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**SOCIAL EXCLUSION AND LACK OF ACCESS TO SERVICES:
EVIDENCE FROM THE 1999 PSE SURVEY OF BRITAIN**

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Preface

This Working Paper arose from the *1999 Poverty and Social Exclusion Survey of Britain* funded by the Joseph Rowntree Foundation. The *1999 PSE Survey of Britain* is the most comprehensive and scientifically rigorous survey of its kind ever undertaken. It provides unparalleled detail about deprivation and exclusion among the British population at the close of the twentieth century. It uses a particularly powerful scientific approach to measuring poverty which:

- incorporates the views of members of the public, rather than judgments by social scientists, about what are the necessities of life in modern Britain
- calculates the levels of deprivation that constitutes poverty using scientific methods rather than arbitrary decisions.

The *1999 PSE Survey of Britain* is also the first national study to attempt to measure social exclusion, and to introduce a methodology for poverty and social exclusion which is internationally comparable. Three data sets were used:

- The *1998-9 General Household Survey* (GHS) provided data on the socio-economic circumstances of the respondents, including their incomes
- The *June 1999 ONS Omnibus Survey* included questions designed to establish from a sample of the general population what items and activities they consider to be necessities.
- A follow-up survey of a sub-sample of respondents to the 1998-9 GHS were interviewed in late 1999 to establish how many lacked items identified as necessities, and also to collect other information on poverty and social exclusion.

Further details about the *1999 Poverty and Social Exclusion Survey of Britain* are available at: http://www.bris.ac.uk/poverty/pse/

1   INTRODUCTION

This paper considers the use and adequacy of local services. It is largely based on data from the 1999 Poverty and Social Exclusion (PSE) Survey and draws on previous analysis of the 1990 Breadline Britain Survey undertaken by Bramley (1997) in order to assess trends over time. The main aim of this research is to investigate whether local services are an effective mechanism of redistribution in favour of the 'poor' and deprived, or whether these services are used more by the better off. In doing so, we are interested in examining use of and attitudes towards local services and the relationship between service exclusion and other aspects of social exclusion. The paper address the following specific questions:

• What is the distributional profile of local public services in terms of individual households' class, income and deprivation status in 1999? Are certain services used more by the poor or by the better off?

• Which local services are regarded as essential by most households? Are the 'poor' more or less likely to regard particular services as essential?

• Has the distributional profile of service usage changed since 1990? What factors might account for these changes? Is this service exclusion for the 'poor' becoming greater or diminishing?

• How does the distributional profile of usage for local private services compare with that for local public services?

• For which services are constraints of access, inadequacy or affordability most significant? Which types of households are more affected by these constraints?

• How important are class, income or deprivation in exploring service usage, along-side other demographic and socio-economic factors?

• How far does living in an urban or rural area affect use of local services? Are there distinguishable regional differences in the case of local service usage? Is it possible to detect any influence of local authority expenditure levels on service usage?

• To what extent the 'service excluded' population are also excluded from other aspects of life, such as work and social activities.

The PSE survey asks well-structured questions on service usage which can (for some services) be compared with the 1990 Breadline Britain survey. These include:

• Whether the respondent rates a service as essential and should be available, or whether the service is desirable but not essential.

• Whether the respondent uses any of the listed services and whether they are adequate or inadequate. For the services that are not used, the respondent is asked to give the reason for not using. Possible responses include 'don't want/not relevant', 'unavailable or unsuitable' and 'can't afford'.
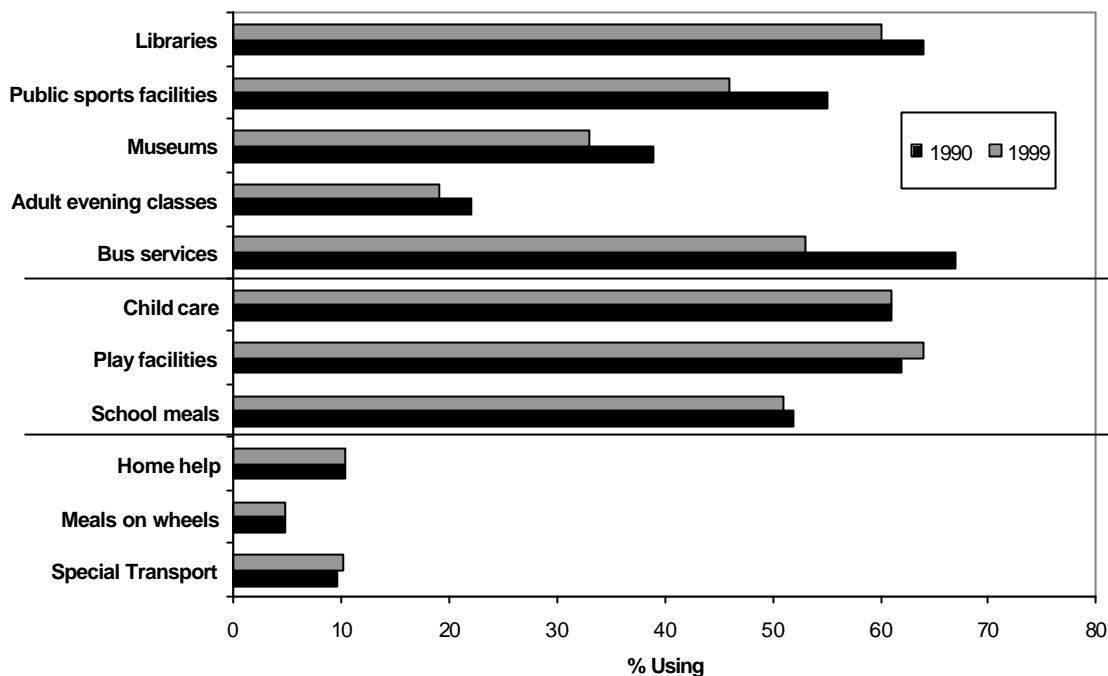
The range of services included in the 1999 PSE survey has been extended from the original 11 local authority services included in the 1990 Breadline Britain survey and now includes a number of private local services and a wider range of public services. The provision of many local authority services are subject to significant local discretion, whilst the private services will be subject to market forces and a variety of external demand factors. Some of these services are available to the population as a whole, whilst others are targeted towards particular groups and rationed on the basis of some method of needs assessment.

2   DISTRIBUTIONAL PROFILE OF LOCAL SERVICE USAGE

Access to local services may affect and be affected by people's standard of living. Whilst good local services can improve people's standard of living, the importance of local services may increase or decrease according to people's level of income. Some services are deliberately targeted at poorer individuals or groups, whether or not they are formally means tested. For 'normal goods', people tend to demand more of them as their incomes increase. However, in some cases they will satisfy this demand through private providers. Income may also be indirectly related to usage and social factors. For example, someone lacking in social networks may rely more on local services for support and a means of participating in the community.

Figure 1 shows the average usage rate for the 11 services that were also included in the 1990 Breadline Britain survey. Calculation of the usage rate is based on all relevant households and includes those who used the service but classified it as inadequate, with the denominator being all relevant households including those answering 'don't know'. The first group of services are open to all household types and in all cases the usage rate has declined in 1999, compared with 1990. Declining usage is particularly apparent for bus services and public sports facilities and this may be a function of increases in charges, reduced access or increased private sector substitution. Usage rates have remained fairly consistent over time for the services targeted at both households with children and households with elderly/disabled members.

Figure 1   Proportion of Households Using Service, 1990 and 1999.

Source: Calculated from 1990 Breadline Britain Survey and 1999 PSE Survey (final data)

Figure 2 illustrates the results of a similar exercise as shown in Figure 1, although these 17 services were only included in the 1999 PSE survey and hence comparisons over time cannot be made. In addition, many of these services are usually private businesses and open to all households, with the exception of public transport for children (school bus) and youth clubs, which are targeted at households with children. The top 5 services (doctor, post office, chemist, supermarket, bank/building society) are used almost universally by all households. The next 5 services (dentist, hospital, optician, corner shop, petrol station) are also used by most households, whilst services such as places of worship and public/community halls are only used by around a third of households.

