

**CHAPTER 46**

**THE RATES REVISITED? A GEOGRAPHICAL REASSIGNMENT OF  
PROPERTY VALUATIONS AND LOCAL TAX BURDENS UNDER THE  
COUNCIL TAX**

**(P Longley, G Higgs and D Martin)**

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# The rates revisited? A geographical reassignment of property valuations and local tax burdens under the council tax

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**Abstract.** In this paper the detailed patterns of British property valuation and local revenue raising under the council tax are compared with those prevailing under the domestic rates. The results of matching individual council-tax valuations with rateable values for the 47 000 domestic properties that make up the Inner Area of Cardiff, Wales, are reported. A geographical information system is used to identify the disaggregate pattern of properties which have been assigned higher or lower relative values after the abolition of the domestic rates. The findings are seen as significant in describing the intraurban geography of property values in Britain: properties constructed by local authorities now attract significantly lower relative valuations; pre-1919 private-sector housing is now more highly valued; and different construction types (for example, purpose-built flats, converted flats, and ends of terraces) attract quite different valuations under the two regimes. Overall, the distribution of rateable values vis-à-vis that of council-tax bands is likely to have had a multi-faceted effect upon local revenue raising, and the authors begin to explore its changed geography in some detail.

## 1 Introduction

At the time of writing, it is now some eighteen months since the introduction of the council tax which followed the abrupt succession of the domestic rates and the 'community charge' or 'poll tax' (Martin et al, 1992). Most indications are that the tax is bedding down quite successfully (for example, *The Guardian* 1994), yet the property assessments that underpinned the old domestic rates were ostensibly much more detailed, and encapsulated a rather wider range of property attributes, than those carried out for the council tax. This is somewhat paradoxical in that the domestic-rating system was deeply unpopular by the time of its abolition (in 1990 in England and Wales, 1989 in Scotland). The resolution to this paradox, no doubt, in large part lies in the generally low proportion of local government expenditure that is now raised locally vis-à-vis the historically higher real yields of the domestic rates. However, to advance only this single explanation is to understate the success of the valuation procedure, for to gain acceptance the tax must also have appealed to a broad-based conception of 'fairness'.

This may, of course, be no great achievement in relation to the widely perceived excesses of the community charge. Moreover, the fairness or otherwise of the council-tax valuations may yet come under closer scrutiny if, as seems likely, the scope for increasing tax yields widens to encompass even a partial restoration of local taxes to higher real levels. The council tax has been seen to be regressive because, in moving from the lowest to the highest banded properties, the fractions or multiples

of the standard (band D) local council-tax charge are not commensurate with corresponding property values (Hills and Sutherland, 1991). Yet is it more or less regressive than its property-tax forbear, the domestic rates? The starting point for such an assessment must be an analysis of the values assigned to different classes of property, because this is central to determination of the relative revenue burdens borne by tax-paying households. In this paper we will argue that the geography of the built environment has been of significant importance in changing the revenue burden under the council tax relative to the burden under its domestic-rates forbear. As such, it represents a development of two previous papers, the first of which was published in this journal (Martin et al, 1992) and the second which was published elsewhere (Longley et al, 1993). Both of these studies were based in the Cardiff study area. In the first paper we investigated the shifts in the geographical local tax burden that accompanied the shift from the domestic rates to the community charge. In the second we sought to predict individual property values for every property in the Inner Area of Cardiff, using rateable-value information, the results of a house-price sample survey, and information about property location and type. A common theme underlying this research is that there is a geographical dimension to the changed individual and household tax burdens which accompanied the introduction of, first, the community charge and, second, the council tax. Aspatial studies of the household characteristics associated with changed local tax burdens (for example, Giles and Ridge, 1993a; 1993b; Hills and Sutherland, 1991) may therefore generate inaccurate and even misleading findings if the effect of property and population geography is not accommodated into analysis.

In this paper we develop the first geographically extensive comparison of actual council tax and rateable values, covering some 47 000 properties in Cardiff, Wales. The value added by this analysis over existing aspatial studies and our own previous work (Longley et al, 1993; Martin et al, 1992) is as follows:

- (a) We provide the first *geographically extensive* comparison of the *distribution* of rateable values versus council-tax values (obtained from the first draft of the council-tax register) for a large and heterogeneous urban area.
- (b) We provide a breakdown of *property attributes* associated with changed positions within this overall distribution. Specifically, we investigate how *tenure at construction* has been associated with quite profound changes in the relative values assigned to properties, as well as investigating various physical attributes pertaining to construction type.
- (c) We begin to identify some of the consequences for the geography of revenue raising following the replacement of the rates, and we report on some of the broad *household characteristics* which are associated with changed relative house valuations.

We are able to do this because we are the first researchers to have undertaken the complex process of matching the first draft of the council-tax register with the rates register in a detailed georeferenced framework. We have attempted to match 100% of the draft council-tax records for Cardiff's Inner Area with the domestic-rates register. Moreover, we have available to us records from the most detailed locationally disaggregate private-sector house-condition survey ever carried out in a British city—the 1989 Cardiff House Condition Survey (CHCS) (Keltecs, 1989). In this sample survey attempts were made to elicit information about one in five private-sector (that is, non-local-authority-owned) properties throughout the Inner Area by the use of a stratified-sample design. These data enable us to assign a range of property attributes and household characteristics to a substantial sample of the entries on the council-tax register.

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The information from the CHCS is not, unfortunately, sufficiently detailed to permit calculation of the full range of rebates, exemptions, and discounts that have characterised both the council-tax and the domestic-rates regimes. We see this paper as supplementing, rather than replacing, existing aspatial analyses of local taxation (Hills and Sutherland, 1991; Ingham, 1993; McCormick, 1992; Paddison, 1989) in which much more detailed income and other household information has been used in the calculation of actual household liabilities. As such, this is a logical sequel to a previous paper published in this journal (Martin et al, 1992), in which we developed a geographical information system (GIS) in order to investigate the very different problem of reassignment of unrebated tax liabilities after the replacement of the domestic rates by the community charge. In this previous paper we were able to demonstrate the detailed ways in which revenue-raising geography based upon attributes of the built environment differed from that based upon the population geography of eligible charge payers. The reversion back to a property tax after the demise of the community charge also produced systematic patterns of household gain and loss (Higgs, 1994). A priori, one might anticipate that the central importance of property taxation in the council tax might lead it to have a more similar revenue-raising geography to that of the domestic rates: in our empirical analysis, however, we will demonstrate that changes in relative property valuations between the two taxes make this a far from general rule.

The paper is structured as follows: in section 2 we outline some of the differences and similarities between the bases of the council tax and the domestic rates; in section 3 we briefly review the development of our case-study data set for Cardiff, Wales; in section 4 we compare the valuations which were associated with the rates with those that have been generated by the council tax; in section 5 we explore some of the ways in which reassigned property values translate into changed local tax liabilities; and in section 6 we draw some conclusions from this analysis and suggest some directions for future research.

