



Assessing neighbourhood level regeneration and
public expenditure

Findings from the Bradford New Deal for Communities Area



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January 2010

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The findings and recommendations in this report are those of the authors and do not necessarily represent the views of the Department for Communities and Local Government.

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Executive summary

About this study

Relatively little is known about overall levels of public spending in the 39 New Deal for Community (NDC) areas, its composition across sectors, and how this has changed since the launch of the Programme in 1998. The original rationale for this study is that by understanding changes in the composition of public expenditure in an NDC area, it may be possible to provide evidence as to:

- the relative scale of NDC expenditure compared with public expenditure
- whether successful area based regeneration changes the composition of local GDP – with less demand on public resources and a larger private sector.

Although NDC expenditure is sizable (approximately £50m per NDC area), this equates to £500 per resident per year for the life of the NDC Programme (for an NDC area of 10,000 people); a sum which is significantly less than other forms of public expenditure.

Methodology

The seminal work on local public expenditure was undertaken by Bramley et al for DETR in 1998. This study focused primarily on local authority districts and wards and not the neighbourhood level.

The initial plan for this study was that Bradford agencies would provide evidence with regard to the number of incidents/beneficiaries/occurrences and also expenditure data. It would then be possible to bring this together to estimate public expenditure going into the NDC at two points in time. However, attempts to have data provided in this way did not prove possible. We have therefore gathered data through special runs from the Social Disadvantage Research Centre (SDRC), data held on Government websites, Neighbourhood Statistics (NeSS)¹, the National Online Manpower Information System (NOMIS)², and the Chartered Institute of Public Finance and Accountancy (CIPFA). This is closer to how Bramley et al operated. We have also focused on the largest areas of public expenditure at a neighbourhood level. It has also not been possible to gather data at two points in time – we therefore focused on 2005/06 as the cut-off year for the study.

This report documents gaps in our analysis – the most significant being the lack of available data for Working Tax Credit and Child Tax Credit. The result of this is that reductions in expenditure on benefits are overstated.

All monetary values are in 2005 prices – adjusted by the consumer price index.

¹ www.neighbourhood.statistics.gov.uk/

² www.nomisweb.co.uk/

Key findings

Estimates have been made of per capita public expenditure in the NDC and Bradford District. In terms of the overall composition of expenditure (where data are available):

- benefits expenditure at NDC and district levels account for nearly half total public expenditure; the proportions are similar because whilst the NDC area receives a higher level of worklessness-related benefits, the district receives a higher level of State Pension benefits
- in the NDC area, we estimate public health expenditure accounts for around 18 per cent of total expenditure, education around 13 per cent, social services expenditure around 10 per cent and policing around 7 per cent.
- together, these areas of public expenditure account for nearly all expenditure for which we have data.

Comparing the NDC with the district, findings reveal:

- considerably higher levels of public expenditure on key benefits (JSA, IB, Income Support, HB/CTB), as well as on Housing Corporation Capital Expenditure, primary education, policing, the fire service and social services
- less expenditure on State Pension benefits, reflecting the younger demographic profile of the NDC area
- about the same levels of expenditure on health (primary and secondary), older people social services, and secondary education.

These findings are perhaps largely to be expected with the exception of secondary education and health. Given the relatively young demographic profile of the NDC area, it is unsurprising to see more spend on primary education and less spend on the State Pension, compared with Bradford District as a whole. Similarly, given the higher levels of worklessness and crime in NDC areas, it is not surprising that expenditure on benefits and policing is higher than the district average.

It is not possible to draw significant conclusions about the change in expenditure over time or to attribute change to the Partnership. Where data are available we find:

- substantial falls (greater than the district) in benefits payments, especially JSA and Income Support, with slight falls in IB, SDA and the State Pension
- substantial increases in social services expenditure.

In total we estimate that in 2005/06 there was around £4,700 of public expenditure per capita in the NDC Partnership area – just under half on benefits. By the same time (year six of the Programme) the NDC Partnership had spent £530 per capita per annum, with this set to fall in the final years of the Programme. NDC expenditure is clearly a significant component of public expenditure in the NDC area, but by no means the largest element.

1. Introduction

Rationale for the study

- 1.1. Relatively little is known about overall levels of public spending in the 39 NDC areas, its composition across sectors, and how this has changed since the launch of the Programme in 1998.
- 1.2. The original rationale for this study is that, by understanding changes in the composition of public expenditure in one NDC area, it may be possible to provide evidence as to:
 - the relative scale of NDC expenditure compared with public expenditure as a whole
 - whether successful area based regeneration changes the composition of local GDP – with less demand on public resources and a larger private sector.
- 1.3. Although NDC expenditure is sizable (approximately £50m per partnership) this equates to just £500 per resident per year for the life of the NDC Programme (for an NDC area of 10,000 people); a sum which is significantly less than other forms of public expenditure.

Intended methodology

- 1.4. The seminal work on local public expenditure was undertaken by Glen Bramley et al for the Department of the Environment, Transport and the Regions (DETR) in 1998. This work was published by the Department along with a separate paper in the journal *Fiscal Studies*³. The work has since been updated in a study for the then Office of the Deputy Prime Minister in 2005⁴. It is not possible here to replicate the Bramley et al study due to resource constraints. However, our work is informed by this study. Our original intention was that data would be gathered on expenditure in the Bradford NDC area from three sources:
 - actual spend data
 - proportion of spend in the area based on known expenditure at the district level

³ Bramley, G. Evans, M. and Atkins, J. (1998), *Where Does Public Expenditure Go? Report of a Pilot Study to Analyse the Flows of Public Expenditure into Local Areas*, for the Department of the Environment, Transport and the Regions. London: DETR. Bramley, G. and Evans, M. (2000), Getting the smaller picture: small-area analysis of public expenditure incidence and deprivation in three English cities, *Fiscal Studies*, 21:2, pp. 231–268.

⁴ Bramley, G. Evans, M. and Noble, M. (2005), *Mainstream Public Services and their Impact on Neighbourhood Deprivation*. London: ODPM

- calibration of district spend data with known characteristics of the NDC population (e.g. numbers of IB and Housing Benefit claimants).
- 1.5. The intention was also to draw as far as possible from local data sources, through liaising with local agencies and the Local Strategic Partnership (Bradford Vision). As such the following would be the main focus for the work:
- Bradford District and NDC data
 - Health: PCT, Hospital Trusts, Regional Health Observatory
 - Housing: DWP benefits, Household survey, RSL/HA/LA/ALMOs,
 - Crime: Police, Youth Offending Teams, Probation Service, Local Authority
 - Education: LEA, Surestart, LSC
 - Worklessness: JCP, DWP, LA, Business Link, Yorkshire Forward
 - Other ABIs: Use the national evaluation team's Partnership survey to identify other ABIs operating in the Bradford NDC area.

Actual methodology

- 1.6. Attempts to have data provided in this way were unsuccessful. We therefore gathered evidence through special runs from data held on Government websites, NeSS, NOMIS, Chartered Institute of Public Finance and Accountancy (CIPFA) and from the SDRC. Informed by Bramley and Evans, and Bramley et al, the decision was taken to focus on the largest areas of public expenditure at a neighbourhood level.
- 1.7. Further details on the methodology are given in the annexes. The remaining sections of this report are structured as follows: the context of Bradford NDC and Programme spend; changes in benefits spending in the NDC; and changes in (Programme) relevant expenditure.
- 1.8. All monetary values are in 2005 prices – adjusted by consumer price index⁵. 2005/06 has been used as the cut-off year for the study.

⁵ CPI data from ONS www.statistics.gov.uk/STATBASE/tsdataset.asp?vlnk=7174&More=N&All=Y

2. Bradford NDC

About Bradford NDC

- 2.1. The area covers about 195 hectares, roughly one square mile, on the south western side of the city. It is bisected by a major road, the A641, Manchester Road, running north to south. The area is largely based on the Little Horton ward of the city, identified in the DETR Index of Deprivation 2000 as the most deprived ward in Bradford and the 42nd most deprived in England. Within the area there are several distinct residential communities and a substantial area of commercial activity. On the west side of the main road are the residential communities of Marshfield and Little Horton, whilst on the east side are West Bowling and the commercial area. The residential areas are densely populated with few open spaces or recreational facilities. About 60 per cent of the 4,200 or so (after recent demolition) homes are privately owned or rented with the remaining 1,600 homes split 40/60 between Housing Association and former council, now Bradford Community Housing Trust, ownership.
- 2.2. Table 1 shows the mid year population estimates for the NDC area and for Bradford local authority district – despite a major demolition programme in the area, population has remained relatively stable with significant recent population growth.

