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The geography of earnings and incomes in the 1990s: an overview

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Abstract. To date detailed analyses of geographical variations in earnings and incomes in Great Britain have been frustrated by a lack of spatially disaggregated data. The author reviews the scope, strengths, and weaknesses of available data sources and outlines some of the methodologies used to generate estimates of earnings and incomes at the local level. An overview is provided of the main regional and subregional patterns of 'raw' earnings differentials and of the underlying 'deep wage structure'—once variations in workforce composition have been controlled for. A distinctive regional pattern with the highest wages in London and the South East is evident, although there are also some significant variations in wage levels between neighbouring local areas within regions. As the demand for spatially disaggregated data on earnings and incomes remains unsatisfied despite recent increases in data supply, important concerns about the quality of the information remain.

1 Introduction

Geographers and planners have devoted much less attention to the analysis of earnings and incomes than have economists. This state of affairs probably reflects, at least in part, the relative lack of spatially disaggregated data. Yet there is a great deal of interest not only in the distribution of earnings and incomes by population subgroups, but also in temporal and spatial patterns of variation. After all, "Income is one of the most important influences over the patterns of life chances" (Hamnett, 1997, page 129).

An individual or household may have several different sources of income. However, it is useful to make a distinction between three main types. First, there is *earned income*—from employment or self-employment. Second, there is *unearned income*—accruing from property, investments, rent, etc. Third, there is *transfer income*—comprising benefits and pensions 'transferred' to the individual or household on the basis of entitlement.

In this paper I concentrate on the geography of *earnings*—the largest single contributor to incomes across the population as a whole. On the basis of information collected in the 1994/95 Family Resources Survey it is estimated that earnings form approximately 70% of total income in the United Kingdom [although the proportion of non-earners is growing, as is the share of two-earner households (see Gregg and Wadsworth, 1996)]. Obviously, for some subgroups of the population—for example, the unemployed and pensioners—incomes are made up largely of transfer income. Similarly, amongst some of those in employment incomes from sources other than earnings (such as investment income and other types of unearned income) are important [see Ryan (1996) for a review of changing factor shares in household income from the 1970s to the 1990s]. Nevertheless, across the population as a whole, understanding the geography of earnings is a key component in understanding the geography of incomes.

In the next section of the paper I identify the main secondary data sources which provide information on earnings in Britain, outline their scope and coverage, the data-collection methodology adopted, and disaggregations available—including spatial disaggregation. An assessment of the strengths and weaknesses of these data sources highlights the lack of comprehensive and consistent earnings or incomes information at the microarea level. In the absence of such data, analysts have adopted proxy

or surrogate measures (mainly from the Census of Population) to fill the gap. The usefulness of such proxy measures is reviewed, and proposals to include a question on incomes in the 2001 Census of Population are outlined. The review of data sources is followed by a description of the key features of the geography of earnings in Britain in the 1990s, and changes in the spatial distribution since the 1970s. Obviously, to some extent geographical variations in the distribution of earnings reflect the differential composition of the workforce (in terms of occupational, educational, and age composition, etc). Controlling for such differential composition as far as possible, I outline the patterns of *standardised spatial wage differentials* in Great Britain and, at a more detailed level, within England. The main regional variations, and intraregional differences in the '*deep wage structure*' are described. In the final section of the paper I concentrate on the key policy issues and implications arising from this overview.

2 Data sources

2.1 A comparison of the main earnings-data sources

Table 1 provides a comparison of the scope, coverage, data-collection methodology, geographical basis, and spatial and other disaggregations available from each of four

Table 1. Comparison of sources of data on earnings.

	NES	LFS	GHS	BHPS
Scope	Earnings not affected by absence	Actual earnings	Usual earnings	Usual earnings
Coverage	Excludes those below income tax	Representative sample	Representative sample	Representative sample
Time series	Conducted annually since 1968	Earnings data available since 1992	Conducted annually since 1968	Started in 1991
Data-collection methodology	Information provided by employers in April of each year	Household survey	Household survey	Household survey
Sample size	Approx. 250 000	Approx. 8 000 wage observations per quarter	8 000–10 000 wage observations per year	approx. 5 000 wage observations per year
Geographical basis	Workplace	Residence and workplace	Residence	Residence
Maximum spatial disaggregation (of publicly available data sets)	Counties and London boroughs (in the 1996 NES earnings data are also available for all TECs, the majority of LECs, and the majority of TTWAs, parliamentary constituencies, and local authority districts)	Regions and metropolitan counties (plus, for more recent quarters, counties of residence)	Regions and metropolitan counties	Regions and metropolitan counties
Other disaggregations	Components of earnings, sex, age, full-time/part-time employment, whether on adult pay rate, occupation, manual/nonmanual, industry	Detailed information on household, worker, and workplace characteristics	Detailed information on household, worker, and workplace characteristics	Detailed information on household, worker, and workplace characteristics