## **2 The two regimes compared**

Although both are forms of property taxation, the council tax and the domestic rates have been based upon quite different principles. The domestic-rating system derives from an era in which the overwhelming majority of hereditaments were rented within the private rented sector, in which patterns and levels of rent regulation were at most piecemeal and, as such, represented only minor distortions of the rental market. Rateable values were thus rooted in the notion of rental property having a 'use value' to resident households, which was liable to taxation. The general reasons why the essential *raison d'être* for the system of rateable values had been undermined by the late 20th century are well known: owner-occupation as a tenure grew from less than 10% of the market in 1914 to 27% by 1949 and 67% by 1991; the decline of private renting has mirrored the growth in owner-occupation (90% of property was rented in 1914, but by 1990 this had fallen to 8%); the local authority sector (originally conceived as 'general-needs housing' and let at below-market rents) expanded during the postwar period to reach a peak of 32% in 1979; and throughout much of the postwar period there has been an intensification both in the range and in the degree of rent controls within the private rented sector [see Saunders (1990), among others, for a full discussion].

At a more specific and practical level, there are other reasons why rateable values lost credibility as a basis for taxation from the 1980s onwards. The final domestic-rates revaluation in England and Wales took place in 1973, and during the following sixteen years the rates register became increasingly riddled with inconsistencies and

anomalies as the statutory obligation of householders to inform local authorities of major improvements and repairs was widely disregarded. Moreover, other inconsistencies in the register were systematic, such as the higher pro rata valuations that were assigned to new buildings and to converted flats. Many of these properties were constructed by local authorities for letting to council tenants. Further anomalies exhibited geographical patterning consequent upon, for example, the pattern of inner-city gentrification that occurred throughout the 1980s (Smith and Williams, 1986) and the outcomes of local authority urban-renewal initiatives.

The capital valuations that are central to the council tax are intended to provide the basis for a defensible property-taxation system which is more relevant to the changed housing-market conditions of the late 20th century. As UK society has become more complex and the standards of living of the majority have increased, so market prices of houses in the mushrooming owner-occupied sector have come to reflect a range of physical, locational, and neighbourhood attributes which conspire to give each property a market exchange value. Council-tax valuations provide a mechanism for taxing these exchange values. Capital valuations are thus used as a unifying means of assigning relative values to properties, and although this likely facilitates valid measurements in areas dominated by owner-occupation, and also in areas of uniform construction type but mixed tenure, the assignment of individual values in areas dominated by rental tenures is more problematic.

Value assessments for the council tax were made during the second half of 1992 and the results are intended to represent valuations as at April 1991. The valuation process was, in practice, quite controversial in view of a number of factors: the brief time period that was available for carrying out valuations; the assumptions made concerning state of repair and availability for sale; the practice of inferring neighbouring property values by the use of nearby 'beacon' properties; and the reliance in most valuations upon external inspections of the front aspect alone. The debacle surrounding the community charge made it politically expedient that a new tax be put into operation within a short time period, and as a consequence ordinal-scale 'banded' values were used in order to provide a robust measure of tax liability. Successive bands span increasingly wide ranges of capital values. Different bands have been identified for England, Scotland, and Wales, and these are shown in table 1.

Tax liabilities arise out of the council tax in a different way to that of liabilities arising out of the rates. Under the rates regime tax liability was ascertained by applying a constant (yet variable between local authorities) rate 'poundage' figure to each rateable value. By contrast, under the council tax liability of properties in each

Table 1. Property values and council-tax bands in Great Britain.

Band	Ratio to standard charge	Property value (£1000)		
		England	Wales <sup>a</sup>	Scotland
A	6:9	< 40	< 30	< 27
B	7:9	40-52	30-39	27-35
C	8:9	52-68	39-51	35-45
D	9:9	68-88	51-66	45-58
E	11:9	88-120	66-90	58-80
F	13:9	120-160	90-120	80-106
G	15:9	160-320	120-240	106-212
H	18:9	>320	>240	>212

<sup>a</sup> The figures for Wales are relevant to the case study.

band is a fraction or a multiple of the standard (band D) charge, as is shown in table 1. This means that changes in (unrebated and undiscounted) tax liability may arise from changes in relative valuation (that is, the assignment of individual values within the overall distribution); from changes in the range and spacing of values within the distribution; and from the 'band-ratio' effect which will serve to dampen the impact of higher capital values upon council-tax liabilities.

Comparison of the local tax burden under the rates with that under the council tax is severely restricted by two major impediments. First, although the council-tax register is in the public domain insofar as individual enquiries are concerned, larger extracts are not available either in the form of individual records or as small-area information. This is in contrast to the pre-1990 domestic-rating lists, which were made available to a number of agencies for a variety of functions. Second, the two lists adopt rather different property-referencing conventions and neither is comprehensively georeferenced either through postcoding or through any other system. Comparative analysis of the two registers has thus been restricted to sparse geographical samples and/or particular housing-market segments [for example, Ingham (1993) considered a sample of owner-occupied properties; the Welsh Office (1994) provided broad all-tenure comparisons of capital values at the county scale] prior to our being allowed limited access to a substantial part of the draft valuation lists for Cardiff. From a methodological point of view, GIS provide the most convenient medium through which to analyse such data, yet our own experience in this regard has been that the linking of these as well as other diverse geographical data sets is far from straightforward and is a very time-consuming task (Martin et al, 1994).

### 3 The Cardiff case study

Our detailed case study concerns the so-called 'Inner Area' of Cardiff (figure 1, see over), which is an urban area comprising some 47 000 properties and is, in many respects, typical of an established urban area. It comprises a heterogeneous mix of construction types and the properties are predominantly, but not overwhelmingly, in the private sector. The area was developed rapidly in the later years of the 19th century and the early 20th century (Daunton, 1977), and like many inner-city areas it has since experienced conversion of larger houses into flats (Hamnett, 1987), infill development of purpose-built flats, and incursion and redevelopment of estates built by the local authority. During the late 1980s, some further redevelopment of sites with high-income owner-occupied housing has taken place. As such, it provides an ideal laboratory for investigating the changes that have accompanied successive property valuations and local taxation regimes (for details see Martin et al, 1992).

It is not our intention in this paper to dwell upon technical aspects of our research, although these can be summarised briefly as follows. We have developed a 'loosely coupled' GIS incorporating Arc/Info (ESRI Inc, Redlands, CA), a spreadsheet, and custom-written programs (Higgs et al, 1991). The map base for this system comprises 920 streets, 81 small areas devised for use with the 1989 CHCS (see figure 1), and the 1991 Census enumeration district boundaries, all of which were digitised in house. The principal attribute layers are individual rateable values and council-tax bands, plus information on property attributes and some household characteristics for the one-in-five stratified sample of private-sector dwellings that were visited for the 1989 CHCS. A total of 41 158 matches were achieved with the council-tax register which contained a total of 49 658 records, representing a 92.9% success rate at matching. Data are stored in a LOTUS 1-2-3 spreadsheet (Lotus Development Corporation, Cambridge, MA) and are linked to the digitised street network held in Arc/Info by the use of 7-figure codes derived from the rates register Unique Property

Reference Numbers (UPRNs). The data are exported from LOTUS as an ASCII file, and are then input into the tables module of Arc/Info, a template is defined and the ASCII file is imported into this. The 7-figure street code is thus the 'relational join' between this file and the digitised street network.