Table 1: Mid-year population estimates

	1999	2000	2001	2002	2003	2004	2005
Bradford NDC	11,211	11,193	11,286	11,112	11,121	11,385	11,835
Bradford District	466,900	467,100	470,800	473,600	476,800	481,400	488,000
% (NDC/District)	2.4%	2.4%	2.4%	2.3%	2.3%	2.4%	2.4%

Source: SDRC, NOMIS

- 2.3. Almost half of the population in the Bradford Trident area are of South Asian heritage (49.2 per cent), with high levels of worklessness experienced by this group. The proportion of the population that is non-White increased nearly 11 percentage points from 1991 to 2001, growing from 46.7 per cent to 57.6 per cent.
- 2.4. A key aim of the NDC has been to redevelop and improve much of the housing stock, both in the rented and owner-occupied sectors. The rationale for this investment is to address high levels of dereliction in the social housing stock (primarily in blocks of flats) and to provide some assistance (through matched incentive type schemes) to improve housing in the owner

occupied sector. Dereliction and vacant social housing have been addressed through a major demolition and rebuilding programme which has seen 39 blocks of flats demolished to date. Investment has also been made in the wider physical environment of the area, through improvements to parks and open space, a living street initiative, and support for neighbourhood wardens and management approaches to maintain the quality of improvements. These developments appear to have had a significant effect on **place based** outcomes. For example, 66 per cent of respondents to the household survey in 2006 were very or fairly satisfied with the area, compared with 58 per cent in 2002. Significantly 77 per cent were satisfied with the state of repair of their home, up from 64 per cent in 2002 and there was a slight fall in the proportion of residents wanting to move home (32 per cent from 33 per cent). Although average house prices remained low (£62,399), this was a marked increase on 2002, when it was £28,218. There are also plans for private investment in city-centre living accommodation.

- 2.5. There have also been marked improvements in crime and community safety. Residents feel safer (26 per cent of people feeling very unsafe after dark in 2006, down from 36 per cent) and recorded crime is down from 62.9 (per 1,000) in 2001/02 to 50.3 in 2004/05. These outcomes occurred at a time when the NDC was investing in a range of integrated activities (target hardening, CCTV, community police and wardens, and targeted interventions with young offenders) and there was considerable support from the police and other groups such as the Youth Offending Team.
- 2.6. There have also been noticeable and very positive changes across **people based** outcomes. For example, at Key Stage 4, 49.7 per cent of pupils achieved five or more A*–C GCSE grades in 2005, a considerable increase on the 2002 figure of 33.6 per cent. NDC funds were spent in schools (e.g. learning mentors and capital improvements), on individuals (e.g. after school clubs, summer schools and ICT centres) and more broadly on youth support (e.g. the youth forum and the Trident Arts Project). Many of the school and individual initiatives anticipated changes in mainstream education provision and benefited from support of local schools.
- 2.7. Although more modest in scale, there have also been improvements in health; for example levels of smoking have fallen and people feel slightly better about their health. And in relation to employability, the employment rate increased from 36 per cent in 2002 to 44 per cent in 2006.
- 2.8. Finally, indicators of community involvement remained positive. In 2006, 51 per cent of residents felt part of the community (up from 48 per cent in 2002), and 68 per cent of survey respondents felt that neighbours looked out for each other (up from 64 per cent in 2002). The NDC has invested across a wide range of community activities and facilities and, moreover, appears to have successfully embedded community involvement in the delivery of the main theme programmes, particularly around education, housing and crime.

Bradford NDC Delivery Plan

2.9. A number of developments in Bradford NDC's Delivery Plan should be noted:

- housing: the early part of the programme was characterised by a significant demolition programme and new build; the area is characterised by relatively (when compared with other NDC areas) large private rented and owner occupied sectors
- police: a new police control centre for South Bradford was constructed in 2005, located in the NDC area; it gives the police a highly visible presence in the area
- health: programme resources in this area have focused on improving primary care services in the area, not least through the bringing together of GP surgeries with community facilities
- worklessness and employment: interventions in worklessness and employment have been relatively small scale, and included interventions such as job brokerage, the establishment of a business forum, and a small grants scheme to help with business security.

2.10. Table 2 shows expenditure against outcomes in the Bradford NDC Partnership Delivery Plan (by the end of March 2006). This shows the relative priority given to housing and physical environment, and also to education and learning interventions. By the end of March 2006, the programme had spent around £3,193 per capita or £533 per capita per annum (assuming the programme had been running for six years). Overall the Programme is expected to spend around £420 per annum per capita.

Table 2: Spend by Bradford NDC – System K data

Theme	Bradford NDC spend: from start of programme to end of March 2006 (£ million)
Community and Corporate	4.056
Crime and Community Safety	3.197
Education and Learning	11.065
Employment and Business	5.604
Health	1.882
Housing and Environment	11.364
Management and Admin	0.629
Total	37.797

Source: System K, CEA

2.11. These expenditure data for the NDC Programme in Bradford provide the best available benchmark for assessing the scale and direction of overall public expenditure in the area, and for Bradford as a whole, a theme addressed in remaining chapters of this report.

3. Public expenditure on benefits

Introduction

3.1. The main benefits considered in this analysis include:

- Jobseeker's Allowance (JSA)
- Incapacity Benefit (IB)
- Severe Disablement Allowance (SDA)
- Income Support (IS)
- Disability Living Allowance (DLA)
- State Pension
- Pension Credits
- Housing Benefit/Council Tax Benefit (HB/CTB)
- Child Benefit (CB)

3.2. It has not been possible to obtain data on Working Tax Credit, Child Tax Credit or Winter Fuel Payments. Payments of tax credits are calculated in relation to individual circumstances. While data were available on numbers of recipients at a small geographical level, it was not possible from the information available to determine the amount paid to these recipients. However, we recommend that further investigations are undertaken around tax credits because of their significance in welfare policy.

3.3. Benefits data have been drawn from the following sources:

- SDRC
- NOMIS
- Neighbourhood Statistics
- City of Bradford Metropolitan District Council
- HMRC
- Institute of Fiscal Studies.

3.4. The Bramley et al study suggested that benefits account for around 48 per cent of public expenditure in the three areas involved in that study. There is no reason to believe that this pattern will have changed markedly. However, the Bramley et al study explored public expenditure in three Local Authority Districts (LAD) and wards within these. The task here is to consider one LAD and a neighbourhood within it (the Bradford NDC Partnership area).

- 3.5. This section provides a composite analysis of benefits before considering each of the main benefits in turn.
- 3.6. Around 2.4 per cent of Bradford's population live in the NDC area: public spending above this figure indicates that the area receives above the Bradford average public expenditure per capita.
- 3.7. Annex 1 outlines the methods we have used to estimate expenditure on benefits and Annex 2 sets out our detailed findings arising from this work.

Composite analysis of benefit expenditure

- 3.8. This study focuses on both the main benefits identified by Bramley et al and the main benefits introduced since the early 2000s. However, we have not been able to consider the whole area of tax credits and other fiscal incentives to individuals linked to the welfare to work agenda (for instance Working Tax Credit or Child Tax Credit). Similarly we have not considered (repeated) one off payments (such as the Winter Fuel Payment) or administration costs.
- 3.9. Table 3 shows that, for all the main benefit payments other than the State Pension, public expenditure in the NDC area is more than 2.4 per cent of the Bradford District level. In other words, spend on these benefits is higher than the proportion of Bradford residents living in the NDC area would suggest. State Pension payments in the NDC area account for only 1.4 per cent of the district total in 2005/06. However, this reflects the demographic profile: 1.5 per cent of Bradford's residents of pensionable age live in the NDC area. There are some notable differences between expenditure on different benefits. The highest percentage of district spend is for Jobseeker's Allowance (6.3 per cent of the district expenditure in 1999/00 and 5.8 per cent in 2005/06). Severe Disablement Allowance (2.6 per cent of district expenditure) and Disability Living Allowance – SDA (3.1 per cent of district expenditure) appear less significant relative to the district.