Figure 2   Proportion of Households Using Service, 1999.
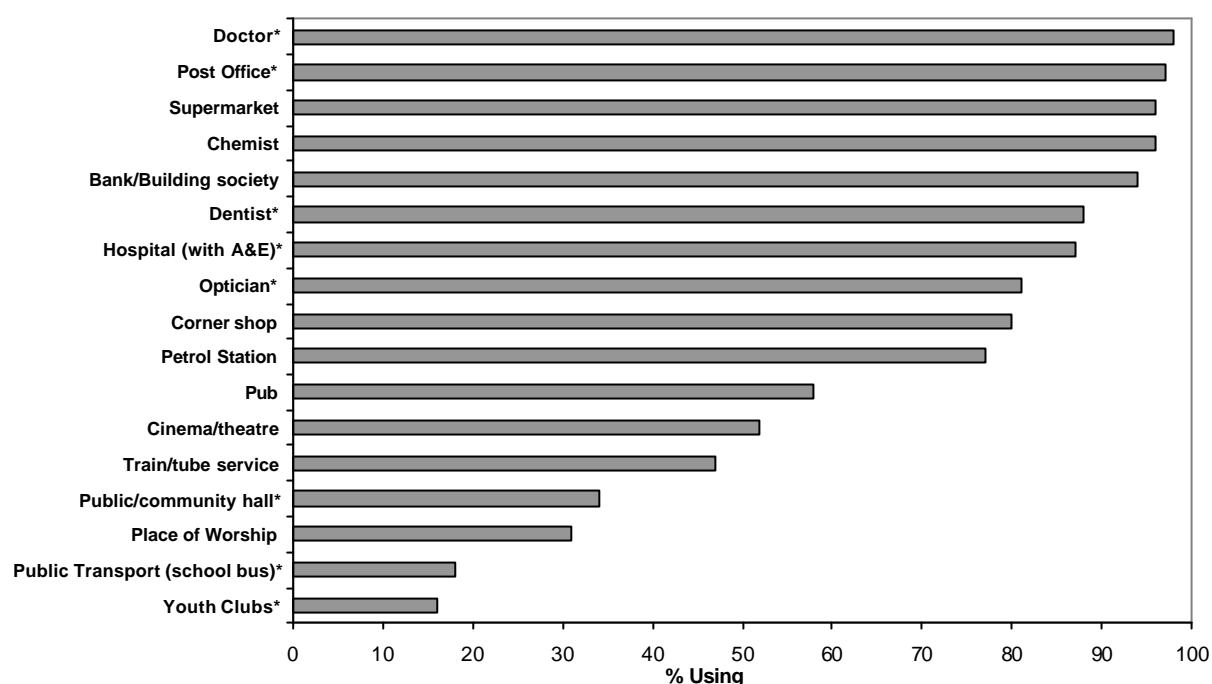
Source: Calculated from 1999 PSE Survey (final data)
Note: * Public services usually provided by local councils or other public bodies.

The central question is whether service usage is distributed evenly, or more towards the poor or more affluent. Here usage rates of the range of public and private services are tabulated by household types against a number of measures of socio-economic (dis)advantage. It is important to take household type into account here, as many local services are either of greater relevance to certain types of households or are specifically targeted at particular groups such as the elderly or households with school-aged children. Important redistributions affected by local services may be demographic (or horizontal), between different age groups and household types, rather than between different income or class groups (vertical). For example, the confounding effects of demography may mean that simple comparisons of usage rates by income are misleading. Cross-tabulating by household type enables us to observe different socio-economic profiles within different demographic groups and also to perform a general standardisation procedure.

Table 1 summarises the results of this procedure for the 11 local public services identified in both the 1990 Breadline Britain Survey and the 1999 PSE survey. Three socio-economic measures are used: social (occupational) class; equivalent income (adjusted for household structure) and deprivation. Deprivation is defined in the 1999 PSE survey as lacking 2 or more socially perceived necessities, whereas the same measure in the 1990 Breadline Britain survey was defined as lacking 3 or more socially perceived necessities. In each case, Table 1 shows the ratio of usage by the top (most advantaged) group to usage by the bottom (least advantaged) group, after standardisation for household type.

Apart from bus services, a 'pro-rich' bias has remained consistent for all of this group of services over the two surveys, and in many cases this bias has increased somewhat in 1999. These services (apart from buses) are essentially demand–led leisure and information services and represent economic goods, which 'better off' people are more likely to use. The pro-middle class pattern exists across the three measures of (dis)advantage used. Social class is particularly important in the case of museums and galleries and adult evening classes, with an increase in the pro-rich bias in 1999. In the case of museums and galleries, the importance of income has increased in 1999 and this may reflect the introduction of charges in the mid 1990s. The 'poor' make significantly less use of these 'leisure' services, with an increase in this disparity in 1999, except in the case of libraries. By contrast, in both 1990 and 1999, bus services remain consistently pro-poor across all three measures. More detailed analysis of the data reveals that bus usage peaks amongst deprived lone parent households and low income couple households with children. Furthermore, only 60% of those using bus services in 1999 were employed, and 10% were unemployed/unable to work.

Services used primarily by households with children show a more mixed picture (Table 1). While usage rates for the three services have remained consistent over time, there has been a shift towards a pro-rich bias in relation to class. For child care services (nurseries, playgroups, mother and toddler groups and after school clubs) the distribution has shifted towards higher income households in 1999. In contrast, there has been a shift towards lower incomes, but also higher class and less deprived households in the usage of children's play facilities. School meals display a more consistent pro-poor bias, although there was a shift towards higher class in 1999.

Table 1   Standardised Usage Ratios by Class, Equivalent Income and Deprivation for Public Local Services, 1990 and 1999.

Service	Usage ratio by Class		Usage ratios Equivalent Income **		Usage ratio by Deprivation	
	1990	1999	1990	1999	1990	1999
Libraries	1.40	1.42	0.95	1.11	1.36	1.26
Public Sports facilities	1.34	1.33	1.39	1.41	1.19	1.44
Museums & galleries	2.03	2.09	1.60	2.22	1.56	1.98
Adult Evening Classes	1.88	2.80	1.29	1.11	1.52	1.76
Bus Service	0.77	0.77	0.77	0.75	0.85	0.84
Child care*	0.92	1.18	0.75	1.94	1.26	1.12
Play Facilities	0.93	1.46	0.80	0.47	1.31	1.56
School Meals	0.70	1.24	0.71	0.81	0.79	0.86
Home Help	0.62	0.61	0.93	1.37	0.84	1.15
Meals on Wheels	0.32	0.61	0.00	0.00	0.57	0.73
Special Transport	0.29	0.23	0.06	0.44	0.94	0.33

Source: Calculated from 1990 Breadline Britain Survey and 1999 Poverty and Social Exclusion Survey (final data).
Note: Usage ratios are the ratio between the usage rate for the least disadvantaged group and that for the most disadvantaged group, with four class groups, five income groups and two deprivation groups. For the first of these services, the relevant population is all households; for the second group households with children under five or school age; for the third group all elderly plus households with one or more disabled members.
* includes nurseries, playgroups, mother and toddler groups and after school clubs
** Equivalised weekly household income, which has been adjusted to account for variation in household size and composition. Income is divided by scales which vary according to the number of adults and the number and age of dependants in the household.

The final group of services are targeted mainly towards the elderly and disabled. Meals on wheels and special transport consistently show a pro-poor bias across all three measures in both 1990 and 1999, although special transport is even more likely to be used by the 'multiply deprived' in 1999. In the case of home help the bias has shifted towards higher income and less deprived households in 1999.