For purposes of the analysis carried out for this paper, we have attached data from the CHCS to the UPRNs by the use of the Joinitem facility in Arc/Info. This has been a further time-consuming and complex task, in which we have tried to match information pertaining to property age and type for the 7787 properties that comprise the CHCS sample. We have achieved 6811 matches—a success rate of 87.5%. Reasons for mismatches have included the following: changes in the definitions of properties had taken place between compilation of the two registers (for example, changes to subdivisions of houses in multiple occupation); changes in use arising through subdivision or amalgamation of hereditaments; and specific problems arising from the conventions used to label some street-corner properties. By the use of the resulting database, it is possible to compare council-tax and rating valuations for the overwhelming majority of all Inner Area council-tax valuations which have been successfully matched with the domestic-rates register. Additional sample information is available for the 6811 CHCS properties, and we feel that this matched subsample is likely to be representative of the private-sector sample-frame from which it was drawn in 1987.

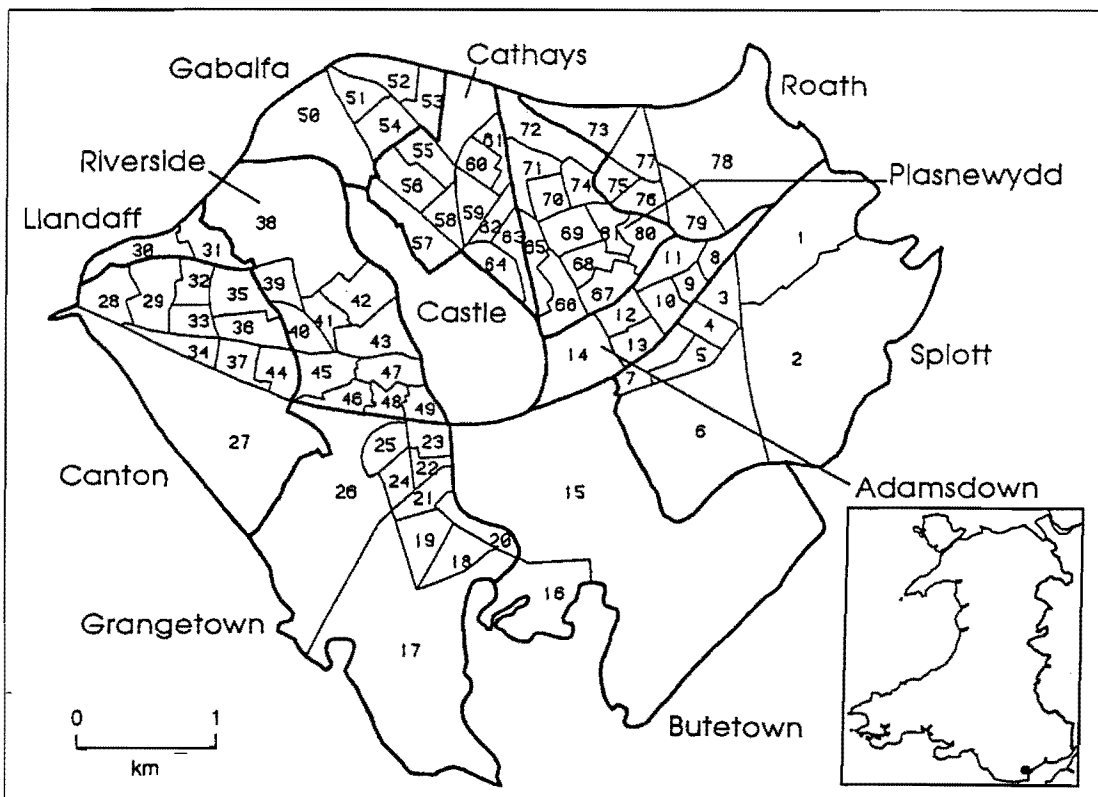


Figure 1. The Cardiff study area (comprising 12 whole or part communities and 81 Cardiff House Condition Survey areas).

#### 4 Capital valuations and rateable values compared

Table 2 provides a broad indication of the distribution of rateable values in the Inner Area vis-à-vis the cut points for the council tax: that is to say, it has been produced by ranking all of the rateable values and assigning cut points on the basis of numbers

of properties in each of the eight council-tax bands. The range of rateable values in the equivalent to bands D and F is rather smaller than those in each of bands A, B, C, E, and G, and the range in successive bands certainly does not increase in the manner of the capital valuations. The highest two bands do cover a wider range of rateable values, although in the case of band H the range is somewhat arbitrary because of the very few properties in the Inner Area that have extremely high rateable values. This aggregate analysis does not, however, give a detailed picture of the different distributions of values, and gives no indication of any reassignment of relative values within the overall distributions.

Table 2. Assignment of rateable-value cut points to rateable-value distribution.

Band	Number of properties in Inner Area	Bounding rateable values (£1000)	Rateable-value range
A	3 999	46–90	44
B	11 302	91–123	33
C	15 613	124–169	46
D	7 271	170–198	29
E	4 978	199–249	51
F	1 420	250–278	29
G	1 104	279–388	110
H	150	389–888	500

Figure 2 compares the cumulative distribution of rateable values [figure 2(a)] with the stepped nature of council-tax bands A–G [figure 2(b)]. Band H accounts for just 150 properties in Cardiff's Inner Area and there is no obvious means of imputing an upper limit to this open-ended category. Band H properties were therefore discarded from this part of the analysis. In order to make the two graphs more comparable, the 150 properties with the highest rateable values (which are not all band H properties, but which do include a very few properties with rateable values as high as 888) were also deleted from the analysis. The stepped nature of the cumulative rateable-value distribution in figure 2(a) indicates that assigned rateable values have a tendency to cluster around certain points within the overall distribution, although to all intents and purposes the rateable-value distribution is continuous whereas that of the council-tax bands is discrete. This may be compared with the distribution of properties between council-tax bands A–G, in which the widths of the

