells us about the fortunes of redundant miners at one point in time, shortly after the closure of 31 pits in 1992. This research uses the Longitudinal Study to identify how miners have been absorbed into the labour market over a ten-year period, and what their resultant employment situation turned out to be. In particular, we investigate alternative modes of non-employment which do not appear in the unemployment figures for the coal field areas.

The availability of longitudinal data from the LS means it is possible to identify a sample of miners in 1981 and observe their economic position in 1991 by which time the number of miners had fallen by 160 thousand to 57 thousand compared to ten years earlier. The LS also allows us to look at the economic situation of miners in relation to a range of other characteristics, in particular their age and geographical location (both regionally and in respect to their local neighbourhoods). Using 1981 Operational Occupational Codes (see Hattersley and Creeser, 1995) two groups of miners were identified: face trained coal mining workers (code 314) and labourers and unskilled workers in coalmines (code 345). These groups constituted a combined sample of 2400 miners, 1270 of whom were in employment in 1981. The remainder had already retired, become unemployed or become economically inactive, yet whose occupation was still recorded as one of the two mining categories. Of the 1270 were employed as miners in 1981, 1115 (87.8%) were enumerated and traced at the 1991 Census of Population and still lived in England and Wales. The remainder had either died, emigrated or had not been successfully traced. The entire sample is male.

Figure 1 shows that of the sample whose reported occupation was in either of the two mining categories described above, less than one third were in employment in 1991. This is compared with half of a random sample of men in the same age group (over 26) taken from the 2% Individual Sample of Anonymised Records (SAR) who were in employment. There are also substantially fewer who are self employed, suggesting that men who have lost work in mining have not been able to circumvent the lack of employment opportunities by setting up in business (see also Guy, 1994). Indeed Turner (1996) has questioned the appropriateness of encouraging entrepreneurship in areas such as the coalfields where there is little tradition of small business ownership or entrepreneurship. A relatively large number of this group is retired or unable to work through permanent sickness, supporting the "hidden unemployment" theory. Much of this group, however, will already have been retired or have dropped out of the labour market prior to 1981. It is therefore more illuminating to look only at those who were in employment as miners in 1981. Of these only 42% were in full time employment compared to the 50% in the population sample, even though the latter includes those who were already retired in 1981. The proportion of miners in full time employment does not, however, compare unfavourably with the full time employment rates of other workers in the coal industry, who were no more likely to be in full time employment than miners. This group did, however, have slightly higher rates of part-time and self employment. It is important to note that of those miners in employment, roughly half were still working in the coal industry. Discounting these from the analysis implies that the success rate of finding alternative full time employment amongst those who lost their jobs was as low as one in four.

Figure 1 also gives us a valuable insight into what happened to those who did not retain or find employment. A substantial proportion was unemployed or on a government scheme in 1991: the sample unemployment rate amongst those who had been in employment in 1981 was 12.4% compared to a population rate of 7.5% amongst the demographically equivalent SAR (Sample of Anonymised Records) sample. However, this tends to support the claim that a majority of ex-miners do not appear in the unemployment count. A considerably larger proportion were either retired (25.4%), permanently sick (14.3%) or "other inactive" (1%) suggesting potentially huge levels of hidden unemployment. The small number of "other inactive" indicates a very low propensity for miners to enter full time education, as a strategy for getting back into work although more may have begun and completed full time education between 1981 and 1991.

Figure 1. 1991 Economic position of men with occupation of miner in 1981



* including those on a government scheme and waiting to take up work.

** data from the 2% SAR (Crown Copyright). Under 26 year olds are excluded as all those who were employed in mining in 1981 must have been at least 16 ten years earlier.