The services in Table 2 have been ranked by usage rate and, as was shown in Figure 2, the top 5 services are used by virtually all households and therefore show a fairly neutral ratio across all three measures. The exception is banks/building societies, which as expected, show a slight bias in favour of higher income households. A 'pro-rich' bias, particularly in terms of income, is more apparent in services such as petrol stations, cinema/theatres, pubs, train/tube services and places of worship and in most cases, this reflects the importance of the ability to pay for these services. Although only a third of households report using a public/community hall or place of worship, these services display a pro-rich bias on all measures, particularly in relation to class. This may have some wider implications for strategies of community involvement in so far as these indicators are proxies for civic participation.

Table 2   Standardised Usage Ratios by Class, Equivalent Income and Deprivation for Selected Public and Private Local Services, 1999 (ranked by usage rate)

Service	Usage Ratio by Class	Usage ratios equivalent income**	Usage ratio by deprivation
Doctor*	1.00	0.98	1.00
Post Office*	1.02	1.00	0.99
Chemist	1.01	1.03	1.02
Supermarket	1.06	1.06	1.02
Bank/Building society	1.10	1.17	1.10
Dentist*	1.03	1.10	1.04
Hospital (with A&E)*	1.06	0.94	1.02
Optician*	1.05	1.07	1.05
Corner shop	1.11	0.98	0.95
Petrol Station	1.46	1.76	1.34
Pub	1.07	1.38	1.31
Cinema/theatre	1.69	2.16	1.61
Train/tube service	1.56	1.38	1.10
Public/community hall*	1.56	1.38	1.46
Place of Worship	1.86	1.32	1.27
Public Transport (school bus)*	1.35	0.35	1.10
Youth Clubs*	1.50	0.45	1.24

Source: Calculated from 1999 Poverty and Social Exclusion Survey (final data).
Note: Usage ratios are the ratio between the usage rate for the least disadvantaged group and that for the most disadvantaged group, with four class groups, five income groups and two deprivation groups. For the first of these services, the relevant population is all households; for the second group households with children under five or school age.
*Public services usually provided by local councils or other public bodies.
** Equivalised weekly household income.

The final two services are used mainly by households with children. Both public transport (school bus) and youth clubs display a pro-rich bias on class and to a lesser extent deprivation, but a strong pro-poor bias on income. Only corner shops and post offices show a slight bias in favour of the deprived, suggesting that these more 'local' services are important for this group.

3   HOW ESSENTIAL ARE LOCAL SERVICES?

Both the 1990 Breadline Britain survey and the 1999 PSE survey asked respondents to indicate which of the selected services they

believed to be essential, and should be available or whether they are desirable, but not essential. Figure 3 shows the proportion of respondents rating the services as essential in both the 1990 and 1999 surveys. While the proportion of respondents rating the services as essential is very high, this proportion has declined in all cases in 1999. It would appear that this reflects the decline in usage of mainstream services (shown in Table 1). This decline is particularly evident for adult evening classes, museums and galleries and services targeted at households with children and elderly/disabled (Figure 3). In contrast, the proportion regarding bus services as essential has remained high in both surveys (more than 90%). This suggests that declining usage of these services is not necessarily due to reduced availability or affordability, but because fewer people see them as less relevant to their needs. One reason may be that more alternative, private forms of provision or substitute services/activities have developed in this period.

Figure 3   Proportion of Respondents Regarding Selected Local Services as Essential, 1990 and 1999 (ranked according to 1999
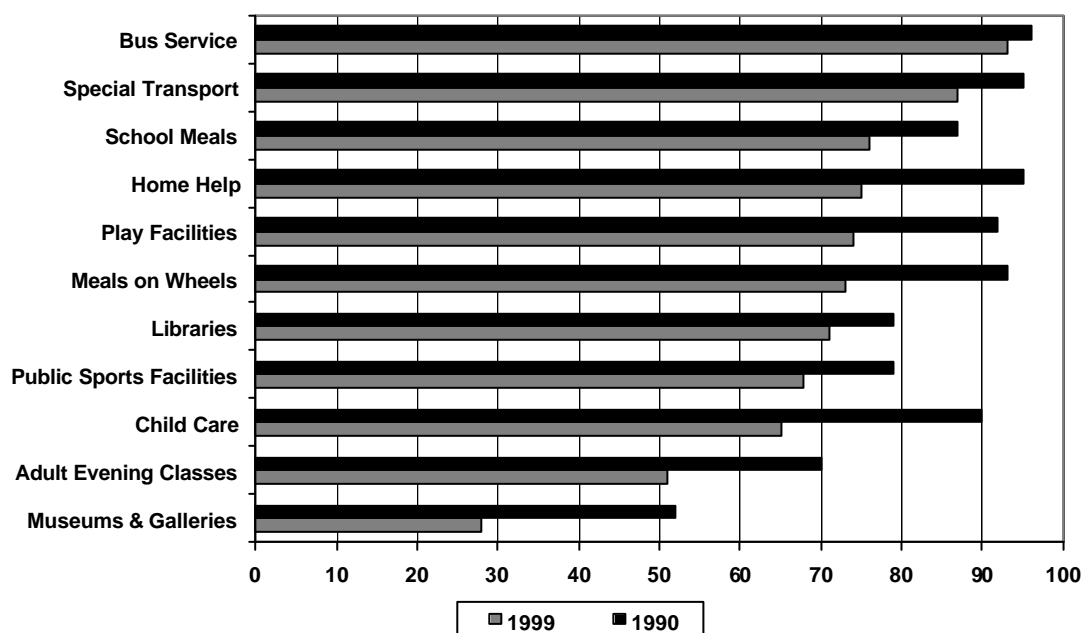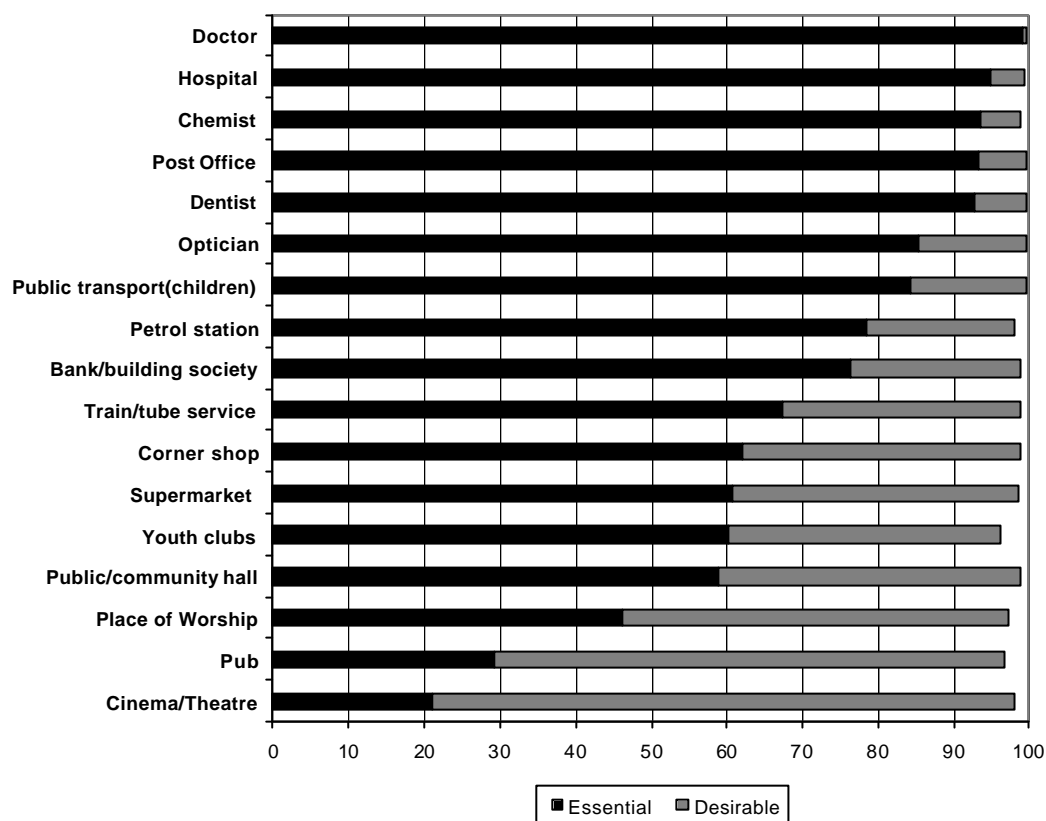

%).
Source: Calculated from 1990 Breadline Britain Survey and 1999 Poverty and Social Exclusion Survey (final data).
Note: Calculations are based on the relevant population as per Table 1.