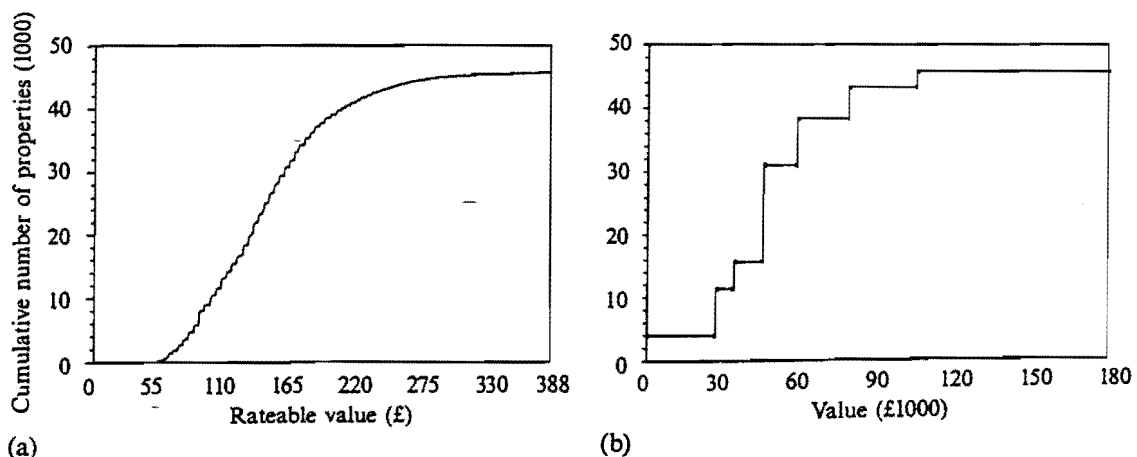


Figure 2. Comparison of cumulative distribution of (a) rateable values and (b) council-tax bands.

bands have been set in proportion to their limiting capital values. Both distributions indicate a right-hand tail of high-value properties, although that for the council tax has a stronger negative skew towards the lower value council-tax bands.

This shift in the distribution implies a shift in the relative values assigned to properties in Cardiff's Inner Area, although the precise nature of this shift cannot be gauged because figure 2 provides only a distribution between rather arbitrary minimum and maximum property values. In order to produce a rough comparison of the two distributions, we have attempted to calculate the total capital value of all properties within bands A–G in the Inner Area. This requires assumptions to be made, because the council-tax bands bound a wide range of values. We have assumed that all properties in bands B, C, D, E, F, and G have capital values at the midpoints of the bands, that is £34 500, £45 000, £58 500, £78 000, £105 000, and £180 000, respectively. Providing a realistic figure for band A is more problematic because the band is limited by zero, and most properties are likely to have values in the uppermost part of this band. The widths of bands B, C, and D are £9 000, £12 000, and £15 000, respectively, and on this basis we have assumed that most properties in band A are within £6 000 of its upper limit and are valued between £24 000 and £30 000 [the house-price survey conducted by Longley et al (1993) lends empirical support to this assertion]. The 'midpoint' of band A was therefore taken to be £27 000. We have left the 150 band H properties out of the analysis. We have also estimated comparable capital-value equivalents for the rateable values. The rateable values of all but the 150 highest value properties were summed across the entire Inner Area and the total was divided by the sum of the rateable values of these same properties. (The scaling factor is, in fact, that one unit of rateable value corresponds to a capital value of approximately £341.) Figure 3 shows how the total valuation figure for the entire Inner Area is broken down into banded capital valuations, in contrast to a comparable distribution of use values under the domestic rates.

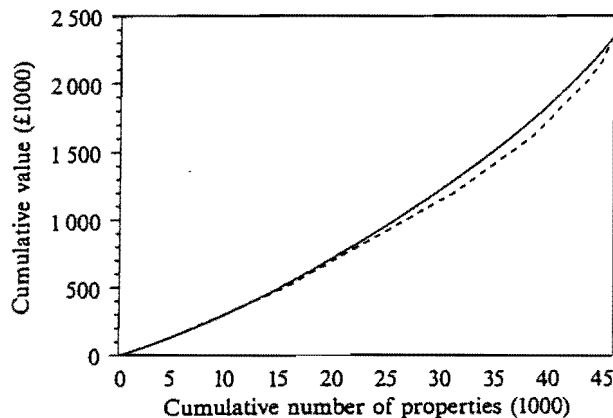


Figure 3. Cumulative distribution of Cardiff's property values under the rates (solid line) and the council tax (broken line).

Figure 3 shows quite remarkable uniformity between the two distributions. Figure 2 shows that the distribution of council-tax bands is more heavily skewed towards lower value properties than were rateable values, but figure 3 shows that a very similar *proportion* of cumulative value is held in the first 10 000 or so low-value properties under each valuation regime. Thereafter the two curves diverge, with the greatest discrepancy in the area at which band D properties are accommodated into the capital-value distribution. Overall, this figure does *not* suggest that there are vast differences in the distributions of value between the two measures, although the

highest council-tax-banded properties do constitute a greater share of value under the capital than under the rateable valuations. This suggests that any significant changes in valuation-based taxation arising out of the council tax will be attributable to the ratio of liabilities (table 1) and not to the valuation procedure per se.

Figure 3 exhibits very close correspondence between the two curves up until the limit of band B. However, this apparent similarity masks considerable differences within categories. In table 3 council-tax bands are compared with rateable-value categories, the limits of which are identified in the same way as for table 2 (categories 1–7). Only 39.4% of all properties (that is, the elements across the principal diagonal) appear in the same category of the two regimes. The median rateable-value band for band A properties is category 3 (rather than category 1), and more properties from the lowest rateable-value category have been assigned to band B than to band A. Thus, despite the near coincidence of the two curves in figure 3, there has clearly been considerable reassignment of relative values, especially among the lowest council-tax bands. Even allowing for misclassification of rateable values at the margins, 15.3% of all properties are misclassified by two or more categories.

Table 3. Comparison of numbers of properties (and percentages in parentheses) in the seven rateable-value categories and council-tax bands.

Rateable-value category (£1000)	Council-tax band							Total
	A	B	C	D	E	F	G and H	
46–90	688 (1.5)	2 172 (4.8)	1 640 (3.6)	42 (0.1)	42 (0.1)	5 (0.0)	1 (0.0)	4 590 (10.0)
91–123	1 081 (2.4)	4 373 (9.6)	4 844 (10.6)	379 (0.8)	80 (0.2)	13 (0.0)	6 (0.0)	10 776 (23.6)
124–169	1 775 (3.9)	3 820 (8.4)	6 733 (14.7)	3 323 (7.3)	712 (1.6)	38 (0.1)	11 (0.0)	16 412 (35.9)
170–198	326 (0.7)	792 (1.7)	2 018 (4.4)	2 274 (5.0)	1 199 (2.6)	76 (0.2)	31 (0.1)	6 716 (14.7)
199–249	72 (0.2)	89 (0.2)	323 (0.7)	1 130 (2.5)	2 514 (5.5)	444 (1.0)	99 (0.2)	4 671 (10.2)
250–278	29 (0.1)	26 (0.1)	39 (0.1)	91 (0.2)	390 (0.9)	679 (1.5)	209 (0.5)	1 463 (3.2)
>279	28 (0.1)	30 (0.1)	16 (0.0)	32 (0.1)	41 (0.1)	165 (0.4)	747 (1.6)	1 059 (2.3)
Total	3 999 (8.8)	11 302 (24.7)	15 613 (34.2)	7 271 (15.9)	4 978 (10.9)	1 420 (3.1)	1 104 (2.4)	45 687 (100.0)

Note: Bold figures denote consistency between rateable-value categories and council-tax bands. Italicised figures are misclassified by two or more categories.