Note: BHPS British Household Panel Study, GHS General Household Survey, LEC Local Enterprise Company, LFS Labour Force Survey, NES New Earnings Survey, TEC Training and Enterprise Council, TTWA travel-to-work areas.

main data sources containing spatially disaggregated information on earnings in Great Britain: the New Earnings Survey (NES), the Labour Force Survey (LFS), the General Household Survey (GHS) and the British Household Panel Study (BHPS) (for reviews of these sources see Elliott et al, 1996; Wilson et al, 1996). Other data sources containing information on income include the Inland Revenue Survey of Personal Incomes which collects information on all types of income, the Family Expenditure Survey (FES), and the Family Resources Survey (FRS) which contains detailed information on amounts and types of benefits, alongside other sources of income.

The NES is the main source of information on the structure of earnings in Great Britain. It is a sample survey of earnings of employees. It covers about 1% of employees who are members of Pay As You Earn (PAYE) tax schemes, with individuals selected for inclusion on the basis of National Insurance numbers; hence, the NES does not include those whose earnings are below the income-tax threshold—and this is recognised as one of the main disadvantages of this data source. It is important to note that the information is provided by employers, not the individuals themselves. Employers indicate the length of the period to which the specified earnings relate, and these are converted to a weekly equivalent and to hourly rates. Earnings data from the NES relate to gross earnings of full-time employees on adult rates. The amount of contextual information on the characteristics of the individuals included in the sample is somewhat more limited than is the case for the other sources: for example, no information is available from the NES on education, training, qualifications, or tenure of workers. From the perspective of geographical studies, it is important to note that information from the NES is publicly available for more detailed spatial disaggregations [including the majority of travel-to-work areas and local authority districts (Osborne, 1997)] than is the case for the other main data sources on earnings.

The LFS is receiving increasing prominence as a source of official statistics (particularly in the labour-market field), but a question on earnings was only introduced when the LFS moved from being an annual to being a quarterly survey in 1992 (for an overview see Laux and Marshall, 1994). Questions about earnings and income from the individual's main job, second job, government schemes, state benefits, and other income were first included only in the fifth of five waves⁽¹⁾ in which a household is included in the survey, because of a fear that such questions might increase non-response if asked in earlier interviews. There has been considerable pressure to include the income question in all five waves in which a respondent household is included in the LFS, in order to increase sample size and enable more reliable analyses of income data alongside the wealth of data on other characteristics included in the LFS. Indeed, from Spring 1997 it was decided to introduce earnings questions in the first wave as well as the fifth wave; it was felt that the disadvantage of a small increase in nonresponse would be outweighed by the benefits of having a large sample size (Jenkins, 1998). It is important to note that it is the individual employees who report their earnings (rather than employers, as in the case of the NES). This may be regarded as a disadvantage in terms of the quality and consistency of information provided. Moreover, it should be noted that LFS response rates are lowest in the fifth wave (averaging 73% for Great Britain as a whole in March–May 1995, but only 61% in Inner London, 66% in Outer London, and 69% in the West Midlands Metropolitan

⁽¹⁾LFS interviews cover approximately 150 000 people living at a representative sample of 60 000 private addresses throughout the United Kingdom every quarter. Each quarter's sample is made up of five waves, each consisting of about 12 000 households. Every sampled address in a wave is interviewed in five successive quarters (that is, waves 1–5), so that in each quarter one fifth of interviews are made up of households on their first-wave interview, a fifth on their second-wave interview, and so on.

County); and approximately 30% of LFS responses are collected by proxy. Again, this is likely to have implications for the quality of data collected. On a more positive note, a key advantage of the LFS is the amount of other contextual information available to which earnings and income data can be related.

For analyses of the geography of earnings—particularly at the subregional scale—the main disadvantage of the other two data sources highlighted in table 1, the GHS and the BHPS, is small sample size. A key advantage of the GHS is the long time series of data available, enabling analysis of changing regional earnings differentials (as outlined in the following section). As individual sample surveys, problems mentioned above in respect of the LFS relating to the quality and consistency of earnings information provided, are also likely to apply to these data sources.