Figure 4 shows that many of the additional services which were included in the 1999 PSE survey are regarded as essential by the majority of households. It may be that many people regard these services as being 'essential' even if they don't actually use them, as they signify a potential 'backup' service if required. Exceptions include places of worship, pubs and cinema/theatres, which are more likely to be regarded as desirable, but not essential. In the case of services such as pubs, supermarkets, corner shops and even banks/building societies, there are now a wide variety of alternative outlets which perform the same or similar service and hence they may not be seen as essential to a household's needs. The rise in the use of the telephone and internet for banking, shopping, payment of bills and email may have an impact on the degree to which households see associated local services such as banks, post offices and supermarkets as being essential.

Figure 4   Proportion of Respondents Regarding Selected Local Services as Essential and Desirable (%), 1999 (ranked).

Source: Calculated from 1999 Poverty and Social Exclusion Survey (final data).

4   SUPPLY CONSTRAINT AND INADEQUACIES

Further insights on the patterns of local service usage can be gained by considering the incidence of constraints associated with the availability, quality and cost of services. In both the 1990 Breadline Britain survey and the 1999 PSE survey, possible responses to the question on service usage included ways in which supply constraints or inadequacies can affect usage. These include: using the service, despite perceiving it as inadequate; not using the service because it is unavailable or inadequate; and not using the service because the respondent cannot afford to. Here we use these three responses together to provide a broad index of constraint.

Figure 5 shows the top 15 services ranked according to the proportion of households reporting some form of constraint or inadequacy. Constraint appears to be greatest for a number of public children's services (play facilities, school meals and youth clubs), with around a third of households with children reporting some degree of constraint, particularly in relation to availability. This may reflect increasing privatisation of these services and households opting for the private services. Indeed, this may be the case for many other services, as 10 out of the top 15 services in Figure 5 are publicly provided services. Approximately one in four households are constrained in their use of transport services (buses, trains, school buses) and this is largely due to inadequate service delivery, whilst only a small proportion of households do not use services because they cannot afford to. This supports the findings of Duffy (2000) and reinforces the need to target particular services for improvement.

Lack of availability or perceived inadequacy appear to be the main barriers to use of both public and private services, rather than affordability. Less than 5 percent of households are unable to use public and private services because of cost, compared with around 25 percent of households who are unable to use these services due to lack of availability. Further analysis of the data shows that households with children are more likely to be constrained in their use all services due to cost, but are particularly constrained in their use of public services by availability. For school meals, youth clubs and school transport unavailability deters usage substantially, whilst for play facilities, buses and hospitals people are more likely to use these services despite seeing them as inadequate.

Figure 5   Service Constraint or Inadequacies for Top 14 Public and Private Local Services, 1999 (ranked by % constrained).
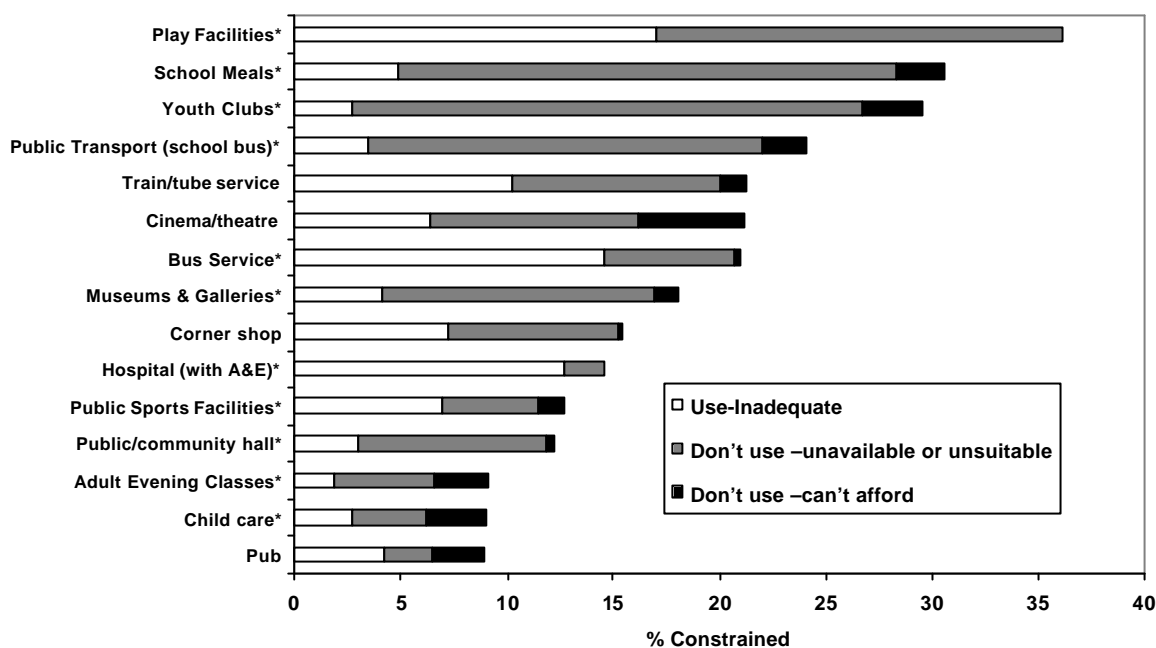
Source: Calculated from 1999 Poverty and Social Exclusion Survey (final data).
Note: Calculations are based on the relevant population as per Table 1 and Table 2.
*Public services usually provided by local councils or other public bodies.

Table 3 summarises the responses for high and low equivalent income groups and households below or above the deprivation threshold in both 1990 and 1999. For most services in 1990, the lowest income group report either a similar level of constraint or a lower level than the top group, with the exception of adult evening classes and children's play facilities. A similar pattern is evident in 1999, except that the difference between the top and bottom groups has increased in the case of public sports facilities and bus services and the lowest income group is more constrained in their usage of child care services. With respect to deprived households, they tend to be more constrained in their use of all services, except public sports facilities and school meals, a pattern which has persisted across both surveys. Hence, it may be concluded that the most deprived face poorer quality services and/or that deprivation reinforces constraints on service

usage. This is more clear cut than the relationship with income or class.

Table 3   Supply, Quality or Cost: Constraints on Usage by Equivalent Income and Deprivation for Local Services, 1990 and 1999.

Service	Proportion of households constrained (%)							
	Equivalent Income				Deprived			
	1990		1999		1990		1999	
	Top	Bottom	Top	Bottom	No	Yes	No	Yes
Libraries	12	12	9	11	9	14	7	12
Public Sports facilities	20	18	20	11	20	15	13	11
Museums & galleries	25	19	22	18	17	21	17	21
Adult Evening Classes	9	16	9	11	9	20	7	15
Bus Service	35	24	22	24	25	29	19	27
Child care	38	30	12	39	29	28	24	50
Play Facilities	26	55	32	57	39	57	29	60
School Meals	35	33	13	15	19	33	11	14

Source: Calculated from 1990 Breadline Britain Survey and 1999 Poverty and Social Exclusion Survey (final data). Note: The percentage of relevant households using service but inadequate, not using because inadequate/unavailable, or can't afford, excluding don't knows.