Our GIS provides a convenient medium for exploring these changes because it permits visualisation of small aggregations, and these may be compared directly with other mapped sources such as 1991 Census information. In order to create a geographical disaggregation of the information contained in table 3, the individual rateable values within each council-tax band were transformed into z-scores. Individual properties which lay more than one standard deviation above or below the mean rateable value for each council-tax band were tagged. For display purposes a distinction was drawn between 'significant' and other residential streets, with the former comprising 20 or more properties: only 'significant' residential streets were displayed. Figure 4(a) illustrates those streets in which 25% or more properties have abnormally *low* rateable values relative to their council-tax band. This figure highlights streets characterised by smaller than average pre-World War I terraced property, in areas of the city which have become moderately fashionable (the largest concentration being in Cathays but with others in Canton, Adamsdown, Splott, and Roath). Some larger properties in areas to the west of the Inner Area are also highlighted (for example, Victoria Park), although these again are overwhelmingly drawn from the early-20th-century private-sector stock. Such property has apparently acquired higher relative



(a)



(b)

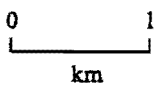
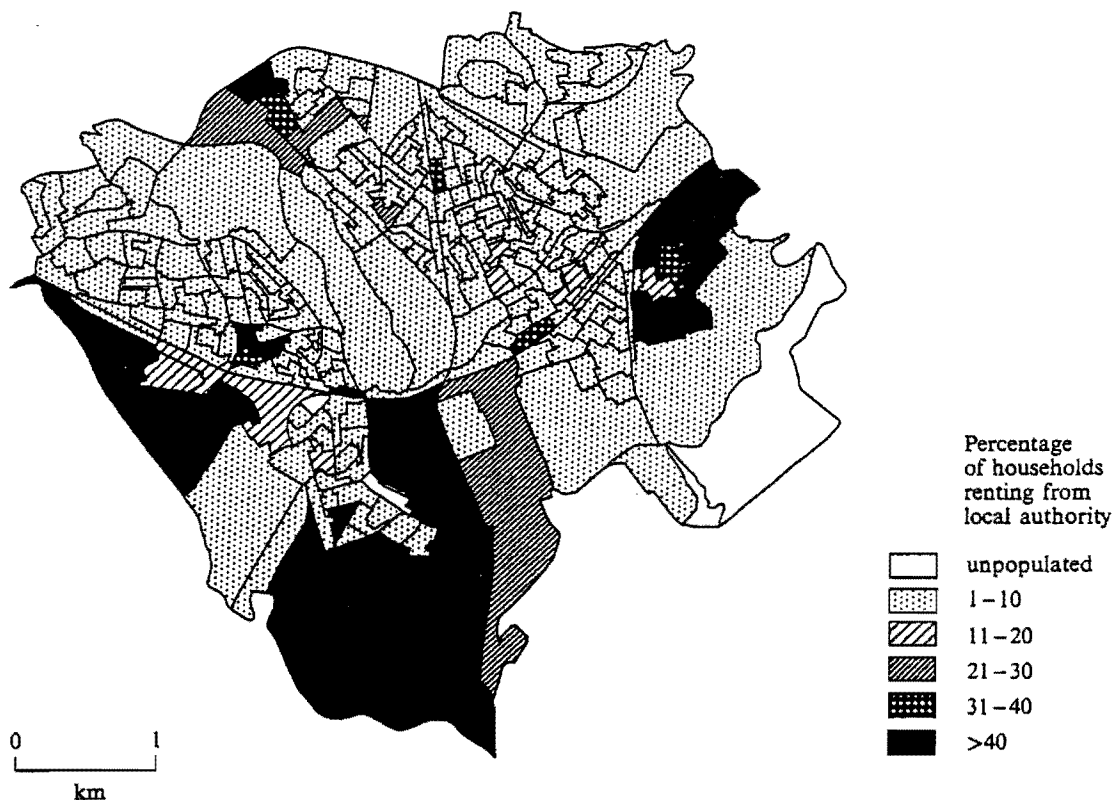


Figure 4. Streets registering (a) low rateable values and (b) high rateable values relative to council-tax bands.

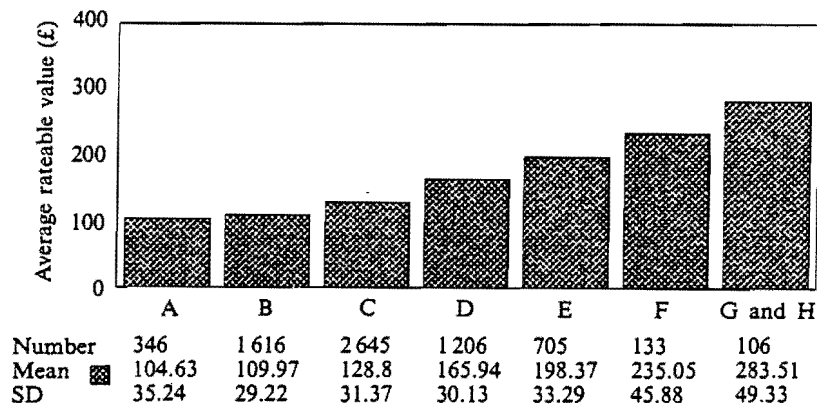
values following the change from use to exchange value as the basis of property valuation. Figure 4(b) depicts those 'significant' streets in which 25% or more properties have abnormally *high* rateable values relative to their council-tax bands. There are fewer of these streets (as would be expected given the distribution shown in figure 2), suggesting that 'overrated' properties are more geographically dispersed throughout the Inner Area. This is consistent with the view that additions and changes to the rates register, arising through new development, infill activity, improvement, and change of use, have disproportionately been those which attracted abnormally high rateable values, and that small-scale infill purpose-built flats attracted high rateable values. The streets which do stand out, however, fall into two categories. In the first they are disproportionately the long arterial roads which were developed with large properties, many of which have since been subdivided into flats and have been rerated as such. The second category comprises concentrations of properties which were constructed by the local authority—mainly in Gabalfa and Splott. The correspondence between local authority construction and high valuations under the domestic rates can be seen with reference to figure 5, which shows the distribution of property owned by the local authority from the 1991 Census Small Area Statistics. The correspondence between local-authority-built housing and high rateable values is still apparent, even given that figure 5 depicts the pattern of local-authority-owned housing after twelve years of intense privatisation under the 'right to buy' policy of successive Conservative central governments.