Given the differences in scope and coverage of the two main data sources on earnings (the NES and the LFS) it is not surprising that there are differences in the levels of earnings recorded in each. Table 2 compares gross weekly earnings of full-time employees (whose pay was not affected by absence) in 1995 according to the two sources. The general picture emerging is that earnings levels estimated from the NES are higher than those estimated from the LFS (the largest differential—over 17%—is recorded in the case of Greater London); the Rest of the South East is the only exception to this general rule. The likely most important single explanation for the recording of lower earnings levels in the LFS than in the NES is that individual respondents tend to understate what they earn—particularly in the upper earnings brackets—whereas the NES records are employer based and so are not susceptible to such understatement in the same way. Although the general patterns of regional variations in earnings are the same according to the estimates from each data source—with earnings in excess of the Great Britain average in Greater London and the Rest of the South East, and relatively low earnings in Wales and the Northern region—there are some differences between the two sources in the detail of the rankings.

Table 2. Comparison of New Earnings Survey (NES) and Labour Force Survey (LFS) estimates of gross weekly earnings (pay not affected by absence) of full-time employees, 1995 (source: derived from Orchard and Sefton, 1996).

Region	NES, April 1995		LFS, Spring 1995		Percentage by which NES estimate is greater than LFS
	amount (£)	rank	amount (£)	rank	
Greater London	439.5	1	375.0	1	17.2
Rest of South East	346.4	2	349.7	2	-0.9
Whole of Great Britain	336.3	3	313.3	3	7.4
North West	317.5	4	291.8	7	8.8
South West	313.8	5	304.6	4	3.0
Scotland	313.4	6	289.3	6	8.3
West Midlands	311.0	7	281.8	11	10.4
East Anglia	308.6	8	289.0	9	6.8
East Midlands	305.5	9	289.7	8	5.5
Yorkshire and Humberside	305.0	10	298.3	5	2.2
Wales	301.3	11	282.5	10	6.7
North	299.1	12	277.6	12	7.7

A more comprehensive comparison of earnings estimates from the NES and LFS in which other disaggregations (by gender, age, industry, and occupation) are used shows that the gap is bigger at the bottom than at the top of the earnings distribution (Orchard and Sefton, 1996). Hence, the gap between men's and women's earnings is

greater in the LFS than in the NES; a feature explained by the greater proportion of women at the lower end of the earnings distribution. In terms of occupations, the differential between the two sources is largest for managers and administrators, and lowest for sales occupations. Personal-service and protective-service occupations (an occupational group characterised by low pay) is the only Standard Occupation Major Group recording lower wages in the NES than in the LFS.

2.2 Approaches to deriving estimates of earnings at the local and microarea scales

Although the NES is the most comprehensive source of earnings information in Great Britain (Osborne and Nichol, 1996), and some aggregate data are now being published at the district, parliamentary constituency, and local labour-market area level, for analyses of incomes and earnings at the subcounty level researchers and analysts have tended to opt for one of two broad approaches.

The first approach involves making use of 'proxy' measures or geodemographic classifications, generally based on microarea data from the Census of Population. Amongst the indicators most commonly used as proxies of low income are the unemployment rate, the inactivity rate, households without access to a car, and households in social rented accommodation; conversely, households with two or more cars, higher level qualifications, and the percentage of employment in high-level nonmanual occupations have been used as proxies of high incomes (see Green, 1994). A study in which the validity of these indicators was examined by exploring how well they predict income in surveys in which income data are also collected (the GHS and the FES) confirms the importance of 'no car', 'no owned home', and 'no job' as correlates of low income, but suggests that a sizeable minority of those with low incomes are missed by such census-based proxies, and that some on higher incomes are misclassified (Davies et al, 1997).

The second approach to deriving 'actual' estimates of earnings and incomes at the microarea level (and above) involves the use of data on earnings or incomes at a higher level of spatial disaggregation in conjunction with other indicators at the microarea level. The precise data sources and methodologies involved vary. Some applications have involved the use of occupational-specific NES data at the national or regional level alongside data from the Census of Population data and data on Income Support disaggregated to the microarea level (for further details of applications, see Cossey, 1996; Gordon and Forrest, 1995). In other applications FES data have been used alongside census and other data sources at the microarea level to estimate local incomes (Bramley and Lancaster, 1998; Bramley and Smart, 1996). Other researchers have made use of microsimulation techniques to derive income estimates (Birkin and Clark, 1995) and additional wealth variables such as stocks and shares (Caldwell et al, 1998).

2.3 Inclusion of an income question in the Census of Population?

In recognition of the lack of 'direct' measures of income at the microarea level, and the usefulness of such data were it to be available, census users have been lobbying for an income question to be included in the 2001 Census of Population. At the times of planning for previous censuses there have been concerns about the possibility of such an inclusion having an adverse effect on census coverage. However, as noted above, since the 1991 Census a question on income has been introduced into the LFS, and questions on income are included in a range of other surveys conducted on behalf of local authorities, Training and Enterprise Councils, Local Enterprise Companies, market researchers, etc.