Table 4 shows the results of a similar exercise, again with the 17 services which were only included in the 1999 PSE survey. The main conclusion here is that, when comparing income or deprivation groups the level of reported constraint is relatively similar for the majority of services. It is noticeable that deprived households are somewhat more constrained for all services, except two (corner shops and school transport). Constraints are markedly greater for deprived households in relation to supermarkets, pubs, cinema/theatres, public/community halls and youth clubs. The lowest income group are more constrained in their usage of the corner shop, whilst deprived households are more constrained in their usage of pubs. Public transport for children (school bus) is the only service which is significantly pro-poor, ie. the poor are less constrained. In many

cases, income is a key factor in the use of private services, as the ability to pay will determine usage.

Some additional services, including some important local public goods are considered in Table 5. These services deal with local environmental quality, open space, school resources (teacher availability, books etc), housing disrepair and crime (being a victim or feeling unsafe). Care needs to be taken here in the interpretation of results shown, as some of the questions asked in the 1999 PSE survey were not directly comparable with those asked in the 1990 Breadline Britain survey. The questions relating to school resources and home disrepair are directly comparable, while those relating to the local area (local area dirty and open space) are quite different between the 2 surveys and hence not very comparable. The question relating to crime is partly comparable between 1990 and 1999 (see notes for Table 5).

Table 4   Supply, Quality or Cost: Constraints on Usage by Equivalent Income and Deprivation for Public and Private Local Services, 1999.

| | Proportion of Households Constrained | | | |
| | Equivalent Income | | Deprived | |
	Top	Bottom	No	Yes
Doctor*	6	5	5	7
Post Office*	8	6	4	5
Chemist	4	3	3	5
Supermarket	11	9	5	9
Bank/Building society	12	10	8	10
Dentist*	8	8	6	8
Hospital (with A&E)*	16	15	14	15
Optician*	3	5	4	5
Corner shop	12	17	16	14
Petrol Station	3	6	4	6
Pub	7	12	7	16
Cinema/theatre	15	27	18	32
Train/tube service	24	23	21	23
Public/community hall*	10	19	10	19
Place of Worship	4	5	3	5
Public Transport (school bus)*	19	13	15	8
Youth Clubs*	6	29	15	31

Source: Calculated from 1999 Poverty and Social Exclusion Survey (final data).
Note: The percentage of relevant households using service but inadequate, not using because inadequate/unavailable, or can't afford, excluding don't knows.
*Public services usually provided by local councils or other public bodies.

In 1990, there was a very strong tendency for the lowest income and multiply deprived groups to experience supply constraints or quality problems. In 1999, this tendency exists, although not to quite the same extent. The proportions of households reporting problems with the local area (dirty, lack open space) differ significantly from those reported in 1990 and this will be due to issues of comparability. Nevertheless, almost equal proportions of both the highest and lowest income and not/deprived groups reported problems associated with a dirty local area in 1999, whereas in 1990 there was a big difference. The multiply deprived were more likely to report lack of public open spaces in both periods. The 'poor' were more likely to experience various aspects of crime and home disrepair, which may reflect the association between the 'poor' and bad housing and neighbourhoods.

The previous study concluded that the poor appeared to be particularly disadvantaged by their local environment. This situation still appears to stand with some qualifications.

Table 5   Supply, Quality or Cost: Constraints on usage by Equivalent Income and Deprivation for Local Services, 1990 and 1999.

Service	1990			
	Equivalent Income		Deprived	
	Top	Bottom	No	Yes
Local area dirty*	20	39	22	42
Local open space*	13	37	19	43
School resources	5	10	na	na
Home Disrepair	2	16	3	19
Crime victim/unsafe**	29	30	22	39
	1999			
	Equivalent Income		Deprived	
	Top	Bottom	No	Yes
Local area dirty*	80	87	85	84
Lack open space*	9	10	7	14
School resources	10	15	22	20
Home Disrepair	3	11	2	16
Crime victim/unsafe**	29	49	35	44

Source: Calculated from 1990 Breadline Britain Survey and 1999 Poverty and Social Exclusion Survey (final data). Note: The percentage of all households reporting the problem.

* In 1990 a single question was asked (with only 3 possible responses)… 'Thinking about the area where you live, Please tell me whether each of the following applies: 'The local area is dirty and unpleasant', There is a lack of pleasant, open spaces within easy reach' and 'There are houses boarded up/with broken windows nearby'. In 1999 two questions were asked: the first asked the respondent to choose up to 10 problems which might be common to the area and the second question asked the respondent to choose up to 6 problems which may occur in their area. In an attempt to make these comparable with the 1990 survey, the following has been analysed: 'The local area is dirty and unpleasant' (1990 Breadline Survey) and 'graffiti on walls and buildings', 'rubbish or litter lying around', 'dogs and dog mess in this area' and 'pollution, grime or other environmental problems caused by traffic and industry' (1999 PSE); 'There is a lack of pleasant, open spaces within easy reach (1990 Breadline Survey) and 'lack of open public spaces' (1999 PSE).

** In 1990 a single question was asked… 'Which, if any, of the following applies to you or other members of your household?'. Responses included 'burgled in the last year', 'mugged/robbed in the last year', 'assaulted in the last year' and 'feel unsafe in local neighbourhood'. In 1999 a series of questions were asked relating to different aspects of crime which may have happened to the respondent only (ie. not including other members of the

household as in 1990). In order to gain a fairly comparable measure, responses to the following questions were included: 'Has anyone broken or tried to break into your home to steal something?', '.....stolen anything you were carrying?', '....deliberately hit or assaulted you?', 'Has any adult member of your household hit or kicked you, or used force or violence in any other way?' and 'how safe do you feel walking alone in this area after dark?'.

5   USE OF LOCAL SERVICES AND LOCATION

Here we address the question of how far people's location affects their access to adequate local services. The analysis presented here concentrates on two location characteristics which may potentially be important for understanding the relationship between poverty and service adequacy: urban/rural location and north/south location. Turning first to the urban/rural indicator, the usage rates are tabulated using a four-way settlement size classification, which ranges from large cities (1 million + residents) to rural areas (less than 9,999 residents). For most services, usage rates are fairly uniform across the four settlement types, which is surprising given that many services are provided centrally and one would assume that, as a result of geography and distance, access would be reduced in rural areas. Nevertheless, there are some services where usage is lower in more rural areas, such as museums/galleries, bus services, train/tube services and cinema/theatres and this is likely to reflect the greater access and convenience to these types of services in urban areas. In contrast, services such as petrol stations, bank/building societies, pubs and post offices have higher usage rates in smaller settlement areas (Figure 6).

Services used primarily by households with children or disabled/elderly members display a more mixed picture with regard to usage by urban/rural area. Figure 7 shows that the general pattern is one of greater usage by households living in medium sized urban centres and also the smallest, rural centres. The exception is children's play facilities which displays a consistent upward slope

from more urban to more rural, and school meals which displays a U-shaped pattern.