Table 3: Summary of Benefits Expenditure

2005 prices	Estimated annual spend (£ million)					
	1999/00			2005/06		
	NDC	District	NDC as % of District	NDC	District	NDC as % of District
Jobseeker's Allowance	2.777	44.327	6.3%	1.436	24.896	5.8%
Incapacity Benefit	2.830	59.672	4.7%	2.691	58.251	4.6%
Severe Disablement Allowance	0.362	9.372	3.9%	0.197	7.606	2.6%
Income Support	5.858	136.833	4.3%	4.964	104.412	4.8%
Disability Living Allowance (a)	2.119	67.634	3.1%	2.443	78.500	3.1%
State Pension (a)	5.037	329.454	1.5%	5.111	352.681	1.4%
Pension Credits	*	*	*	2.110	59.600	3.5%
Housing Benefit/Council Tax Benefit	*	*	*	5.417	122.400	4.4%
Child Benefit	*	*	*	2.659	94.786	2.8%

Note: (a) 2002/03 and 2005/06, * = no data

- 3.10. We only have data for one point in time for Pension Credits, Housing Benefit/Council Tax Benefit, and Child Benefit. In terms of changes over time in the other benefits, there were substantial real term falls in expenditure on JSA and SDA at both the NDC and district level. In contrast, expenditure on DLA increased over this period for both NDC and district. We would expect that the main change over this period for the benefits where we only have data at one point in time would be to Housing Benefit/Council Tax Benefit, which we would expect to have fallen in line with benefits such as JSA.
- 3.11. Table 4 indicates the relative significance of different benefits within the NDC area in 2005/06. It shows the significance of Income Support, the State Pension and Housing Benefit/Council Tax Benefit, which together accounted for nearly 60 per cent of benefits. However, it should be noted that individual eligibility and receipt of different benefits is linked.

Table 4: Relative Significance of Different Benefits (2005/06)		
	2005/06 spend (£ million)	% Share of 2005/06
Jobseeker's Allowance	1.436	5.3%
Incapacity Benefit	2.691	10.0%
Severe Disablement Allowance	0.197	0.7%
Income Support	4.964	18.4%
Disability Living Allowance	2.443	9.0%
State Pension	5.111	18.9%
Pension Credits	2.110	7.8%
Housing Benefit/Council Tax Benefit	5.417	20.0%
Child Benefit	2.659	9.8%
Source: see above		

- 3.12. We estimate that in 2005/06 just over £27m was spent on benefits in the NDC area. For those benefits where we have data at two points in time (JSA, IB, SDA, Income Support, DLA and the State Pension), we find that £2.14m less was spent in 2005/06 than in 1999/00 (assuming no change in DLA and State Pension expenditure in the first years of the Programme). This is a reduction of 11 per cent, compared with only 3 per cent in Bradford as a whole. However, if State Pension payments are excluded the difference is much less marked: the NDC saw a 16 per cent reduction in non-Pension benefit payments, compared with 14 per cent across the district.
- 3.13. We have not considered all benefits or expenditure on benefits such as Child Tax Credit, Working Tax Credit or the Winter Fuel Payment.

Claimant numbers

- 3.14. Table 5 shows estimates of numbers of claimants for different benefits. This evidence largely reflects changes in benefit expenditure: falls in numbers claiming JSA and Income Support. These falls account for a substantial part of the reduction in benefits expenditure in the Bradford NDC area. However, it is unlikely that falls in claimant numbers experienced in the first five years of the programme will be experienced to the same extent in the second five years.

Table 5: Numbers of claimants by benefit				
2005 prices	Estimated number of claimants (to nearest ten)			
	1999/00		2005/06	
	NDC	District	NDC	District
Jobseeker's Allowance	860	13,760	510	8,780
Incapacity Benefit				
<i>Recipients</i>	610	12,950	590	12,820
<i>Credits only</i>	310	8,020	440	10,780
Severe Disablement Allowance	120	3,100	60	2,370
Income Support	1,630	39,250	1,090	22,480
Disability Living Allowance (a)	720	22,440	800	25,060
State Pension (a)	1,160	76,210	1,100	76,550
Pension Credits	*	*	750	26,240
Housing Benefit/Council Tax Benefit	*	*	2,110	47,660
Child Benefit				
<i>No. families</i>	*	*	1,710	65,730
<i>No. children</i>	*	*	3,620	126,570

Note: (a) 2002/03 and 2005/06, * = no data

Conclusion

- 3.15. We estimate that between £250–300m will be spent on benefits in the Bradford NDC area between 2000 and 2010 (at 2005/06 prices). Assuming constant changes in benefits over this period data suggest a reduction in benefits expenditure of around 10 per cent over this period. These estimates give an order of magnitude of possible change over time: more sophisticated modelling of trends in benefit expenditure could be undertaken to form a more accurate estimate of change. In particular, it is unlikely that falls in claimant numbers will be of the same extent in the second half of the programme: with the onset of recession increases in claimant numbers are more likely.

4. Public expenditure on health

Introduction

- 4.1. We have attempted to estimate two elements of health service expenditure: Primary Care Trust (PCT) expenditure and hospital expenditure. For reference, Annex 3 sets out methods deployed in calculating health expenditure.

Hospital expenditure

- 4.2. Using proportional weights we estimate that around 2.7 per cent of total Bradford District hospital expenditure can be assigned to NDC residents, 0.3 percentage points more than the NDC area's share of total district population. Assigning this proportion of the combined Bradford Teaching Hospitals and Airedale NHS Trust expenditure, the two NHS trusts serving Bradford local authority, to the NDC area we estimate that £8.267m was spent in the area in 2005/06 (Table 6). This equates to around £700 per resident – to the nearest £10.
- 4.3. Focussing solely on Bradford Teaching Hospitals expenditure, then we estimate £5.806m was attributable to NDC residents (Table 6). Per capita spend is therefore around £500 for the NDC area compared with £450 for the district. The rationale for using Teaching Hospitals data is that the Airedale NHS Trust covers a wider area than the Bradford District. The operational expenditure by this Trust in 2005/06 was £92.333m.

Table 6: Hospital expenditure			
	Estimated annual spend (£ million)		
	1999/00	2005/06	
		Bradford teaching hospitals	Bradford plus Airedale
Bradford NDC	*	5.806	8.267
Bradford District	*	217.825	310.158
NDC as a percentage of District	2.8%	2.7%	

Source: Hospital episode statistics, NHS reference costs, Bradford Teaching Hospitals NHS Foundation Trust statement of accounts, Airedale NHS Trust statement of accounts and authors' calculations

Note: * = no data

- 4.4. In an analysis of 1999/2000 data, the 2001 mid year population estimate showed that the NDC population made up 2.4 per cent of the total district population. In 1999/00 we estimate from Hospital Episode Statistics (HES) that NDC residents had claim to 2.8 per cent of hospital expenditure in the district. We could not access 1999/00 expenditure information to convert weights into monetary or per capita amounts. These figures provide some evidence of NDC residents having relatively less of a claim on hospital expenditure, but we cannot comment on if this was an actual reduction in real money terms.

Primary Care Trust

- 4.5. We have not been able to estimate PCT expenditure in the Bradford NDC area. Contact was made with the PCT and initially it seemed evidence might be made available, but ultimately this proved impossible. The amount of PCT expenditure going into the NDC is potentially large. Consequently, we have made an attempt to estimate it from annual accounts for the four PCTs serving Bradford District in 2005/06.
- 4.6. The spend figure Bramley and Evans use is GP practice level spending on all General Medical Services head of spending (both cash, and non-cash, limited) together with the prescription spending of the practice by the ward of residence of all people registered on the list. They then reconciled estimates to actual outturn spending totals by Health Authorities. However, our analysis is based solely on PCT wide expenditure data rather than expenditure at an individual GP practice level.
- 4.7. We have computed estimates based on annual accounts for the four PCTs serving Bradford District. From 2005/06 accounts, the net operating costs in 2005/06 for the four PCTs was:
- Bradford South and West PCT: £187.336m
 - North Bradford PCT: £140.865m
 - Bradford City PCT: £189.400m
 - Airedale PCT: £153.740m.
- 4.8. This puts total 'Bradford District' PCT net operating costs at £671.341m. PCT operating costs cover:
- Hospitals and community health services
 - Prescribing
 - Primary care
 - Administration and support functions
 - Teaching trust
 - Health inequalities
 - Reserves
 - Provider services.