A question asking "What is your total gross income from all sources?" was included in the June 1997 Census Test. Respondents were asked to tick the box for the range into

which their income fell (see table 3), and were instructed to count *all* income, including earned income, pensions, Child Benefit, other state benefits, interest, rent, and other regular allowances. A survey of users' requirements from the 2001 Census (Rees, 1998) revealed overwhelming support for an 'income' question; indeed, only two other questions were regarded as more essential or highly desirable—those on 'employment status' and 'main job'. The survey also indicated a desire for more detailed information on income—particularly at the upper end of the distribution—than that provided by the test question; the categories identified are reproduced in table 3. A final decision on whether to include an income question in the 2001 Census is likely to be made in Autumn 1998.

Table 3. Seven-fold categorisation of gross income used in June 1997 Census Test.

Income per week (£)	Income per year (£)
0	0
<60	<3000
60–119	3 000–5 999
120–199	6 000–9 999
200–299	10 000–14 999
300–479	15 000–24 999
≥480	≥25 000

3 The geography of earnings

3.1 Understanding variations in earnings

In a recent review of trends in pay in the 1980s and 1990s Blanchflower et al (1996) identified four main developments in pay which have occurred since the 1970s: first, the rapid widening of the earnings distributions (for an overview see Hills, 1995); second, a substantial growth in real earnings; third, a reversing of the public-sector–private-sector wage differential; and fourth, the widening of regional differentials. Key facets of these trends are summarised in table 4. In this paper my main emphasis is on the fourth development, that is, the patterns of change and stability in geographical patterns of earnings. However, the other developments outlined in table 4 are important as contextual features.

In conceptual terms, the wage level can be interpreted as the agreed price of labour, which is the outcome of a process of negotiation between the employee (the 'seller') and the employer (the 'buyer'). Different wage-determination models vary in terms of the balance ascribed to the two groups, and of the impact of external factors leading to imperfections in the market for labour. From a geographical perspective, observed differences in regional or local earnings levels and earnings differentials would be expected in accordance with:

- (a) Geographical variations in the industrial and occupational structure of employment, as earnings levels vary by industry and occupation; hence the use of occupational data in the derivation of earnings and incomes at the microarea level, as outlined above, and in deriving proxy classifications of low-paid employment (for an example see McKnight, 1997).
- (b) Spatial variations in the acquisition of human capital between individuals in employment, as earnings levels for the highly qualified tend to be higher than for the less well qualified.
- (c) The extent to which employers choose to pay wages above the competitive level in order to minimise turnover costs—a situation most likely to arise where the turnover of the workforce is high, or where the local labour market is 'tight'.

Table 4. Main developments in pay since the 1970s (source: derived from Blanchflower et al. 1996).

Development	Key facets
Rapid widening of the earnings distribution—growth in inequality	<p>Widening of educational differentials—return to education has increased</p> <p>Widening of difference in earnings in manual and nonmanual workers</p> <p>Returns to job or work experience have increased</p> <p>Relative earnings of young have declined</p> <p>Earnings in manufacturing have tended to grow faster than earnings in services, although there are marked intrasectoral variations</p> <p>Relative position of women has improved</p>
Substantial growth in real earnings (that is, wages adjusted for price changes)	<p>Between 1988 and 1990 gross weekly earnings grew at just under 10% per annum, but the rate of increase slowed with the onset of recession</p> <p>Real-wage growth was rapid in comparison with competitor countries</p>
Reversing of public–private sector wage differential—private sector workers now earn more than do public sector workers (a reversal of the previous position)	<p>During the 1970s pay in the public sector was everywhere higher than in the private sector</p> <p>Between 1981 and 1992 relative earnings in the public sector declined steadily as real earnings in the private sector rose strongly</p> <p>With the onset of recession in the private sector between 1991 and 1993 the public sector fared better, but since then the downward trend has reemerged</p>
Widening of regional differentials—wages in the South East are a greater multiple of wages in other regions than formerly	<p>1973–94, increased regional dispersion in earnings</p> <p>The London premium rose substantially up to 1991, and then fell slightly</p> <p>During the 1970s pay in the public sector was everywhere higher than in the private sector</p> <p>A broad stability in regional wage-structure positions is apparent</p>

(d) Regional or local variations in the cost of living.

(e) Compensating differentials and local-area attractiveness: some areas may be intrinsically more attractive than others (in terms of environment, other amenities, etc), and such attributes are likely to influence individual preference functions such that individuals are willing to substitute at the margin between characteristics: for example, in particularly attractive areas individuals may be willing to accept lower pay balanced with more amenities, whereas in areas with otherwise poor amenities a pay 'premium' may be necessary to tempt workers into the area to take jobs.

This list of factors is not exhaustive, but goes some way to outlining the main possible reasons for geographical differences in earnings.