Figure 6   Usage Rates for Selected Services by Urban /Rural Indicator, 1999.
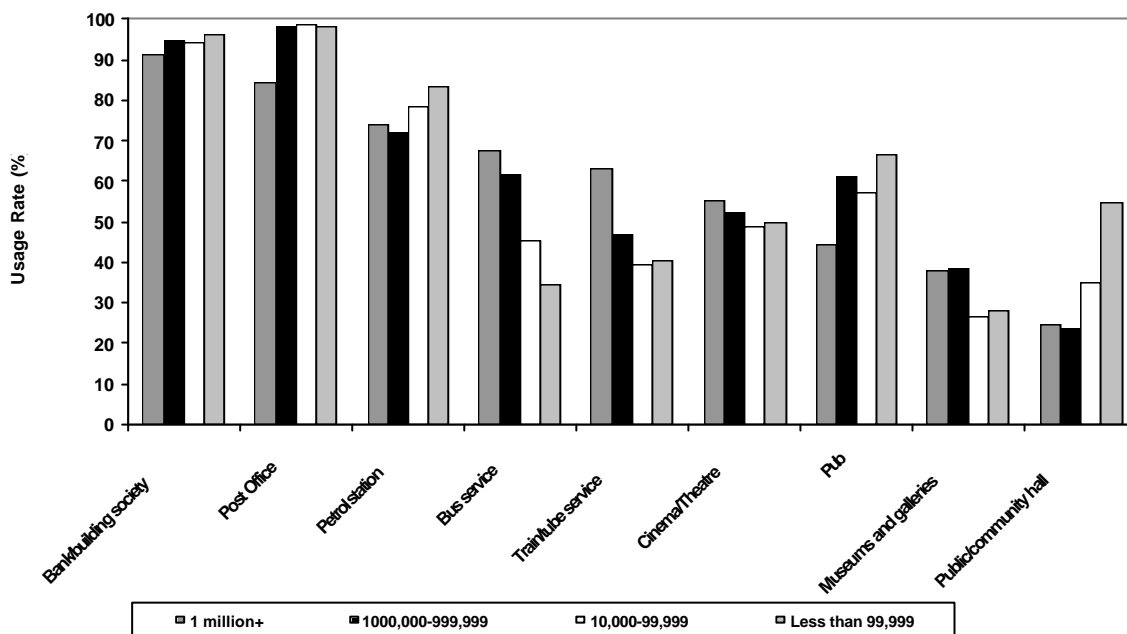
Source: Calculated from 1999 Poverty and Social Exclusion Survey (final data).

**Figure 7   Usage Rates for Services Targeted at Children, the**
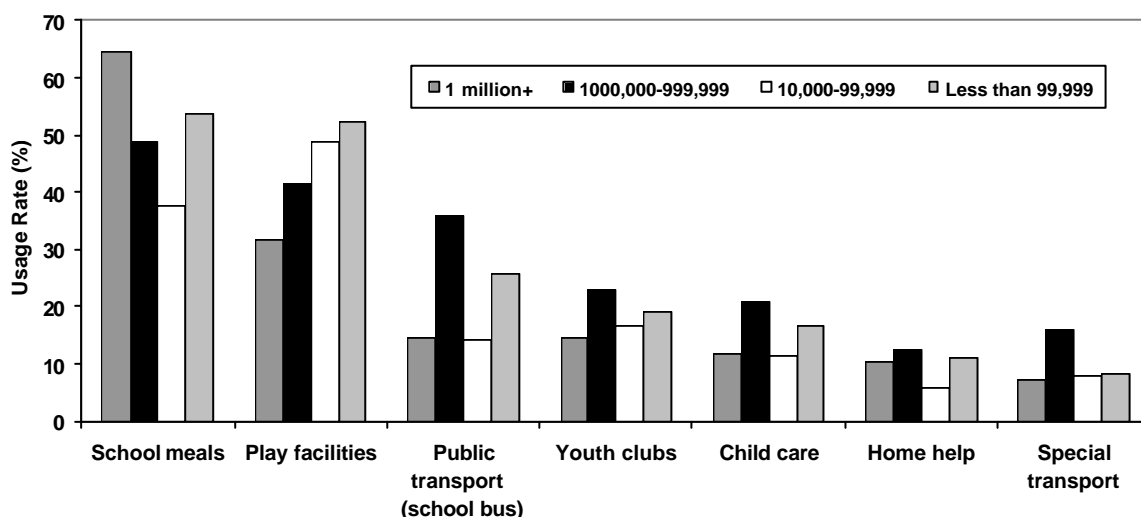
Elderly and Disabled by Urban /Rural Indicator, 1999.
Source: Calculated from 1999 Poverty and Social Exclusion Survey (final data).

Rates of service usage have also been tabulated for households living in the North (North West, North East, Yorkshire and Humberside and Midlands Regions), those living in Greater London and those living in the Rest of the South (South West, South East, East Regions) of England. Figure 8 shows that services such as opticians, libraries, cinema/theatres and children's play facilities are utilised more by households living in the South and London. While usage of services such as buses, train/tubes and children's school meals are more concentrated in London, other services such as petrol stations, pubs, child care and public/community halls are utilised more by households outside of London. These geographical patterns will be explained more fully in Bramley and Ford (forthcoming).

Figure 8   Usage Rates for Selected Services by North/South Indicator, 1999.
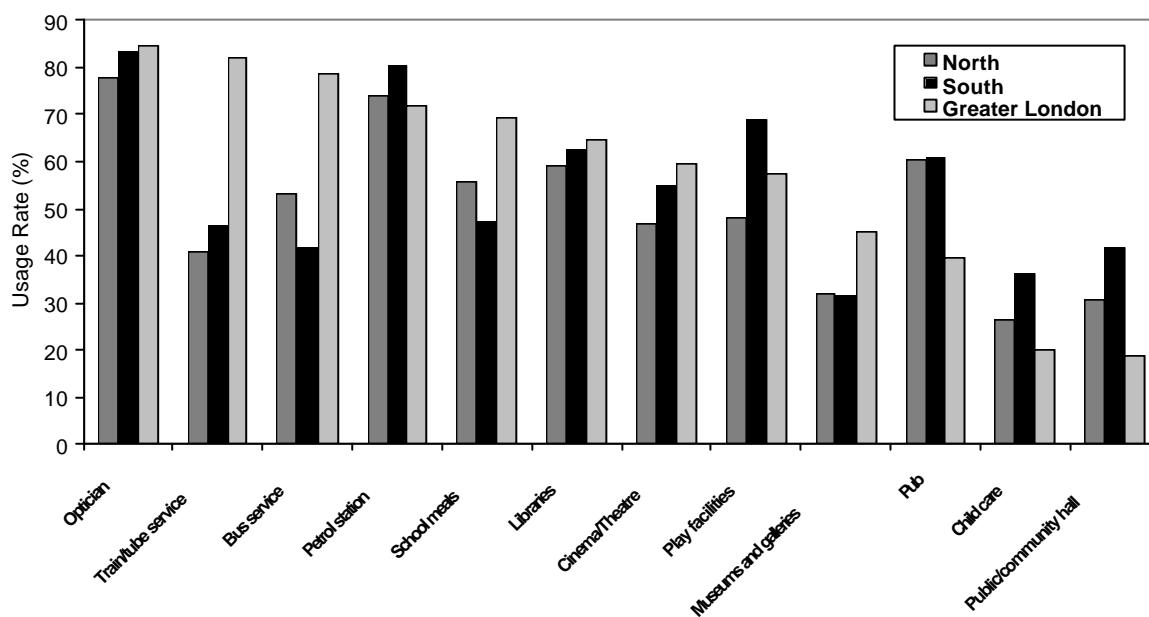
Source: Calculated from 1999 Poverty and Social Exclusion Survey (final data).
Note: Excludes Wales and Scotland

6   MULTIVARIATE MODELS

While the previous section addressed the patterns of service usage, the underlying reasons are still not clear. Although higher income

households may use a particular service more than lower income households, this might not only be a direct result of income alone, but may have more to do with indirect factors such as higher car ownership, more direct access or size and type of household. The next section outlines a multivariate statistical analysis which tries to separate out the simultaneous influence of a large number of factors which may influence the outcome. The relative influence of particular explanatory variables within a plausible set of relevant characteristics can be assessed empirically. The list of household and area attributes used in the analysis are listed in Appendix A. The analysis first only includes variables that represent the attributes of individual households and excludes at this stage, measures of the characteristics of areas. Up to twenty household characteristics are included in the analysis, and include class, income, deprivation, age, sex, household types, economic activity factors, housing tenure, health and disability, ethnicity, car ownership and receipt of benefits. In some cases, the number of variables included in the analysis is reduced for certain services as appropriate.