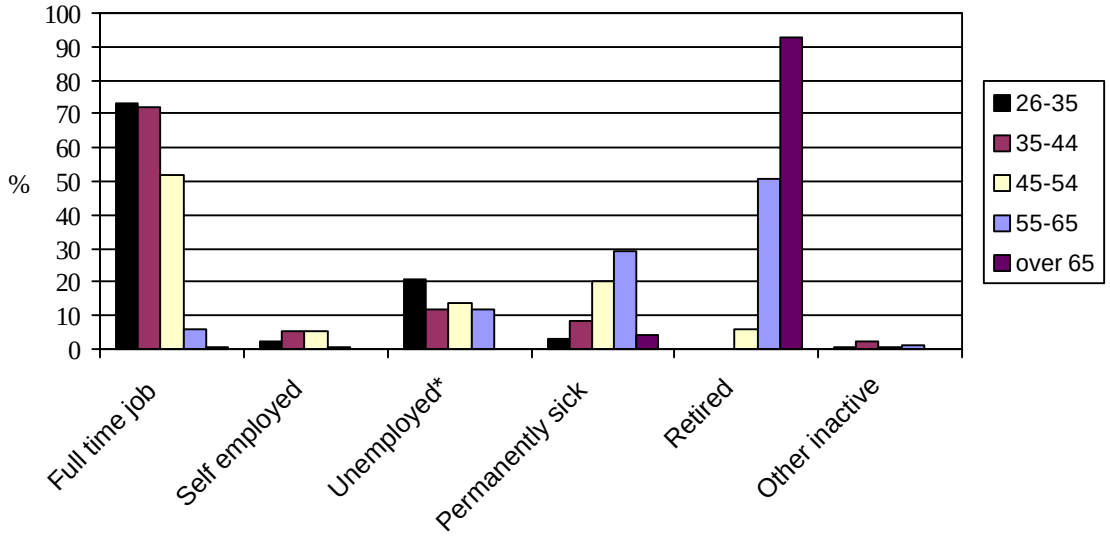
Further findings

The data have revealed high levels of hidden unemployment among ex-miners, reflected in the high number of those that are registered as permanently sick, or having taken early retirement, compared to the number unemployed. In other words there appears to be a strong discouraged worker effect among ex-miners. However, the degree of hidden unemployment varies with age within the mining population, perhaps reflecting the different situations and opportunities facing older and younger miners. Younger (ex)miners are more likely to be working or registered as unemployed, although the chances of finding work are less than that of the rest of the population (Figure 2). It is among the 45+ age group that hidden unemployment takes on a particular significance and therefore where the discouraged worker effect appears to be strongest. In the 45+ age group ex-miners have a significantly higher rate of permanent sickness and incidence of early retirement than the rest of the population.

Other responses to leaving the mining industry, such as education or migration to more prosperous job markets, appear not to be significant. The data shows low numbers entering into further education. There is some out-migration from the coalfields but not at significant enough levels to suggest a large-scale movement to more prosperous labour markets. Miners appear to be remaining in areas of high unemployment.

The existence of an alternative income in the household does not seem to be of major importance either. It appears that either both spouses are in employment, or that both are unemployed or inactive. There is little evidence of the wife working to support a jobless husband. This illustrates the effect of the benefits system whereby it is more sensible, financially, for both partners to be jobless, to maximise entitlement to benefits. This points to a growing trend towards the incidence of household unemployment.

Figure 2. 1991 Economic position of persons employed as miners in 1981



The results of this research indicate poor employment prospects for ex-miners and their families. The mechanisms of the Benefits system and the lack of alternative employment for miners has led to a situation whereby the only option for miners is to register as sick or to take early retirement. This effectively disenfranchises those ex-miners from the job market and compounds their lack of employment prospects, since being registered as permanently sick makes them ineligible for restart schemes and job clubs, thus making it harder for those who withdraw to re-enter into employment (Schmitt and Wadsworth, 1994).

The situation for ex-miners may now be much worse, since the LS data reflects the situation before the 1992 closures. However, it may also be that factors such as further education and migration have become more important. The data used here refer only to (ex) miners and inevitably raises the question as to whether miners should be viewed as a special case. If the trends found here are reflected among other male manual workers in Britain affected by redundancy, it may be that the official unemployment rate seriously underestimates the extent of joblessness. Full results from this research are expected to be published later this year.

References:

Beatty, C and Fothergill, S (1994) *Registered and hidden unemployment in areas of chronic industrial decline: the case of the UK coalfields.* Paper presented to the Regional Studies Association conference on 'Tackling Unemployment and Social Exclusion', London, 15th November 1994.

Beatty, C., Fothergill, S., Lawless, P. (1997) Geographical variation in the labour market adjustment process: the UK coalfields 1981-91, Environment and Planning A, 29, pp 2041-2060.

Guy, N (1994) *Dole Not Coal. The labour market experience of redundant miners since October 1992*. Coalfields Community Campaign, Barnsley.

Hattersley, L and Creeser, R (1995) *Longitudinal Study 1971-1991: History, organisation and quality of data, OPCS series LS no. 7*, London: HMSO, page 64

Hudson, R, Peck, F, and Sadler, D (1985) *Undermining Easington*, Easington: Easington District Council

Schmitt, J. And Wadsworth, J. (1994) The rise in economic inactivity, in A.Glyn and D. Miliband (eds) *Paying for inequality: The economic cost of social injustice,* IPPR/Rivers, Oram Press, London.

Seabrook, J and Blackwell T (1993) Coal seams stitched up (what happened to the miners after the pits closed) *New Statesman and Society*, 9th July 1993.

Turner, R (1996) De-Industrialisation, Economic Regeneration and Social Capital, *Teaching Public Administration*, vol. 16.2, pp 47-58.

We welcome your views and comments on any of the articles in ***Update***.