3.2 Regional and intraregional variations in earnings

A variety of analyses of gross earnings at the regional level highlight a pattern of 'London and the South East versus the Rest' as the key feature of pay differentials in Britain. This is the pattern highlighted in table 2. Indeed, the main finding emerging from an analysis of pay at the local labour-market area level (Molho, 1991) was the steep decline in local pay with distance from London, which tended to flatten out after a distance of 75 miles. However, aside from this 'London effect' considerable variability in local pay was still evident (see also Evans and Pentecost, 1998).

An insight into the extent of this local variability may be gained from table 5, which lists the average gross weekly full-time earnings in the highest ranked and lowest ranked counties within each Government Office Region (GOR) in England. In the South East GOR, which displays the highest average earnings outside London, the average-earnings level in the lowest ranked area—the Isle of Wight—is lower than in five of the regions characterised by lower regional earnings. This underlines the findings of other work in which the fact that a regional focus disguises the extent of local variability has been highlighted (Bramley and Smart, 1996; Hamnett, 1998). It is also evident from table 5 that the majority of the counties ranked in the lowest position within their region are ‘rural’ in character. Indeed, behind the favourable statistics of greater-than-average employment growth and lower-than-average rates of unemployment and long-term unemployment, low wages have been highlighted as one of the major labour-market problems of rural areas (Monk and Hodge, 1995).

Table 5. Interregional and intraregional variations in average gross weekly full-time earnings, 1996 (source: Office for National Statistics, 1996).

Region	£	Highest ranked county	£	Lowest ranked county	£
London	454.3				
South East	367.4	Berkshire	405.5	Isle of Wight	296.8
<i>Whole of England</i>	<i>356.0</i>	<i>Berkshire</i>	<i>405.5</i>	<i>Cornwall</i>	<i>271.2</i>
Eastern	345.7	Hertfordshire	374.0	Norfolk	310.0
North West	329.6	Cheshire	354.3	Lancashire	315.6
South West	326.5	Wiltshire	354.0	Cornwall	271.2
West Midlands	324.3	West Midlands	334.4	Shropshire	302.4
		Metropolitan County			
East Midlands	317.9	Northampton	331.7	Lincolnshire	303.7
Yorkshire and Humberside	316.4	Humberside	322.7	North Yorkshire	306.4
North East	314.1	Cleveland	330.1	Northumberland	290.8

3.3 Standardised spatial wage differentials

As noted above, these differences in observed earnings may be ‘explained’ (at least in part) by the composition of regional or local employment structures and the characteristics of workers. In an attempt to ‘purge out’ such compositional effects, research has been undertaken to inform ‘labour-cost adjustments’ or ‘market-forces factors’ in the public sector; these ‘adjustments’ and ‘factors’ are derived in recognition of the fact that the costs incurred in supplying an ‘equal’ level of service provision varies between areas, and that local authorities and health authorities should be compensated in high-labour-cost locations so that standards of service are not compromised. This research has generated estimates of the pattern of ‘standardised spatial wage differentials’ (SSWDs) and has uncovered the underlying ‘deep wage structure’ (DWS) (that is, the underlying geography of earnings once variations in the age, industry, occupation, educational qualifications, etc, of the workforce have been accounted for) (Blanchflower et al, 1996; Wilson et al, 1996).

Regression analysis was the technique used to estimate SSWDs: typically, age (as an indicator of work experience), gender, employment status (full-time, part-time, etc), industry (whatever disaggregation is available in the data set being used), sector (distinguishing the public sector), occupation (typically adopting the maximum disaggregation available in the data set), human capital (qualification levels), and location (regions, zones or local areas) were used as ‘control’ variables, and the log of earnings as the dependent variable. Obviously, the availability of ‘control’ variables and the extent of disaggregation possible varies according to the data set used (see table 1); the results

reported below relate mainly to analyses conducted using the NES (Wilson et al, 1996) and the LFS (Blanchflower et al, 1996) data. In this paper I am concerned with exploring geographical variations in earnings, and so the coefficient on the 'location' indicator—which can be interpreted as measuring the SSWD—is the focus of attention.

Regression analysis conducted on the NES data at the region scale reveals that a significant part of the 'raw' differential in pay between London and the Rest of England (evident in table 2 and table 5) is attributable to differences in occupational and industrial composition and other factors. When such factors are controlled for, Greater London's premium in hourly earnings compared with the Rest of the South East, and the difference between the Rest of the South East and other parts of England, are reduced by approximately one third. Nevertheless, even when industrial, occupational, and associated factors are taken into account the underlying 'London and the South East versus the Rest' pattern of regional wage differentials remains (again, see Evans and Pentecost, 1998). Separate regressions for males and females reveal a similar pattern of standardised regional wage differentials, although the differentials appear to be larger for females than for males. This result may reflect the fact that females are more occupationally segregated than are males and the fact that the lack of a qualification variable in the NES data means that no additional 'control' for qualifications can be made. However, the results obtained are in accordance with the findings of research that suggests clear regional differentials in employment opportunities for men and women, with a location in London and the South East being especially favourable to the development of women's careers (Fielding and Halford, 1993; see also the discussion in Hamnett, 1998).