Further evidence of systematic discrepancies may be gathered by reference to the linked Cardiff House Condition Survey, which allows other property attributes and household characteristics to be added into the analysis. It is not possible to say anything directly about the public sector of the housing market, because the

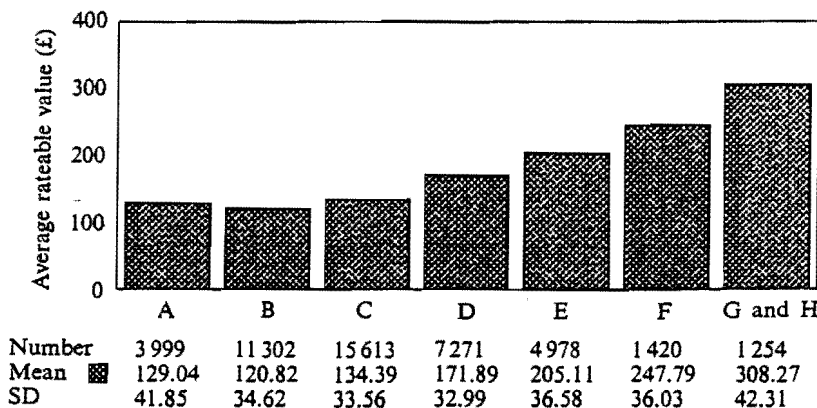


**Figure 5.** The distribution of households renting property from the local authority in the study area (source: 1991 Census Small Area Statistics).

register sample which was used for the CHCS was drawn entirely from the private sectors of the housing market. However, this stratified one-in-five sample of private-sector housing is representative of all private housing as at 1987, and thus it is possible for us to infer the characteristics of the public sector by comparison between the private-sector sample and the complete list of (all tenure) properties. Such comparison may be blurred slightly by the levels and patterns of pre-1987 council-house sales and of post-1987 private-sector constructions in the study area. Figure 6 illustrates the average rateable values of properties in each of the eight council tax bands (bands G and H have been amalgamated because of the small numbers of properties in these two bands). Figure 6(a) illustrates mean rateable values of the (private sector) Cardiff House Condition Survey sample, and shows how the mean value of each successive band of properties increases, providing a measure of overall consistency between the two valuation procedures. However, this provides a representative picture only for private-sector properties built before the CHCS sample was drawn and uses a 1987 version of the rates register. Figure 6(b) presents the distribution arising out of the comparison of the (all tenure) draft council-tax valuation list with the 1990 version of the entire rates register for the study area. This highlights a major anomaly in that, for all properties of all tenures in the Inner Area, the mean rateable value for band A properties is above that for band B properties. This arises primarily because of the inclusion of local-authority-built properties into the calculation.



(a)



(b)

Council-tax band

**Figure 6.** Average rateable value by council tax band: (a) Cardiff House Condition Survey sample and (b) entire Inner Area, excluding properties with a rateable value of less than £45 or more than £2000 (source: rateable values, CHS, and council-tax valuation list).

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Smaller differences exist within each of the other categories, reflecting (in the case of the lower bands) the inclusion of local-authority-constructed properties and (in the case of the upper bands) the effects of post-1987 private-sector construction.

Tenure at construction therefore explains a considerable amount of the reassignment of relative values, and our GIS enables other interstreet comparisons to be made. Other changes are likely to reflect attributes of properties which are not necessarily shared by their neighbours (such as construction type, age, etc). We have considered the effects of some of these, both upon valuation and upon attendant taxation implications. To avoid repetition, we will consider these with regard to their implications for taxation, to which we now turn.

### **5 The changing geography of local taxation**

Thus far our focus has been upon differences in relative property valuations, as encapsulated in two conceptually and temporally separate valuation procedures. A second, alternative, focus for the comparison is upon the implications of the two valuations for apportioning the burden of local taxation. Hills and Sutherland (1991) have made the important observation that the council tax is likely to be regressive, because successive higher bands are broader in terms of capital value, and because the fraction or multiple of the standard (band D) charge bears no constant correspondence with property value. However, we are not aware of any work which has attempted to verify whether this state of affairs is a recent innovation, that is, whether or not the domestic rates were also regressive in similar or different ways. We have established, in section 4, that any new-found regressiveness is not a consequence of the valuations per se. In seeking to fill this gap in the literature, our focus is restricted to the reassignments and reallocations in the local tax burden which arise out of the different property valuations for the rates and for the council tax.

Our database is not rich enough to replicate Hills and Sutherland's (1991) simulation of eligibility for rebates, discounts, and exemptions from local taxes. This does inevitably restrict the use of our analysis—for example, figure 7, derived from 1991 Census data, shows that the distribution of single-person households across the study area is far from even. What follows should, as such, be viewed as complementing aspatial analyses.

We have adopted the following accounting procedure. First, a notional total council-tax yield (assuming nil single-person rebates, 100% collection rates, and no household reductions or exemptions) for the Inner Area of Cardiff has been calculated by use of the actual tax payable for each band in 1993/94. Second, this yield has been divided by the total rateable value of all domestic properties in the Inner Area, thus yielding a notional rate 'poundage' which would have been necessary under the rates in order to raise the same Inner Area revenue. Third, this poundage has been applied to each individual rateable value in order to yield a notional 1993/94 rates bill for each property in the study area. Thus our comparison also gives appropriate estimates of the current monetary gain or loss experienced by the residents of every property. This approach is simplistic because of the omission of rebates etc (although not council-tax transitional relief, because there is no transitional-relief system in effect in Wales), and is also bound by the assumption that the Inner Area share of total City revenues is the same under the council tax as was the case under the rates. Our previous analysis (Martin et al, 1992) suggested that the initial change from the rates to the community charge resulted in an increase in the proportion of City revenue raised in the Inner Area from 35.7% in 1989/90 to 39.5% in 1990/91. For the present study we have calculated the comparable Inner-Area share of Cardiff's local revenue base under the council tax to be 34.3%. Thus the Inner-Area share



Figure 7. Distribution of single-person households in Cardiff's Inner Area (source: 1991 Census Small Area Statistics).

of local revenue raising is likely to be approximately 1.4% less under the council tax than under the rates. We have not built this figure into our disaggregate comparisons as it is likely to be within the margin of error, especially given that single-person household discounts under the council tax have not been taken into account. The strength of this approach is that it enables a direct and disaggregate comparison of values attributable to *property* as opposed to the socioeconomic geography of the study area.

Figure 8 shows the street-scale pattern of changed tax contributions under the assumptions outlined above: figure 8(a) shows the streets in which the occupants of properties have registered the highest mean gains, and figure 8(b) shows the streets in which the occupants of properties have experienced the greatest mean losses. These maps show a similar pattern to that depicted in figure 4, although it is different in detail because the ratios separating the council-tax liabilities of successive bands are different to the ratios separating the corresponding mean capital valuations. It suggests that the areas of the city which benefit the most are the high-status areas of Roath and Llandaff.