- 4.9. Calculations using total net operating costs would lead to double counting of hospital expenditure. We have therefore only included Primary Healthcare purchased by the PCT. The accounts show that £175.442m of Primary Healthcare was purchased by the four PCTs (Table 7). This includes:
- General Medical Services (GMS)/Personal Medical Services (PMS)/Alternative Provider Medical Services (APMS)/Primary Care Trust Medical Services (PCTMS) (£77.814m)
 - Prescribing costs (£75.986m)
 - Pharmaceutical services (£8.000m)
 - Contractor led General Dental Services (GDS) and Personal Dental Services (PDS)
 - Trust led General Dental Services (GDS) and Personal Dental Services (PDS)
 - General Dental Services (£323,000)
 - General Ophthalmic Services (£4.777m)
 - Department of Health Initiative Funding (<£1,000)
 - Personal Dental Services (PDS) pilots (£13.284m)
 - Local Pharmaceutical Services Pilots (£493,000)
 - New Pharmacy Contract
 - Non-GMS Services from GPs (£2.319m)
 - Other (£438,000).
- 4.10. The Bradford District mid year population estimate in 2005 was 488,000; per capita PCT spend is therefore £360. Multiplying this Bradford wide per capita figure by the NDC population (2005 mid-year population estimate) gives an estimated PCT spend in Bradford NDC of £4.255m. This is larger than the estimates recorded by Bramley and Evans as they include only GP based Primary Care expenditure.

Table 7: PCT Expenditure⁶	
	Estimated annual spend (£ million)
	2005/06 Bradford PCTs
Bradford NDC	4.255
Bradford District	175.442
Bradford PCTs are Bradford South and West PCT, North Bradford PCT, Bradford City PCT and Airedale PCT	
Source Bradford and Airedale Teaching PCT statement of accounts	

⁶ For further on individual accounts see:
www.bradfordairedale-pct.nhs.uk/NR/exeres/3A3C3BF4-9550-4032-9769-95DE652D20B0/frameless.htm?NRMODE=Published
 For combined accounts see:
www.bradfordairedale-pct.nhs.uk/NR/rdonlyres/557B4A7F-E069-4634-968F-7454EACD78AF/52689/BradfordSWAccounts.xls

Conclusion

- 4.11. We estimate that public expenditure on healthcare (primary and secondary) in the NDC area for 2005/06 to be in the order of £10.1m or £850 per resident. This has been calculated by adding together PCT and hospital expenditure; using the four combined PCT accounts data for the former and Bradford Teaching Hospitals data for the latter. It is also likely that public health expenditure in Bradford increased rapidly over this period, largely as a result of the NHS Plan⁷ and Wanless Review⁸. Given increasing attention to health inequalities, the NDC area may have benefited disproportionately from these increases. This requires further research. However, it should also be noted that estimates of the composition of health expenditure at a neighbourhood level may be derived as much from socio-demographic factors (e.g. greater levels of expenditure on the elderly population and ante-, and post-, natal care) than factors of disadvantage and poverty.

⁷ Department of Health (2000) *The NHS Plan: a plan for investment, a plan for reform*, London: HMSO
www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyandGuidance/DH_4002960

⁸ Wanless, D. (2002) *Securing Our Future Health: Taking a Long-Term View*, London: HM Treasury
www.hm-treasury.gov.uk/consult_wanless_final.htm

5. Public expenditure on education

Introduction

- 5.1. We have attempted to estimate three elements of education expenditure: primary school; secondary school; higher education. Table 8 provides a summary of expenditure for primary and secondary schools in the 2005/06 financial year.

Table 8: Primary and Secondary school expenditure		
		Estimated annual spend (£ million)
		2005/06
Primary	Bradford NDC	3.951
	Bradford District	129.886
	NDC as a percentage of District	3.0%
Secondary	Bradford NDC	2.801
	Bradford District	117.332
	NDC as a percentage of District	2.4%

Source: SDRC, Section 52 statements and authors' calculations

- 5.2. Annex 4 sets out methods for calculating public expenditure on education.

Primary schools

- 5.3. Total expenditure for all Bradford District primary schools was £129.886m for the 2005/06 financial year. Our calculations estimate that £3.951m of this is attributable to Bradford NDC pupils. This implies that NDC primary schools receive 3 per cent of the total primary school budget; whilst NDC primary pupils make up 2.7 per cent of all district primary pupils. Using per capita figures for each school (held on the 'section 52 statements') it is estimated that NDC pupils would make up 2.2 per cent of the total primary school expenditure (£2.871m). The higher amount that NDC pupils are actually estimated to have received is largely explained by higher numbers of pupils with Special Educational Needs (SEN) and pupils receiving Free School Meals (FSM).

Secondary schools

- 5.4. Total expenditure for all Bradford District secondary schools was £117.332m. Our calculations estimate that £2.801m of this is attributable to Bradford NDC pupils. This implies that NDC secondary schools receive 2.4 per cent of the total secondary school budget, with NDC secondary pupils making up 2.3 per cent of all district secondary pupils. Using per capita figures available for each school (held on the 'section 52 statements') it is estimated that NDC pupils would only receive 2 per cent of the total secondary school expenditure (£2.397m). NDC pupils receive a slightly higher amount per capita than expected based on the school that they attend, again largely because of higher levels of SEN and FSM.

Higher education

- 5.5. The calculation of higher education (HE) expenditure received by Bradford NDC is more complex. It assumes that expenditure into the higher education system is received by the student where their parents are domiciled (i.e. the student's home rather than term-time address). The analysis of HE expenditure is drawn from Higher Education Statistics Agency (HESA) held data.
- 5.6. Table 9 shows estimated higher education expenditure into Bradford District and the NDC area in both 1999/00 and 2005/06. Initial analysis broadly reveals expenditure to be as expected, given Bradford NDC's share of the total local authority population. However, given the NDC's relatively young population, it would have been expected to be higher. Subtracting income received from tuition fees (except when payment was from government sources) from the standard resource gives an estimated £769,000 of public sector higher education expenditure going into the NDC area in 2005/06.

Table 9: Higher Education expenditure

		Estimated annual spend (£ million)	
		1999/00	2005/06
Bradford NDC	Standard resource	0.776	1.099
	Income	0.197	0.330
	Net	0.578	0.769
Bradford District	Standard resource	34.526	45.355
	Income	9.120	13.611
	Net	25.406	31.745
NDC as a percentage of District		2.3%	2.4%

Source: Higher Education Statistics Agency (HESA) and authors' calculations

- 5.7. The HESA data also allow analysis of FTE students by the price groups of the types of course that they attend. Courses in medicine or engineering would be deemed to cost more than those in the social sciences or humanities. Table 10 shows, for the two time periods, numbers of FTE students from the NDC and the district on courses in different price bands.

		Specified JACS Principal subject groups			
		Group A	Group B	Group C	Group D
1999/00	Bradford NDC	1	69	42	61
	Bradford District	116	2,319	2,276	3,213
2005/06	Bradford NDC	1	47	104	80
	Bradford District	185	1,663	4,138	3,435

Source: Higher Education Statistics Agency (HESA)

- 5.8. NDC students are more likely to undertake 'lower cost' courses. Moreover the proportion of students on higher cost courses (A and B) has fallen (Table 11).