In table 6 (derived from Wilson et al, 1996) SSWDs are compared at the scale of metropolitan counties and regional remainders, with the aid of data from the NES and LFS. Again, the pattern of an earnings premium in London and the South East is apparent, with earnings falling off between Central London and Outer London (see also Hamnett, 1998). The details of the rankings of other regions vary according to the data source used.

Table 6. Standardised spatial wage differentials by metropolitan county and regional remainder according to the New Earnings Survey (NES) and the Labour Force Survey (LFS) (source: Wilson et al, 1996).

Metropolitan County/regional remainder	NES		LFS	
	differential	rank	differential	rank
Central London				
Inner London	-0.125	1	-0.098	1
Outer London	-0.206	2	-0.135	2
Rest of South East	-0.276	3	-0.245	3
Rest of North West	-0.317	4	-0.343	12
East Anglia	-0.352	5	-0.319	6
Greater Manchester	-0.353	6	-0.315	5
South West	-0.353	7	-0.336	10
Merseyside	-0.354	8	-0.333	9
Rest of Northern region	-0.369	9	-0.331	8
West Midlands Metropolitan County	-0.373	10	-0.312	4
Rest of Yorkshire and Humberside	-0.383	11	-0.350	13
West Yorkshire	-0.384	12	-0.320	7
South Yorkshire	-0.384	13	-0.366	15
East Midlands	-0.389	14	-0.338	11
Tyne and Wear	-0.389	15	-0.352	14
Rest of West Midlands	-0.418	16	-0.367	16

As noted in table 3, one of the main developments in pay during the 1980s was the increased regional dispersion in earnings. Of the main data sources outlined in table 1, the one which contains the longest 'consistent' time series, and so which offers the best facility for examining regional earnings differentials over time, is the GHS. Figure 1 shows standardised regional wage differentials (relative to the Rest of the South East) over two decades (from 1973) for five selected regions: London (which consistently records the highest wages of any region), the North West (which is characterised by having amongst the highest wages in England outside London and the South East), and Wales, Yorkshire and Humberside, and the Northern region (which exhibit amongst the lowest earnings in all years). Even from the data presented for these regions it is evident that there is considerable variation in the underlying deep wage structure at the regional level (for a full review, see Blanchflower et al, 1996). Despite variations from year to year there is evidence of a growing dispersion over time, particularly in the latter part of the 1980s. The London differential has an upwards trend to 1991 (it seems likely that the rise is related to the house-price boom in London and the South East at this time—underlining the important two-way interactions between housing markets and labour markets which play an important role in determining patterns of earnings variations across regions), but somewhat downwards after that. Nevertheless, the broad pattern of regional differentials has been maintained throughout the period (see also Hamnett, 1998).

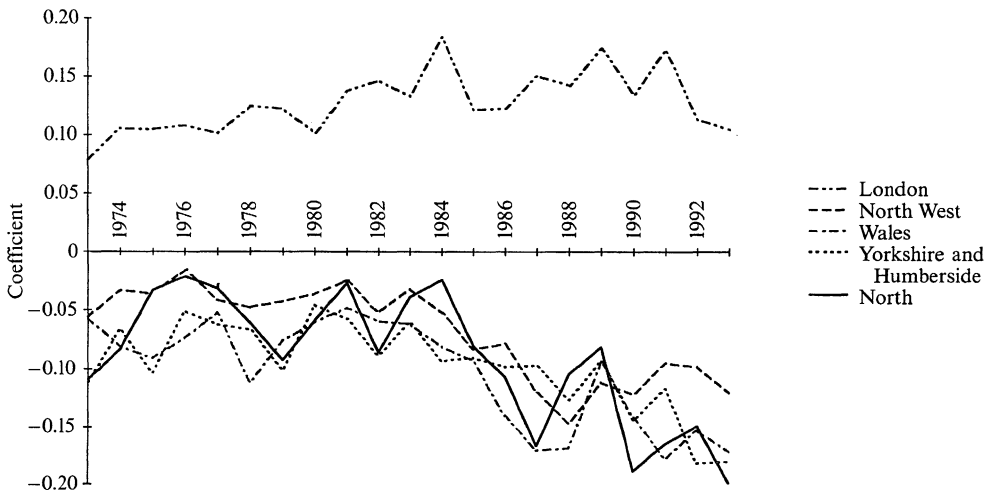


Figure 1. Standardised regional wage differentials in Great Britain, 1973–93 relative to the Rest of the South East (source: General Household Survey data, from Blanchflower et al, 1996).