The following tables concentrate on class, income and deprivation. If the 3 variables are working in the same 'pro-rich' way, a negative relationship with deprivation and a corresponding positive relationship with income and class would be expected, or vice versa for pro-poor. However, some of the other variables included (see Appendix A) may also capture some of the effects of poverty and deprivation. Table 6 summarises the key findings for the three socio-economic measures, using t-statistics from a logistic regression (logit) model to indicate the direction and statistical significance of the effects.

Table 6   Influence of Class, Equivalent Income and Deprivation on Usage of local Services in Multivariate Models, 1990 and 1999 (t-statistics in logistics model including up to 20 individual household attributes)

Service	Class AB		Class C1		Equivalent Income		Deprivation	
	1990	1999	1990	1999	1990	1999	1990	1999
Libraries	**3.54**	**3.92**	**3.06**	0.65	**-2.00**	**-2.12**	-1.23	-1.82
Public Sports facilities	1.26	1.27	1.50	1.17	2.11	0.90	-1.49	**-3.22**
Museums & galleries	**2.82**	**4.50**	**2.14**	1.15	0.71	-0.42	-1.76	**-4.61**
Adult Evening Classes	1.36	**5.59**	**2.93**	1.22	1.25	-1.27	-1.54	-0.66
Bus Service	-0.42	-1.71	-0.05	-1.87	**3.12**	**2.92**	-1.54	-0.16
Child care	-**3.20**	0.12	-1.67	-1.76	0.92	**2.10**	-**2.50**	-0.40
Play Facilities	-1.72	1.28	-1.02	-0.80	-0.19	1.24	-**2.20**	**-3.08**
School Meals	1.49	0.61	0.11	0.21	-1.15	**2.35**	0.64	0.00
Home Help	1.77	1.28	1.13	1.74	-0.09	-0.25	-1.13	**-2.31**
Meals on Wheels	0.26	0.47	0.22	0.03	0.59	0.09	0.01	0.22
Special Transport	0.58	-0.60	1.10	1.00	-0.92	0.06	-0.73	**2.49**

Source: Calculated from 1990 Breadline Britain Survey and 1999 Poverty and Social Exclusion Survey (final data).
Note: t-statistics indicate the direction and significance of the effect of the particular variable on the probability of usage of each service, allowing for the simultaneous influence of all of the other variables included in the analysis; values greater than 2.0 shown in bold indicate significance at the 5% level.

For the first 4 services, the pattern is fairly consistent with the results discussed from Table 1. Higher social class exerts a positive influence on usage in both 1990 and 1999 cases, except public sports facilities. As was shown in Table 1, the extent of this influence increased in 1999 for museums and galleries and adult evening classes. Income has a largely negative influence on the use of these services, but particularly in the case of bus services, which underlines the issue of affordability of bus fares for lower income households. It may also reflect use of private substitutes. Although the strong negative effect of income has declined slightly in 1999, this is continuing even after

allowing for the strong negative effect of car ownership, which has increased in 1999. Most of the other significant influences are demographic, particularly age and household type. Being of Asian or Black ethnic background has a strong negative influence on the use of public sports facilities, but a positive influence on the use of bus services.

Deprivation has a consistently negative effect on usage of all services, except school meals and special transport, a pattern which confirms earlier results. Nevertheless, the negative effect of deprivation is considerably stronger on public sports facilities and museums and galleries in 1999. Being in full-time employment has a positive influence on the use of museums and galleries and reinforces the conclusion that generally, these services are used more by higher socio economic groups and less by the most deprived groups, and this effect is generally stronger in 1999.

In the case of child care, the pattern has changed to one more related to income and less to class and deprivation. This may relate to increasing costs involved with good quality child care, higher demand from working households for the service or increased privatisation. The multiply deprived are less likely to use children's play facilities in the local area, and this may reflect issues of access to safe and good quality play facilities. In contrast the relationship between income and school meals has shifted from being pro-poor in 1990 to pro-rich in 1999, and this may be due to an increase in two parent working families requiring schools to fulfil the role of meal provision for their children.

The influence of the three variables is generally minimal in relation to the services targeted at the elderly and the disabled. Whilst neither income or class have a strong or significant influence on any of the three services, deprivation has an increasingly strong influence on

home help and special transport; the multiply deprived are less likely to use home help, but more likely to use special transport.

In relation to the additional services included in the 1999 PSE survey, Table 7 shows that higher class households are more likely to use private local services such as cinemas/theatres, train/tube services and places of worship. Access to transport, particularly car ownership is likely to influence the usage of many services listed in Table 7. Although this effect is not as strong as expected, car ownership does exert a strong influence on the use of petrol stations, but a negative influence on the use of train/tube services, as would be expected.

Table 7   Influence of Class, Car Ownership, Equivalent Income and Deprivation on Usage of Local Services in Multivariate Models, 1999 (t-statistics in logistics model including up to 20 individual household attributes)

Service	Class AB	Car Ownership	Equivalent Income	Deprivation
Doctor*	-0.04	0.02	1.28	**-2.17**
Post Office*	0.23	1.34	0.10	0.28
Chemist	0.74	-1.42	1.63	**-2.08**
Supermarket	-0.05	0.67	1.28	0.36
Bank/Building society	-0.13	1.82	1.91	-1.51
Dentist*	0.05	1.19	**3.09**	-0.38
Hospital*	0.65	0.88	**3.23**	-1.05
Optician*	-0.06	0.52	**-3.13**	-1.98
Corner shop	-0.97	-0.30	0.33	1.65
Petrol Station	-0.24	**15.27**	3.94	-0.86
Pub	-1.17	0.02	0.10	**-2.00**
Cinema/theatre	**5.46**	0.13	0.67	**-3.34**
Train/tube service	**3.50**	**-3.33**	**-2.94**	-0.40
Public/community hall*	1.37	0.60	**-3.38**	**-2.76**
Place of Worship	**3.32**	1.13	**3.74**	**-2.85**
Public Transport (school bus)*	-0.95	0.82	-0.41	-0.51
Youth Clubs*	-1.47	-0.52	-0.76	-0.63

Source: Calculated from 1999 Poverty and Social Exclusion Survey (final data).
Note: Interpretation of t-statistics as in Table 6.
*Public services usually provided by local councils or other public bodies.

Income has a significant relationship with many of the services listed in Table 7 and exerts a positive influence on the use of dentists,

hospitals, petrol stations and places of worship, but a negative influence on the use of opticians, train/tube services and public/community halls. Other income-related factors such as receiving benefits, council tenant, and being in full-time employment are significant influences for the use of opticians, corner shops, pubs, places of worship and cinema/theatres. Generally, deprivation has a negative influence on the use of all the services listed in Table 7, but particularly doctors, chemists, opticians, cinema/theatres, public/community halls and places of worship. The only exception is again corner shops.

As with the previous set of services, other demographic factors such as age and household type exert a strong influence on the services in Table 7. Interestingly, ethnicity has a strong influence on the use of services, a reflection of wider cultural and lifestyle issues. Specifically, coming from an Asian or Black background has a strong negative influence on the use of banks/building societies, chemists, dentists and pubs, but a positive influence on the use of places of worship, supermarkets and public/community halls.

This multivariate modelling exercise can be extended to include the influence of factors associated with the area in which households live. Accessibility to services may be affected by the geographical characteristics of local areas and here we include two area indicators in the logit model to test this: north/south and urban/rural. Table 8 summarises the influence of these area characteristics on service usage, once allowance has been made for the household/individual variables. Area effects are discussed more fully in Bramley and Ford (forthcoming).