		Specified JACS Principal subject groups			
		Group A	Group B	Group C	Group D
1999/00	Bradford NDC	1	40	24	35
	Bradford District	1	29	29	41
2005/06	Bradford NDC	1	20	45	34
	Bradford District	2	18	44	36

Source: Higher Education Statistics Agency (HESA)

Conclusion

- 5.9. The analysis of public expenditure on primary and secondary education revealed that greater amounts were spent on NDC pupils than would have been expected given their number and the school they attended. The numbers of NDC pupils having SEN and/or being in receipt of FSM are the primary reasons for NDC pupils receiving additional primary and secondary education resources. In terms of higher education, the proportion of higher education expenditure is broadly in line with district averages, although when variations in course costs are considered, the NDC does less well compared with the district average.

6. Public expenditure on housing

Introduction

- 6.1. In 2001 29,350 households in Bradford were living in social rented accommodation, of which 1,500, or 5 per cent, were in the NDC. However, it should also be noted that the NDC contributed to a major demolition programme of social rented housing in the first part of the programme.
- 6.2. Annex 5 outlines methods used to estimate capital expenditure on housing.

Housing Corporation capital spend

- 6.3. Our analysis of expenditure on public housing primarily draws on Housing Corporation expenditure (which provides funding through local authorities or housing associations). Table 12 shows that the NDC area received more as a proportion of district expenditure than its population would suggest, although probably an amount in proportion to its stock of social housing. Housing Corporation capital grants for new social housing units or refurbishments in the Bradford NDC area are estimated at £582,000 for general needs housing (11 units).

Table 12: General needs housing

2005 prices	Estimated annual spend on General Needs Housing 2005/06 (£ million)
Bradford NDC	0.582
Bradford District	13.866
NDC as a percentage of District	4.2%
Source: CORE, Housing Corporation	

Supported housing

- 6.4. In terms of new supported housing units in the Bradford NDC area, we found that none had been built from this source of expenditure in 2005/06 (Table 13).

Table 13: Supported housing expenditure	
2005 prices	Estimated annual spend on Supported Housing 2005/06 (£ million)
Bradford NDC	0
Bradford District	2.099
NDC as a percentage of District	0%
Source: CORE, Housing Corporation	

Conclusion

- 6.5 For the year for which data are available, there was no Supported Housing expenditure and an estimated £582,000 capital expenditure. This year also follows a sustained period of capital expenditure by Bradford NDC and other agencies on housing (and demolitions) in the area. It is therefore likely that capital expenditure fluctuated markedly in preceding years.

7. Public expenditure on personal social services

Introduction

- 7.1. The amount spent on all Personal Social Services (PSS) increased in real terms between 2001/02 and 2005/06, in both Bradford NDC area and also across Bradford District (Table 14). As a proportion of district level spend, spend in the NDC area decreased from 3.6 per cent to 3.4 per cent, but remained higher than the proportion of Bradford District residents living in the NDC area (2.4 per cent).

Table 14: Total PSS expenditure		
	Estimated total annual spend on Personal Social Services (£ million)	
	2001/02	2005/06
Bradford NDC	4.028	5.596
Bradford District	112.663	164.770
NDC as a percentage of District	3.6%	3.4%
Source: Department of Health/NHS Information Centre, SDRC, NOMIS 2005 prices		

- 7.2. Annex 6 sets out the methods used to estimate public expenditure on Personal Social Services.

Children and families services

- 7.3. Expenditure on children and families increased in real terms between 2001/02 and 2005/06, at both NDC and district level (Table 15). Spend in the NDC area as a proportion of district-wide spend increased from 4.1 per cent to 4.5 per cent. It is unclear what explains this change. However, it might, for example, be due to SureStart funding and the roll out of other initiatives targeted at more disadvantaged groups.

Table 15: Children and Families Services		
	Estimated annual spend on children and families (£ million)	
	2001/02	2005/06
Bradford NDC	1.582	2.506
Bradford District	38.633	55.839
NDC as a percentage of District	4.1%	4.5%
Source: Department of Health/NHS Information Centre, SDRC, NOMIS 2005 prices		

Older people

- 7.4. The amount spent on older people also increased in real terms between 2001/02 and 2005/06, in both Bradford NDC area and Bradford District (Table 16). As a proportion of district level spend, NDC area expenditure decreased from 2.8 per cent to 2.5 per cent. This is in part be explained by a slight fall in numbers (60 or 5 per cent) entitled to the state pension in the area, although this would only account for around half the fall. It should be stressed that calculations are based on estimates derived from known population characteristics and not from actual spend data.

Table 16: Older People		
	Estimated annual spend on older people (£ million)	
	2001/02	2005/06
Bradford NDC	1.334	1.682
Bradford District	48.262	67.370
NDC as a percentage of District	2.8%	2.5%
Source: Department of Health/NHS Information Centre, SDRC, NOMIS 2005 prices		

Adults with physical disabilities, learning disabilities or mental health needs

- 7.5. Finally, spend on adults with physical disabilities, learning disabilities or mental health needs increased in real terms between 2001/02 and 2005/06, in both the NDC and Bradford as a whole (Table 17). As a proportion of district spend, spend in the NDC area decreased from 3.8 per cent to 3.4 per cent. It is unclear what explains this fall.

Table 17: Adults with physical disabilities, learning disabilities or mental health needs

	Estimated annual spend on adults under 65 with physical disabilities, learning disabilities or mental health needs (£ million)	
	2001/02	2005/06
Bradford NDC	0.930	1.346
Bradford District	24.314	39.167
NDC as a percentage of District	3.8%	3.4%
Source: Department of Health/NHS Information Centre, SDRC, NOMIS 2005 prices		

Conclusion

- 7.6. Our findings suggest that expenditure on social services increased from £360 per capita in 2001/02 (to the nearest £10) to £470 in 2005/06 (both at 2005/06 prices). This is a substantial increase. However, over the same period per capita spend for the District increased more rapidly to £340 per capita.

8. Public expenditure on policing, community safety and the fire service

Policing

- 8.1. Annex 7 sets out methods used to estimate public expenditure on policing, community safety and fire services.
- 8.2. Spend on policing increased in real terms between 2001/02 and 2004/05, in both Bradford NDC area and Bradford District (Table 18). As a proportion of district level spend, spend in the NDC area increased from 4.4 per cent to 5.4 per cent, much higher than the proportion of Bradford District residents living in the NDC would suggest. It is unclear why there was such a sharp increase over this period. It may be the result of a greater focus on particular types of crime.

2005 prices	Estimated annual spend on policing (£ million)	
	2001/02	2004/05
Bradford NDC	3.063	3.932
Bradford District	69.349	72.936
NDC as a percentage of District	4.4%	5.4%

Source: Neighbourhood Statistics, SDRC, Chartered Institute of Public Finance and Accountancy, West Yorkshire Police Authority, Home Office

- 8.3. This change marks an increase in per capita expenditure in the NDC area from £270 to £332 over this period, whilst at a district level expenditure remained at £150 per capita (to the nearest £10).

Fire service

- 8.4. Estimates of expenditure on the fire service suggest that the NDC area receives over double public expenditure per capita than the district (£110 per capita to £50 per capita in 2005/06, to the nearest £10), although this ratio fell between 2001/02 and 2005/06 (Table 19). Fire service expenditure includes responses to emergencies (RTAs and fires) as well as educational and fire prevention work.

Table 19: Fire and Rescue service expenditure

2005 Prices	Estimated annual spend on fire and rescue (£ million)	
	2001/02	2005/06
Bradford NDC	1.355	1.250
Bradford District	23.051	23.940
West Yorkshire FRS	77.138	90.755
NDC as a percentage of District	5.9%	5.2%

Source: Fire and Resilience Directorate Communities and Local Government, West Yorkshire Fire and Rescue Service statement of accounts and authors' calculations

Note: Based on net cost of the service expenditure

9. Gaps in the analysis and lessons for future studies

Introduction

- 9.1. This study has sought to provide estimates of the composition of the main areas of public expenditure at both the NDC area, and also the local authority, level. It has also sought where possible to identify changes in public expenditure, notably from the start of the NDC Programme (1999/00) to the most recent point at which reasonable data are available (2005/06 – the mid point of the Programme).
- 9.2. The keynote work on public expenditure estimates undertaken by a team led by Bramley focused generally on ward level expenditure and was funded as a substantial piece of 'stand-alone' research.⁹ It has not been possible fully to replicate the Bramley et al study here. A number of gaps remain.