SSWDs have also been calculated at the subregional level. Table 7 (derived from Wilson et al, 1996) presents SSWDs for English counties and London boroughs, derived from NES data. In order to gain some insights into the geographical patterns emerging, the areas have been ranked in descending order on the wage coefficient, and have then been grouped for minimum error into seven categories:

(a) Category 1 is made up exclusively of Central London boroughs, with a westwards extension to include Kensington and Chelsea, Hammersmith and Fulham, and Hillingdon (which includes Heathrow).

(b) Category 2 includes most of the remaining western, northwestern, and southwestern London boroughs, along with Berkshire (immediately to the west of London), and Surrey.

Table 7. Sevenfold categorisation of London boroughs and counties on standardised spatial wage differentials (source: Wilson et al, 1996).

Borough/County	Coefficient	Borough/County	Coefficient
<i>Category 1</i>		<i>Category 2</i>	
City of London	1.000	Richmond-upon-Thames	-0.280
Tower Hamlets	-0.099	Ealing	-0.296
Westminster	-0.111	Lewisham	-0.299
Hackney	-0.148	Wandsworth	-0.300
Southwark	-0.194	Hounslow	-0.304
Lambeth	-0.201	Brent	-0.315
Camden	-0.202	Berkshire	-0.320
Islington	-0.203	Surrey	-0.320
Hammersmith/Fulham	-0.210	Sutton	-0.347
Hillingdon	-0.213	Enfield	-0.350
Kensington and Chelsea	-0.224	Harrow	-0.350
		Barking and Dagenham	-0.352
		Kingston-upon-Thames	-0.352
<i>Category 3</i>		<i>Category 4</i>	
Croydon	-0.354	Merton	-0.411
Newham	-0.358	Bromley	-0.422
Redbridge	-0.380	Oxfordshire	-0.423
Buckinghamshire	-0.381	Bedfordshire	-0.426
Hertfordshire	-0.382	Waltham Forest	-0.432
Haringey	-0.384	Hampshire	-0.435
Barnet	-0.397	Essex	-0.437
Greenwich	-0.401	Wiltshire	-0.437
Havering	-0.402	Avon	-0.438
West Sussex	-0.402	Cambridgeshire	-0.443
Bexley	-0.404	Cheshire	-0.450
		Gloucestershire	-0.457
<i>Category 5</i>		<i>Category 6</i>	
Kent	-0.465	Cumbria	-0.510
Northamptonshire	-0.474	Humberside	-0.514
Dorset	-0.478	Durham	-0.514
Greater Manchester	-0.489	West Yorkshire	-0.520
Merseyside	-0.490	South Yorkshire	-0.522
Cleveland	-0.498	Tyne and Wear	-0.522
Suffolk	-0.501	Norfolk	-0.523
West Midlands	-0.507	East Sussex	-0.524
Metropolitan County		Somerset	-0.528
		Nottinghamshire	-0.528
		Warwickshire	-0.529
		Lancashire	-0.530
		Leicestershire	-0.532
		Hereford and Worcestershire	-0.535
		North Yorkshire	-0.535
		Northumberland	-0.540
<i>Category 7</i>			
Derbyshire	-0.552		
Devon	-0.556		
Isle of Wight	-0.558		
Staffordshire	-0.571		
Lincolnshire	-0.588		
Shropshire	-0.588		
Cornwall	-0.615		

(c) Category 3 contains the majority of the remaining Outer London boroughs, along with three counties to the northwest, north, and southwest of London (Buckinghamshire, Hertfordshire, and West Sussex).

(d) Category 4 includes the remaining southeast and northeast London boroughs, most of the remaining Home Counties, along with counties which may be considered part of the 'Greater South East' (such as Cambridgeshire), and the M4 corridor (Wiltshire, Gloucestershire, and Avon); the first representative from northern England—Cheshire—is also in this category.

(e) Category 5 comprises Kent, other counties bordering the South East, and some of the major metropolitan counties (Greater Manchester, Merseyside, and West Midlands).

(f) Category 6 contains most of the Midlands and northern England.

(g) Category 7 comprises mainly remoter rural counties.

Similar regional and urban–rural differentials are evident from a disaggregated analysis of LFS data (Blanchflower and Oswald, 1996). It is clear that there is noticeable pay variation between areas that are close to each other, and these 'cliff edges' do not disappear entirely even when local authority district-level data are analysed. There is considerable variation in wages within Greater London; outside Central London, Inner London boroughs and West London boroughs display the highest earnings coefficients.