Although households are more likely to use train/tube services, largely a result of greater access to this service, the influence of living in the South of England (including Greater London) on these services

is minimal and this implies that the regional differences identified in Figure 8 are mainly due to socio-economic factors. Households living in large cities are more likely to use bus and train/tube services, which reflects the greater access to these services in cities. On the other hand, households living in large cities are less likely to use post offices and pubs and this may reflect access to alternatives in large cities. Many of the services provided by post offices can now be found in a wide variety of alternative outlets, whilst wine bars, cafes and restaurants offer alternatives to the pub.

School transport and special transport for the elderly are also less likely to be utilised by city dwellers and this reflects the concentration of these services in smaller and more rural areas. Households living in a rural location are far more likely to utilise public/community halls and this is a direct result of greater accessibility to this service in these areas. As expected, many of the services often associated with large cities, such as museums and galleries, cinema/theatres, bus services and train/tube services, are negatively associated with a rural location.

Table 8   Influence of Area Characteristics on Usage, 1999 (t-statistics in logistics model including up to 20 individual household attributes).

Service	South	City	Rural
Libraries*	0.90	0.28	**-2.70**
Public Sports Facilities*	1.92	-0.91	1.13
Museums & Galleries*	0.58	-0.05	**-4.20**
Adult Evening Classes*	-0.31	-0.16	-1.34
Bus Service*	-0.33	**2.18**	**-6.69**
Doctor*	-0.78	0.25	-0.55
Post Office*	-0.20	**-2.57**	0.31
Chemist	-1.20	-1.24	**-2.58**
Supermarket	0.99	-0.80	-0.85
Bank/Building society	1.03	-1.91	-0.40
Dentist*	-0.05	1.41	0.56
Hospital*	-1.47	-1.42	**-2.21**
Optician*	**2.59**	0.27	-0.25
Corner shop	1.42	0.56	0.79
Petrol Station	0.10	0.64	0.64
Pub	-1.14	**-3.72**	1.18
Cinema/theatre	**2.45**	0.90	**-2.89**
Train/tube service	**4.80**	**4.37**	**-2.83**
Public/community hall*	0.41	-0.44	**8.62**
Place of Worship	**-2.44**	-0.46	1.11
Child care*	-0.56	-1.54	0.17
Play Facilities*	0.93	-1.51	0.35
School Meals*	-1.77	1.50	1.41
Public Transport (school bus)*	-1.87	**-3.48**	-1.16
Youth Clubs*	**-2.32**	-1.54	-0.91
Home Help*	**2.09**	-0.68	0.20
Meals on Wheels*	-0.34	1.33	1.28
Special Transport*	-1.30	**-2.64**	-1.21

Source: Calculated from 1999 Poverty and Social Exclusion Survey (final data).
Note: t-statistics indicate the direction and significance of the effect of the particular variable on the probability of usage of each service, allowing for the simultaneous influence of all of the other variables included in the analysis; values greater than 2.0 shown in bold indicate significance at the 5% level. 'South' includes the South West, South East, East and London Regions; 'City' is defined as having 1 million or more residents; 'Rural' is defined as having less than 9,999 residents.
*Public services usually provided by local councils or other public bodies.

Table 9 shows the influence of high relative local authority expenditure per (expenditure relative to standard spending or SSA, the government's estimates of the cost of providing a comparable level of service allowing for local circumstances) head on frequency of usage. Generally this variable is not significant, after allowing for individual and household characteristics. High relative expenditure

has a positive influence on the use of bus services and children's school buses and (marginally) on public sports facilities and special transport for the elderly and disabled, but a negative influence on the use of public/community halls. It should be emphasised that this relative spending measure is a relatively 'blanket investment'. It covers all service spending together and is in categorical form. Also in 1999 there was rather low variance in the level of spending relative to SSA.

Table 9   Influence of Local Authority Expenditure on Usage, 1999 (t-statistics in logistics model including up to 20 individual household attributes).

Service	High Relative Expenditure
Libraries	-0.70
Public Sports Facilities	1.45
Museums & Galleries	0.08
Adult Evening Classes	0.18
Bus Service	**2.97**
Public/community hall	-1.62
Place of Worship	0.33
Child care	-0.16
Play Facilities	-0.81
School Meals	-1.35
Public Transport (school bus)	1.85
Youth Clubs	-0.69
Home Help	1.44
Meals on Wheels	1.13
Special Transport	1.72

Source: Calculated from 1999 Poverty and Social Exclusion Survey (final data).
*Public services usually provided by local councils or other public bodies.
Note: t-statistics indicate the direction and significance of the effect of the particular variable on the probability of usage of each service, allowing for the simultaneous influence of all of the other variables included in the analysis; values greater than 2.0 shown in bold indicate significance at the 5% level. Note: Local Authority Expenditure is per head (bands)

The findings presented in this section have been exploratory in nature, but do provide confirmation for some of the key findings on local service usage and constraints experienced by different socio-economic groups. In addition, more detailed insights into some of the factors which affect usage of services have been gained.

7   SERVICE EXCLUSION AND OTHER EXCLUDED GROUPS

It is instructive to assess whether there is a relationship between people who are excluded from local services and those who suffer from other forms of exclusion. Gordon *et al* (2000:54) identify 4 dimensions of exclusion: impoverishment (or exclusion from adequate income or resources); labour-market exclusion; service exclusion and exclusion from social relations.

The relationship between service exclusion and impoverishment has already been addressed to some extent in this paper. Much of the earlier analysis focused on 'multiply deprived households' as a measure of disadvantage and concluded that deprivation does appear to reinforce constraints on service usage. Labour market exclusion is an important risk factor for both service exclusion and some aspects of exclusion from social relations. Living in a jobless household is an indicator of labour market exclusion and Gordon *et al* (2000:57) report that a greater proportion of people in non-pensioner, jobless households lack access to two or more services compared with those with workers. A relationship may also exist between people excluded from social relations, ie. not participating in common activities, isolated, lacking support, disengaged and confined and those excluded from using local services.

Clearly, each of these aspects of exclusion can be assessed independently, just as we have focused on service exclusion in this paper. However, one aspect of exclusion may correlate with or be caused by another and a significant relationship may exist between the various forms of social exclusion. The key further question is whether those people who are excluded from local services are also excluded from material resources, social relations or the labour market? This will be addressed further in future work.

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APPENDIX A

Variable Definitions
(survey based, household level)

a. Demographic

FMALE	Male respondent
YOUNG	Respondent aged under 25 years
OLD	Respondent aged 75+
SINGRET	Single adult of retirement age
SINGLE	Single person household
LPAR	Lone parent household
CPLCHILD	Household with children
MULTI	Household with three or more adults
NKIDS	Number of children
NDISAB	Household with disabled or ill member
ASIAN	Black or asian respondent

b. Socio-economic

PSEEQUIV	Equivalised household income £ per week
BENEFIT	Household receives state benefits
POOR	Household lacks and cannot afford two or more 'essentials'
OWNER	Outright home owner
COUNCIL	Council tenant
CLASSAB	Social class of HOH professional/managerial
CLASSDE	Social class of HOH other non-manual
CLASSC1	Social class of HOH semi/unskilled manual
FULLTIME	Respondent works fulltime
CARS	Household has one or more cars

c. Area Characteristics

EXPBAN2	Local authority expenditure per head (bands)-high relative exp
EXPBAN3	Local authority expenditure per head (bands)-high absolute exp
CITY	Household lives in large city (1 million + residents)
SMALL	Household lives in a small town (10,000 to 99,999 residents)
RURAL	Household lives in a rural area (less than 9,999 residents)
SOUTH	Household lives in the South of England (Eastern, London, South East, South West regions)