Benefit payments

- 9.3. It has not been possible to collect data on:
 - Child Tax Credit
 - Working Tax Credit
 - War Pension (these data are not available from public sources to a low level geography)
 - Costs of provision of benefits (administrative costs, staffing, overheads, etc).
- 9.4. Of these benefits the most significant are the two tax credits, especially as they form a central part of the Welfare to Work agenda. It would have also been useful to have explored levels of take up within disadvantaged communities.

Other notable gaps

- 9.5. The Bramley et al study provided a list of mean per capita expenditure estimates across all major domestic areas of expenditure (i.e. excluding defence and foreign policy). We have sought to focus on the main categories

⁹ Bramley, G. Evans, M. and Atkins, J. (1998), *Where Does Public Expenditure Go? Report of a Pilot Study to Analyse the Flows of Public Expenditure into Local Areas*, for the Department of the Environment, Transport and the Regions. London: DETR.

on this list. However, some areas of expenditure have ceased (e.g. Training and Enterprise Councils (TECs)). Whilst some of these areas have been replaced (e.g. TECs with Business Links), others have not. In addition there will also be some genuinely new areas of expenditure (because of new agencies, new programmes or new benefit payments to individuals). Nevertheless, other than for the introduction of tax credits, we believe we have addressed major new areas of expenditure. A summary of gaps is provided in Table 20.

Table 20: Summary of gaps in analysis

Service	National per capita mean (£)
Other local environmental	74
Local roads	64
Further education	55
Rail subsidies	51
Local government overheads	50
Trunk roads	42
Attendance allowance	38
LA housing capital	31
Family credit	29
Special education	29
Employment service	26
War pensions	22
Local environmental capital	20
Other local education	19
Widows' benefit	18
LA net housing subsidy	16
Training and Enterprise Councils	16
Parks and open spaces	12
Street cleaning	12
Industrial injury benefit	12
Underground subsidy	11
Invalid care allowance	11
Libraries	10
Sport, swimming and leisure centres	10
Probation	10
Concessionary fares	9
Bus subsidy	7
Single Regeneration Budget	6
Refuse collection	6
Social Fund	4
Independent Living Fund	2

Source: Adapted from Bramley and Evans (2000) pp. 260–263.

Problems and lessons for future studies

9.6. The work by the team led by Bramley guided this study. Applying this approach has been helpful, although the following comments highlight some of the difficulties encountered:

- **non-standard geography:** the Bradford NDC area does not approximate to a standard administrative unit; it crosses ward boundaries and combines parts of different super output areas
- **national secondary data:** provision from agencies was problematic and it has only been possible to collect data through commissioning special runs from SDRC, NOMIS and NeSS
- **local support:** it was unfortunate that we tried to carry out this work at the same time as several high profile data protection breaches occurred; many agencies in Bradford were wary of providing data.

10. Conclusion

Introduction

- 10.1. The original rationale for the study was that by understanding changes in the composition of public expenditure in one NDC area (Bradford), it may be possible to provide evidence as to:
- the relative scale of NDC expenditure compared with overall public expenditure
 - whether successful area based regeneration changes the composition of local GDP, with less demand on public resources and a larger private sector.
- 10.2. General public expenditure per capita is far greater than that brought by the NDC Programme.
- 10.3. The study has been able to provide a detailed assessment of changes in benefits expenditure (with data at two time points). However, for most areas of public expenditure it has only been possible to estimate expenditure at one time point (2005/06). This is for a range of reasons outlined in Chapter 9. The study has also not explored changes in public expenditure with respect to local GDP (NDC and district). This is due both to measurement and data collection issues (i.e. obtaining meaningful data at small non-standard geographies).

Key findings

- 10.4. Table 21 summarises key findings using per capita estimates of expenditure for the NDC area and Bradford District. In terms of the overall composition of expenditure (for those areas of expenditure for which data are available):
- benefits expenditure at NDC and district levels account for nearly half total public expenditure; the proportions are similar because whilst the NDC area receives a higher level of worklessness-related benefits the district receives a higher level of State Pension benefits (reflecting the relatively young demographic profile of the NDC area)
 - in the NDC area, we estimate public health expenditure accounts for around 18 per cent of total expenditure, education around 13 per cent, social services expenditure around 10 per cent and policing around 7 per cent.
- 10.5. Together these areas of public expenditure account for nearly all expenditure for which we have data.

10.6. Comparing the NDC area with the district, findings reveal:

- considerably higher levels of public expenditure on key benefits (JSA, IB, Income Support, HB/CTB) as well as on Housing Corporation Capital Expenditure, primary education, policing, the fire service and social services
- less expenditure on State Pension benefits (reflecting the demographic profile of the area)
- similar levels of expenditure on health (primary and secondary), older people social services and secondary education; however, it should be stressed that expenditure on primary health care was calculated using a direction population proportion and not weighted.

10.7. These findings are perhaps largely to be expected with the exception of secondary education and health. Given the relatively young demographic profile of the NDC area, it is unsurprising to see more spend on primary education and less on the State Pension, compared with Bradford District as a whole. Similarly, given the high levels of worklessness and crime in NDC areas, it is not surprising that expenditure on benefits and policing is higher than the district average.

Table 21: Per Capita Expenditure (NDC and Bradford District)		
2005/06	NDC	District
Mid Year Population Estimates	11,835	488,000
	£	£
Benefits		
Jobseeker's Allowance	121	51
Incapacity Benefit	227	119
Severe Disablement Allowance	17	16
Income Support	419	214
Disability Living Allowance	206	161
State Pension	432	723
Pension Credits	178	122
Housing Benefit/Council Tax Benefit	458	251
Child Benefit	225	194
Public Health		
Secondary Care	491	446
Primary Care	360	360
Net Secondary and Primary Care	850	806
Education		
Primary	334	266
Secondary	237	240
Higher Education	65	65
Housing Corporation		
Capital Spend	49	28
Supported Housing	0	4
Social Services		
Childrens and Families Services	212	114
Older People	142	138
Adults with physical disabilities, learning disabilities or mental health needs	114	80
Net Social Services	473	338
Policing, Community Safety and the Fire Service		
Policing	332	149
Fire Service	106	49
Estimated Per Capita Expenditure	4,729	3,797

Note: Police expenditure is for the 2004/05 year

- 10.8. It is **not possible to draw significant conclusions about change in expenditure over time**. Where data are available we find:
- substantial falls (and greater than the district) in benefits payments, especially JSA and Income Support, with slight falls in IB, SDA and the State Pension
 - substantial increases in social services expenditure.
- 10.9. In total we estimate that in 2005/06 there was around £4,700 per capita of public expenditure in the Bradford NDC Partnership area, just under half on benefits. By the same time (year six of the Programme) the NDC Partnership had spent £530 per capita per annum, with this figure set to fall in the final years of the Programme. NDC expenditure is clearly a significant component of public expenditure in the NDC area, but by no means the largest element.

Annex 1: Methods – public expenditure on benefits

Public expenditure has been estimated for the following benefits:

- Jobseeker’s Allowance (JSA) 1999/00 and 2005/06
- Incapacity Benefit (IB) 1999/00 and 2005/06
- Severe Disablement Allowance (SDA) 1999/00 and 2005/06
- Income Support (IS) 1999/00 and 2005/06
- Disability Living Allowance (DLA) 2002/03 and 2005/06
- State Pension 2002/03 and 2005/06
- Pension Credits 2005/06 only
- Housing Benefit/Council Tax Benefit (HB/CTB) 2005/06 only
- Child Benefit (CB) 2005/06 only.

While the precise methods of estimation varied between the different benefits, a common approach was used throughout. This involved three stages: producing a **count of recipients** of a particular benefit (or sub-categories within that benefit) at both Bradford NDC and Bradford District level; multiplying this by the relevant **weekly payment amount** (per person) for the specific benefit, either based on district-level averages or standard rates of payment; and **scaling up** by a factor of 52 to give estimated annual spend.

This method only includes amounts payable to benefit recipients and therefore omits any administration costs such as staffing and overheads. Further spend data were requested from Jobcentre Plus but unfortunately none was available.