3.4 Summary

A variety of evidence, from different data sources and different time periods, and on both 'raw' and 'standardised' earnings differentials, reveals a distinctive regional pattern of 'London and the South East versus the Rest'. The highest wage areas in England are the City of London, followed by Central London and Inner and West London. However, some significant variations in wage levels between neighbouring areas are also apparent. The lowest wages are found in remoter rural areas, with Cornwall recording the lowest wages in England: depending on the precise data source and 'controls' used, an individual in Cornwall would earn 60–70% less than a similar individual in the City of London. The evidence reviewed here, covering the period from the 1970s to the 1990s, reveals that there is a relatively robust deep wage structure, and that this has been apparent over at least the last two decades.

4 Issues and implications

4.1 Quantity and quality of information

Until recently, the geography of earnings and incomes has been an underresearched topic—a situation largely explained by a lack of spatially disaggregated data. More data have become available in recent years, as illustrated by the introduction of an income question into the LFS, and the availability of a greater degree of spatial disaggregation of NES data. The possible introduction of an income question in the 2001 Census of Population would mark an important step forward. In the absence of 'direct' information on earnings and income at the microarea level there has been a good deal of interest in the application of modelling and microsimulation techniques to derive estimates of income and earnings. There has also been an increasing use of benefit data in specific local contexts (see Dobson et al, 1996; Noble and Smith, 1996).

The recent increase in availability of earnings data from survey sources (notably the LFS, but also a variety of ad hoc surveys undertaken at the local level), reflects a more general willingness on the part of respondents to provide information on 'banded' earnings or income. Nevertheless, it is worthy of note that FRS interviewers report that some respondents remain very wary or unwilling to be specific about pay details. Moreover, there remain important concerns about differences in coverage between

alternative sources and, more particularly, about the 'quality' of responses to questions on earnings and income.

The 'quality' issue remains relatively underresearched, but clearly the form, order, and guidance given to survey respondents, and the extent of proxy response, are important features. For example, recent analysis of the Family and Working Lives Survey (Green et al, 1997) suggested an underreporting of receipt of benefits relative to other data sources, indicating a reluctance on the part of the respondents to provide full responses. On a similar theme, feedback from experienced interviewers responsible for conducting FRS interviews indicated that they felt that respondents were becoming far less clear about the type and amounts of benefits they receive (one likely reason is that an increasing number of benefits are paid in combination).

4.2 Nominal earnings and real earnings

The focus in this paper has been on the geography of earnings, rather than more broadly on incomes—of which earnings (on average) form the largest constituent part. Hence, earnings constitute only part of the overall picture, and, moreover, need to be considered alongside spatial variations in the cost of living. It is apparent from information presented in publications such as *Regional Trends* that there are some significant regional differences in the expenditure on different components of household budgets (notably housing costs) in different regions—a fact underlined by 'Cost of Living' reports prepared by organisations such as the Reward Group. In general, the main spatial divide revealed by such information is the characteristic 'London and the South East versus the Rest' highlighted in the geography of earnings. However, some components of the cost of living, notably transport costs, may be greater in rural areas than in urban areas. This suggests the need to focus greater attention on 'real earnings', the geography of which may be rather different to the geography of 'nominal earnings'.

4.3 Policy implications

From a policy perspective, the research on standardised spatial wage differentials reviewed above underlines the continuing need to compensate local authorities and essential public service employers in high-labour-cost areas for the 'extra' costs incurred in providing a standard level of service. The more detailed analyses of SSWDs have been influential in refining the zoning systems previously used to inform the distribution of such payments between providers.

It seems likely that in the short term there will be continued, and perhaps growing, interest in the use of occupational proxies of low pay; particularly for longitudinal analysis (investigation of transitions in to and out of low pay). Debates about social exclusion and widening inequalities, at national, regional, intraregional, and intraurban scales, are likely to fuel further an interest in such analyses. A recent longitudinal analysis in which a proxy of low-paid employment based on occupation was used has highlighted that low-paid individuals have, on average, experienced lower employment rates (and hence higher unemployment and inactivity rates) over their working lives (McKnight, 1997). There is some evidence for the existence of a group of individuals who 'cycle' between spells of low-wage employment and unemployment. Nevertheless, an examination of the proportion of low-wage employment which is made up of spells of long duration shows that for many people such employment is by no means temporary. This has clear policy implications for meeting the 'needs' (for housing, health care, etc) of a sizeable minority of the population who have low incomes over long durations, and who are disproportionately spatially concentrated in inner cities and outer estates—some of which have been targeted in area-regeneration initiatives (Green and Owen, 1998).

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