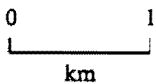
Once again, the most profound change in relative values is that about the division between local-authority-built and private stock. Figure 9 plots the cumulative distribution of Cardiff's tax burden under the rates and under the council tax. The gradient of the rates curve increases more rapidly than does that of the council tax, confirming that the relative share of the local tax burden borne by residents of high-capital-value properties leaves them generally better off than they were under the rates. Figure 10 illustrates the magnitude of this gain by comparing the interband distribution of gain and loss for the entire study area with that of the systematic one-in-five sample of the private stock. Our calculations suggest that in 1993/94 band A property has, on average, incurred £32.33 *less* tax under the council tax than under the rates,



(a)



(b)



**Figure 8.** Streets showing greatest mean 'gain' (a) or 'loss' (b) for occupants following the change from the rates to the council tax

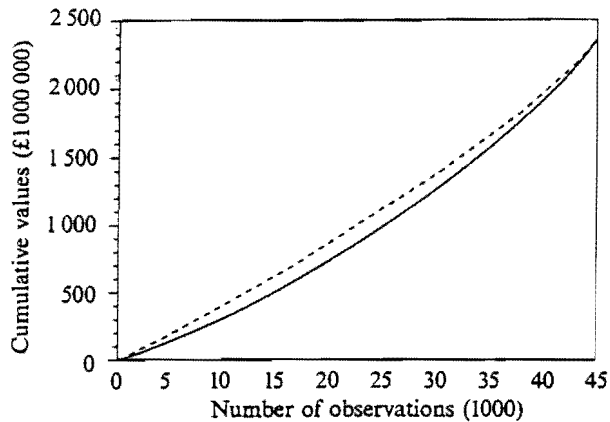
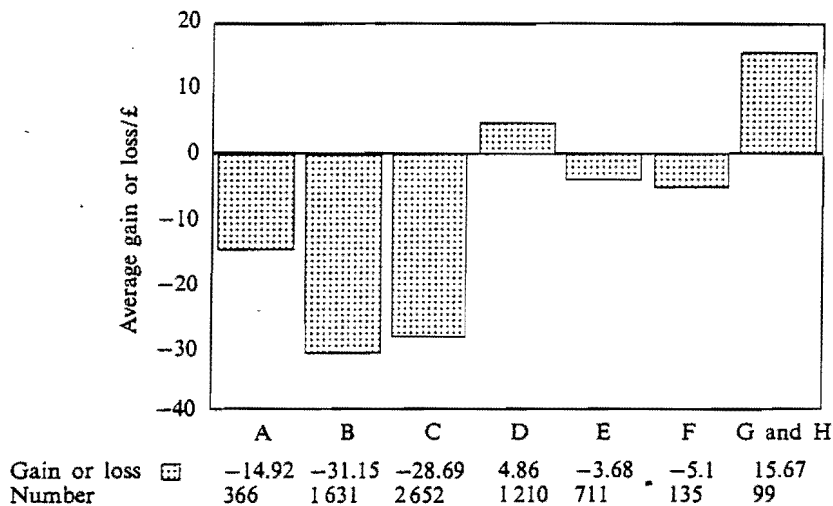
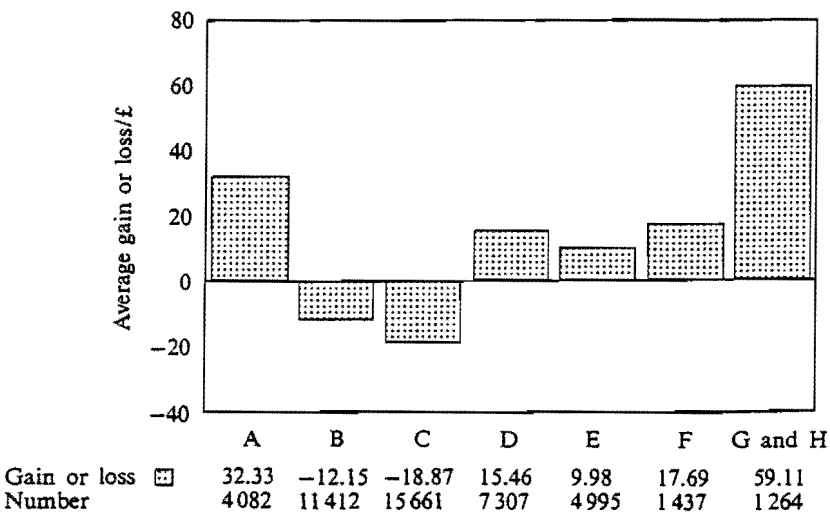


Figure 9. Cumulative distribution of Inner Cardiff's local tax burden under the rates (solid line) and the council tax (broken line)



(a)



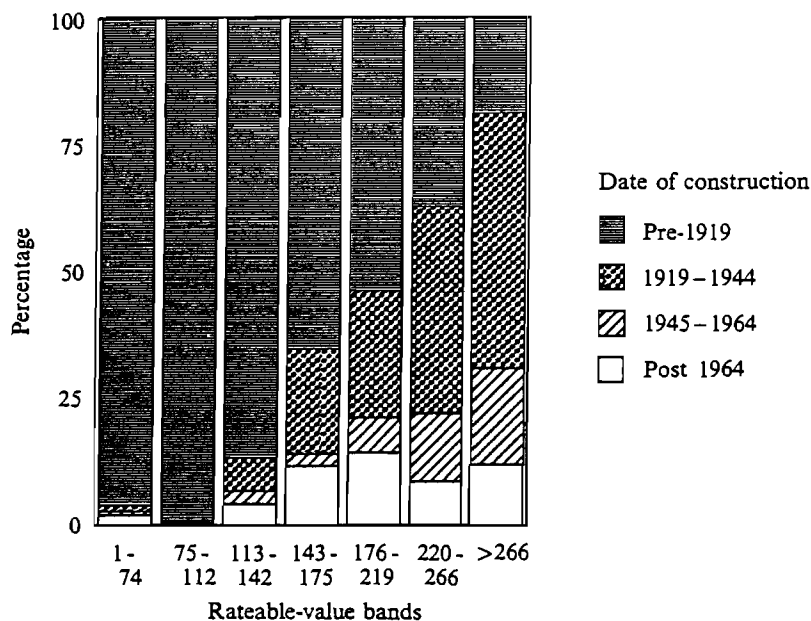
(b)

Council-tax band

Figure 10. Average financial gains or losses of householders from the transition to council tax in the Inner Area: (a) Cardiff House Condition Survey sample; (b) all properties [source: CHCS (6811) rateable values and council tax register (46158)].

and that when local authority rented properties are stripped out the remaining private-sector properties actually pay £14.92 *more* than under the rates. A similar, though more muted, effect is discernible across the other bands.<sup>(1)</sup> To the best of our knowledge, this effect has attracted no attention in the literature, and is likely to cast some doubt upon prognoses of the unequivocal regressive nature of the council tax within the below-average bands. In short, some of the most extensive areas of the study area in which householders have gained from the changes are local authority estates, where the rates system ascribed high use values to local authority properties, yet the stigma associated with the now partially privatised estates during the 1990s leads them to have low exchange values in the owner-occupied market.