The estimates of benefits expenditure rely on two main assumptions:

- that district-level averages and proportions (amount of benefit paid, sub-groups of claimants, etc.) are applicable to NDC-level estimates
- that, when using weighted Lower Layer Super Output Area (LSOA) data to approximate to the NDC area, benefit claimants are distributed evenly within these LSOAs.

Issues specific to the different benefits will now be considered in turn.

Jobseeker’s Allowance

- NDC-level counts of JSA claimants aged 16–59 were provided by SDRC; these were scaled up to estimate counts of JSA claimants of all ages, using district-level age breakdowns of benefit claimants for each year: approximately 99 per

cent of all claimants in Bradford District are aged 16–59 (source: Work and Pensions Longitudinal Study (WPLS) data available via NOMIS)

- district-level counts of all JSA claimants were taken from WPLS data
- average weekly JSA payment amounts for Bradford District (WPLS/NOMIS) were used to estimate both NDC- and district-level expenditure.

Incapacity Benefit

- NDC-level counts of IB/SDA claimants aged 16–59 were provided by SDRC; these were apportioned to different types of benefit (IB short term higher, IB short term lower, IB long term, IB credits only, SDA) and scaled up to estimate counts of IB claimants of all ages, using district-level breakdowns for each year and each benefit type (WPLS/NOMIS); SDA claimants were left out to be considered separately; 'IB credits only' claimants were excluded as no direct benefit payment is made
- district-level counts of all IB claimants were taken from WPLS data, excluding IB credits and SDA
- average weekly payment amounts for each type of IB for Bradford district (WPLS/NOMIS) were used to estimate both NDC- and district-level expenditure.

Severe Disablement Allowance

- LSOA- and district-level counts of all SDA claimants were taken from WPLS data; LSOA counts were weighted and summed to estimate the Bradford NDC area using look-up tables provided by SDRC
- average weekly SDA payment amounts for Bradford District (WPLS/NOMIS) were used to estimate both NDC- and district-level expenditure.

Income Support

- LSOA-level counts of IS claimants in three statistical categories ('incapacity benefit claimants', 'lone parents', 'carers and others') were taken from WPLS data; these were weighted and summed to estimate the Bradford NDC area
- district-level counts of all IS claimants were taken from WPLS data
- average weekly IS payment amounts for Bradford District (WPLS/NOMIS) were used to estimate both NDC- and district-level expenditure; for NDC-level estimates these amounts were broken down by the three statistical categories.

Disability Living Allowance

- LSOA- and district-level counts of all DLA claimants were taken from WPLS data, broken down by each type of mobility award (lower, higher, nil) and care award (lowest, middle, highest, nil); LSOA counts were weighted and summed to estimate the Bradford NDC area
- estimated NDC-level counts were then scaled down from 'claimants' to estimate 'recipients': approximately 99 per cent of DLA claimants across Bradford receive payment (WPLS/NOMIS); others have payment suspended, often due to a spell in hospital; this adjustment was not necessary at the district-level as actual numbers of recipients were provided
- actual weekly rates of payment for each year and each type of award were taken from the historical archive of benefit rates, maintained by the Institute for Fiscal Studies (IFS).

State Pension

- LSOA-level counts of State Pension recipients, broken down by age and sex, were taken from WPLS data; these were weighted and summed to estimate the Bradford NDC area.
- district-level counts of all State Pension recipients were taken from WPLS data
- average weekly amounts of pension paid for Bradford District (WPLS/NOMIS) were used to estimate both NDC- and district-level expenditure; for NDC-level estimates these amounts were broken down by age and sex.

Pension Credits

- LSOA-level counts of Pension Credit recipients, broken down by type of award (guarantee element only, saving element only, guarantee and saving elements), were taken from WPLS data; these were weighted and summed to estimate the Bradford NDC area
- district-level counts of all Pension Credit recipients were taken from WPLS data
- average weekly amounts of Pension Credit paid for Bradford District (WPLS/NOMIS) were used to estimate both NDC- and district-level expenditure; for NDC-level estimates these amounts were broken down by type of award.

Housing Benefit/Council Tax Benefit

- district-level total spend on HB and CTB was taken directly from Bradford Metropolitan District Council's *Statement of Accounts 2005–6*
- LSOA-level counts of HB/CTB claimants were taken from Neighbourhood Statistics; these were weighted and summed to estimate the Bradford NDC area

- the average annual amount of benefit paid per claimant was derived from total spend data (in the *Statement of Accounts*) and number of claimants (Neighbourhood Statistics) both at a Bradford-wide level; this was then used to estimate NDC-level expenditure
- as these estimates used annual data, it was not necessary to multiply by 52.

Child Benefit

- LSOA- and district-level counts of all families in receipt of Child Benefit, broken down by number of children in the family, were taken from Neighbourhood Statistics; the proportion of these that were lone parent families was estimated using Child Tax Credit data from HM Revenue and Customs; LSOA counts were then weighted and summed to estimate the Bradford NDC area
- actual weekly rates of payment for first child (lone parent), first child (couple) and subsequent children were taken from the IFS historical archive of benefit rates.

Annex 2: Public expenditure on benefits – detailed findings

This section provides further details of the data used for the analysis contained in section 3 on public expenditure on benefits. It considers the main benefits in turn.

Jobseeker's Allowance

2005 prices	Estimated annual spend on JSA (£ million)	
	1999/00	2005/06
Bradford NDC	2.777	1.436
Bradford District	44.327	24.896
NDC as a percentage of District	6.3%	5.8%
Source: SDRC, NOMIS		

Key findings:

- the amount spent on Jobseeker's Allowance decreased in real terms between 1999/00 and 2005/06, in both Bradford NDC area and Bradford District
- as a proportion of district level spend, spend in the NDC area decreased from 6.3 per cent to 5.8 per cent, but remained much higher than the proportion of Bradford District residents living in the NDC (2.4 per cent).

Incapacity Benefit

2005 prices	Estimated annual spend on IB (£ million)	
	1999/00	2005/06
Bradford NDC	2.830	2.691
Bradford District	59.672	58.251
NDC as a percentage of District	4.7%	4.6%
Source: SDRC, NOMIS		

Key findings:

- the amount spent on Incapacity Benefit decreased in real terms between 1999/00 and 2005/06, in both Bradford NDC area and Bradford District
- as a proportion of district level spend, spend in the NDC area decreased slightly from 4.7 per cent to 4.6 per cent.

Severe Disablement Allowance

2005 prices	Estimated annual spend on SDA (£ million)	
	1999/00	2005/06
Bradford NDC	0.362	0.197
Bradford District	9.372	7.606
NDC as a percentage of District	3.9%	2.6%
Source: SDRC, NOMIS		

Key findings:

- the amount spent on Severe Disablement Allowance decreased in real terms between 1999/00 and 2005/06, in both Bradford NDC area and Bradford District
- as a proportion of district level spend, spend in the NDC area decreased from 3.9 per cent to 2.6 per cent, remaining only slightly higher than the proportion of Bradford District residents living in the NDC (2.4 per cent).

Income Support

2005 prices	Estimated annual spend on IS (£ million)	
	1999/00	2005/06
Bradford NDC	5.858	4.964
Bradford District	136.833	104.412
NDC as a percentage of District	4.3%	4.8%
Source: SDRC, NOMIS		

Key findings:

- the amount spent on Income Support decreased in real terms between 1999/00 and 2005/06, in both Bradford NDC area and Bradford District
- as a proportion of district level spend, spend in the NDC area increased from 4.3 per cent to 4.8 per cent.

Disability Living Allowance

2005 prices	Estimated annual spend on DLA (£ million)	
	2002/03	2005/06
Bradford NDC	2.119	2.443
Bradford District	67.634	78.500
NDC as a percentage of District	3.1%	3.1%
Source: SDRC, NOMIS, Institute for Fiscal Studies		

Key findings:

- the amount spent on Disability Living Allowance increased in real terms between 2002/03 and 2005/06, in both Bradford NDC area and Bradford District
- as a proportion of district level spend, spend in the NDC area remained at 3.1 per cent.