Our linked-sample database allows us to identify some key attributes to privately owned properties that are associated with unusually high gains or losses. Figure 11 is based upon a subsample of the CHCS survey for which date of construction was known, and shows that the privately-owned properties with the lowest rateable values are overwhelmingly pre-1919 properties. Other graphs and tabulations of the private-sector sample (not shown here) demonstrate that nearly 80% of pre-1919 properties become liable for increased taxation under the council tax, whereas the percentages for property built in 1919–44, 1945–64, and post-1964 are 19.3%, 31.6% (of a small sample), and 12.0%, respectively. This suggests a shift effect, with pre-1919 properties being those that enjoyed low historical rateable values which are not mirrored in the capital values that they can presently command.



**Figure 11.** The distribution of rateable values by date of construction—Cardiff House Condition Survey sample (source: rates register, CHCS)

Figure 12 highlights some key characteristics both of the council tax and of the rating procedures with respect to property type (where this is known for the CHCS sample), although it should also be noted that some property types (especially recently converted flats, houses in multiple occupation, and some street-corner properties) may be underrepresented because of problems in matching the rates and council tax registers (see section 3 above). The anomalous and high rateable values

<sup>(1)</sup> In the case of the highest bands, this effect may be attributable to a low sampling fraction because the CHCS sample frame predated late-1980s private-sector infill development.

assigned to purpose-built flats are widely recognised, and figure 12 shows that such properties now attract a lower share of the unrebated revenue burden. The converse is true of converted flats, however, suggesting perhaps that the total rateable values of such properties summed to a rateable value which was comparable with the rateable value of the entire building, whereas in capital-value terms the total for the flats is rather higher. The net gains of detached and semidetached properties presumably reflect the high rateable values of such properties on an open-ended scale in comparison with the more regressive effects of the highest council-tax bands. A final interesting phenomenon is the generally higher gains of end-of-terrace residents relative to those of mid-terraces: this may reflect the relative imprecision of the council-tax valuation procedure, which would be more likely to assign end-of-terrace properties to the same bands as mid-terrace properties on the basis of a 'beacon' value.

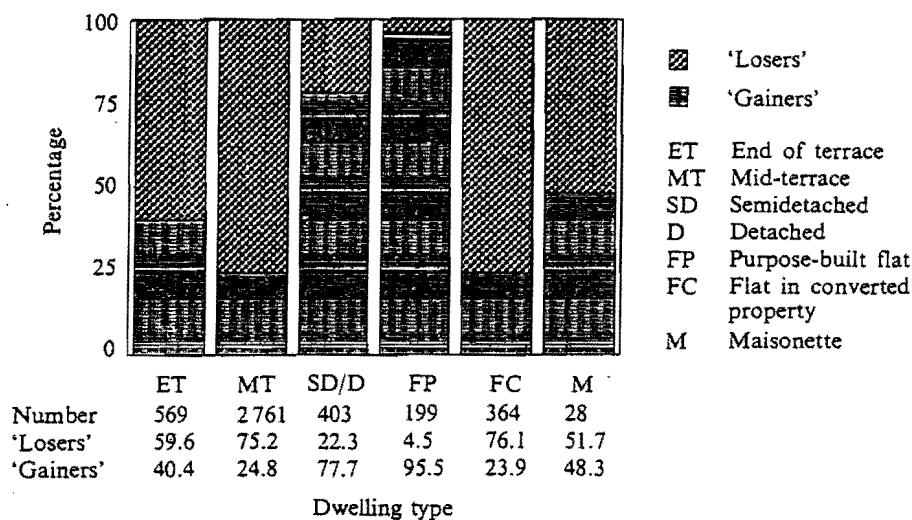


Figure 12. 'Gainers' and 'losers' under the council tax by dwelling type for Cardiff House-Condition Survey sample (source: rates register, council-tax register, CHCS).

## 6 Conclusions

Property valuation is an imprecise geographical science, and comparison of council-tax valuations and rateable values is fraught with a number of problems. First and foremost, values are not strictly 'comparable'—rateable valuations being grounded in the implicit assumption of a universal (private-sector) rental market and council-tax valuations presuming that all property is notionally available for sale. Rateable values constitute a continuous and open-ended distribution, whereas council-tax valuations are ordered categories. At a practical level, the data sets do not share a common and consistent referencing system, geographical or otherwise, and the council-tax register is not in the public domain for most research purposes. Nevertheless, we contend that our GIS provides a coherent and comprehensive framework for investigating the patterns of reassignment of relative property values over the period spanning the last domestic-rates revaluation and the release of the draft council-tax register.

Relative changes in value in the built environment are of academic interest to geographers and urban historians, but they are of immediate and practical consequence to households responsible for paying local taxes. Local taxation in Britain over the last five years has been in a state of flux, having lurched from a predominantly property-based means of taxation under the rates, to an emphasis upon personal taxation under the community charge, and back again to mainly property-based

taxation under the council tax. The preceding empirical analysis has identified two reasons why households may find themselves paying different shares of the local revenue burden. First, despite only very modest changes in the overall distribution of property values, very considerable reassignment has taken place within the distribution of values. Second, the linkage between property value and tax liability is different under the council tax from that under the rates. In previous studies researchers have recognised the latter, yet have ignored the former and have paid scant regard to the geographies of either. It is our contention that until the geographical patterns of reassignment of relative property valuations are understood, it is misleading to suggest that the council tax is more 'regressive' than its domestic-rates forbear. Our Cardiff study suggests that the scale of such reassignment may be more than sufficient, for example, to offset the 'tilting' and 'gearing' (Hills and Sutherland, 1991) effects of the banded liabilities for council tax. In our view, GIS has proven to be an appropriate medium through which to assess these changes, because they are inherently geographical in nature.

Our case-study analysis reveals that a distinct geography to the pattern of gain and loss has developed with the demise of the domestic-rates system and its eventual replacement with the council tax. Investigation of this geography reveals some hitherto-undiscovered artifacts of the change. Specifically, considerable reassignment of relative property values has taken place, with the residents of modest owner-occupied properties built before World War I being the main losers, and the residents of present or former local authority property being the greatest gainers. This tenure-based reassignment of the revenue burden constitutes a profound and likely far-reaching shift which has gone largely unnoticed in previous studies. Some council tenants pay rents which are inclusive of council-tax payments, and these changes should be taken into account in the calculation of aggregate figures pertaining to rent increases in this sector [see Joseph Rowntree Foundation (1994) for a discussion of the phased withdrawal of subsidy to this sector]. The built environment is also the cause of reassignments between residents of purpose-built versus converted flats, and the level of imprecision inherent in the capital-valuation procedure may have benefitted residents of properties which represent minor upgrades of their neighbours.

Although of far-reaching importance, these findings are in a sense only preliminary for we have not discussed the detailed interactions between dwelling attributes and household characteristics which may generate geographical changes in the actual revenue burden. From a built-environment perspective, this research also heralds a more detailed investigation of the changes in relative values of the built environment over time. These topics should be the focus of future research.

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