State Pension

2005 prices	Estimated annual spend on State Pension (£ million)	
	2002/03	2005/06
Bradford NDC	5.037	5.111
Bradford District	329.454	352.681
NDC as a percentage of District	1.5%	1.4%
Source: SDRC, NOMIS		

Key findings:

- the amount spent on State Pension increased in real terms between 2002/03 and 2005/06, in both Bradford NDC area and Bradford District
- as a proportion of district level spend, spend in the NDC area decreased slightly from 1.5 per cent to 1.4 per cent, slightly lower than the proportion of Bradford District residents of pensionable age living in the NDC (1.5 per cent).

Pension Credits

Note: Pension Credits were introduced in October 2003, replacing the Minimum Income Guarantee (Income Support for the over 60s). This is included in 1999/00 estimates of expenditure on Income Support, so only one time point (2005/06) is used for Pension Credits.

2005 prices	Estimated annual spend on Pension Credits 2005/06 (£ million)
Bradford NDC	2.110
Bradford District	59.600
NDC as a percentage of District	3.5%
Source: SDRC, NOMIS	

Key findings:

- As a proportion of district level spend, Pension Credit spend in the NDC in 2005/06 was 3.5 per cent, higher than the proportion of Bradford District residents of pensionable age living in the NDC (1.5 per cent).

Housing Benefit/Council Tax Benefit

2005 prices	Estimated annual spend on HB and CTB 2005/06 (£ million)
Bradford NDC	5.417
Bradford District	122.400
NDC as a percentage of District	4.4%
Source: SDRC, Neighbourhood Statistics, Bradford Metropolitan District Council	

Key findings:

- As a proportion of district level spend, HB/CTB spend in the NDC in 2005/06 was 4.4 per cent.

Child Benefit

2005 prices	Estimated annual spend on Child Benefit 2005/06 (£ million)
Bradford NDC	2.659
Bradford District	94.786
NDC as a percentage of District	2.8%
Source: SDRC, Neighbourhood Statistics, HMRC, Institute for Fiscal Studies	

Key findings:

- As a proportion of district level spend, Child Benefit spend in the NDC in 2005/06 was 2.8 per cent, marginally higher than the proportion of Bradford District's children living in the NDC (2.7 per cent).

Annex 3: Methods – public expenditure on health

Hospital expenditure

An effort has been made to replicate the Bramley et al method in the estimation of hospital expenditure (Bramley et al, p.157¹⁰). The crux of the approach involved calculating proportional weights which are then applied to known expenditure to assign expenditure to the district and NDC.

A special run of hospital episode statistics (HES) data was obtained from HES online. This included the number of hospital episodes recorded by 'healthcare resource group' (HRG) classification for residents domicile in each of: Bradford NDC (defined by an amalgamation of postcodes), the district and the Health Authority (HA) at time points 1999/00 and 2005/06. These data were combined with weighted National average unit costs for a given HRG in a given year to calculate the proportional weights.¹¹

These proportional weights were then applied to operating expenses from two sources to assign expenditure to both the district and Bradford NDC:

- Bradford Teaching Hospitals NHS Foundation Trust in 2005/06, taken from the Trust's annual accounts for the year ending 31st March 2007.¹²
- Airedale NHS Trust in 2005/06, taken from the Trust's annual accounts for the year ending 31 March 2006. Note this Trust is located on the border of the district so there is a question about coverage: how much spend is on Bradford patients¹³?

There are some reflections which should be drawn on this approach. We have used National HRG unit costs and assumed that these are true for Bradford Hospitals. Access to Hospital-level HRG unit costs may improve our estimates. We have not estimated out-patient episodes and their associated costs. We have assumed that these reflect in-patient activity.

¹⁰ Bramley, G. Evans, M. and Atkins, J. (1998), *Where Does Public Expenditure Go? Report of a Pilot Study to Analyse the Flows of Public Expenditure into Local Areas*, for the Department of the Environment, Transport and the Regions. London: DETR.

¹¹ National average unit costs have been weighted by elective/non-elective, excess bed days and the Reference Costs Index; the Reference Costs Index takes into account differences in unit cost spend by hospital (see Department of Health website) www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_062884

¹² www.bradfordhospitals.nhs.uk/home/annual-report/Accounts%202006%20-07%20-%20BTHNHSFT_200607_v2.pdf

¹³ www.airedale-trust.nhs.uk/AboutUs/TrustBoard/tb_Agendas/TrustBoard2006/trustboardwebjuly06/index.htm

Primary Care Trust

We have not been able to estimate Primary Care Trust (PCT) expenditure into Bradford NDC. Contact was made with the PCT; initially it seemed that they would be able to help, but in the end the data were not made available. The amount of PCT expenditure going into the NDC is potentially large. Consequently, we have made an attempt to estimate this from annual accounts for the four PCTs that served Bradford district in 2005/06.

Bramley and Evans¹⁴ calculate GP-Based Primary Care Spending using the 'Exeter System' database to identify geographical coverage of GP practice spending and apportion spending to wards. They also suggest that the introduction of Personal Medical Services (PMS) may allow access to data on PMS consultation-based estimates. Due to the lateness of Bradford PCT informing that they would not be able to provide data we have not had time to follow this method.

The spend figure used by Bramley and Evans is GP practice level expenditure on all General Medical Services head of spending (both cash limited and non-cash limited) together with the prescription spending of the practice by the ward of residence of all people registered on the list. They then reconciled the estimates to actual outturn spending totals by HAs for the appropriate heading of primary care.

Our expenditure data come from PCTs – we do not have access to data at practice level. The research team have not had time to fully explore accessing consultation data. However, it may be possible to commission a special run from The Information Centre for Health and Social Care or from Qresearch.

We have computed estimates based on total primary healthcare purchased, taken from annual accounts for the four PCTs that serve Bradford District. We calculated expenditure per capita and then multiplied this by the population of Bradford NDC.

There are some weaknesses with this approach. We have simply estimated district per capita primary health care expenditure and multiplied this up to the NDC population. The estimation procedure would be stronger with access to consultation information by geographic area (district and NDC) and practice level expenditure (See Bramley and Evans' method).

¹⁴ Bramley, G. and Evans, M. (2000), Getting the smaller picture: small-area analysis of public expenditure incidence and deprivation in three English cities, *Fiscal Studies*, 21:2, pp. 231–268.

Annex 4: Methods – public expenditure on education

Schools – primary and secondary

We attempted to replicate the Bramley et al¹⁵ method in the estimation of school expenditure (Bramley et al, p.157). The methodology used school budgets information as a source of district expenditure and PLASC data on pupil numbers, free school meals (FSM) take up and special education needs (SEN) numbers supplied by SDRC to estimate the expenditure on Bradford NDC pupils.

All local authority schools budget information is held in spreadsheet form in 'section 52 statements'. The research team had access to these for 2005/06 but was unable to access 2002/03 'section 52 statements' i.e. the earliest data that SDRC could supply from PLASC. SDRC provided data for all primary and secondary schools, broken down by school year, the number of pupils and NDC pupils, the number of pupils with SEN and NDC pupils with SEN and the number of pupils that receive FSM and NDC pupils that receive FSM.

Using the data provided by SDRC, estimations were made of the proportion of each school's expenditure attributable to children from the NDC area. To do this appropriate 'category' expenditure figures for each school were weighted by: the proportion of NDC pupils in the school, the proportion of NDC pupils in each year, the proportion of SEN NDC pupils or the proportion of NDC pupils receiving FSM.

The following assumptions have been made: We have assumed that NDC to district proportions of actual numbers in (a) year, (b) school, (c) with SEM and (d) receiving FSM is a correct method to apportion/estimate expenditure.

Higher education

Again, drawing on Bramley and Evans, the method to estimate higher education expenditure combines known characteristics of the Bradford NDC and district higher education students with the funding formulae used by the HE funding council (HEFCE).

The analysis applies domicile as the place of the student's permanent/home address prior to the start of their studies. For example a student at Sheffield Hallam University who lived in Bradford NDC area prior to commencing their studies would count in the NDC and district figures. The characteristics of Bradford NDC and district higher education students were obtained through a special run of data purchased from the

¹⁵ Bramley, G. Evans, M. and Atkins, J. (1998), *Where Does Public Expenditure Go? Report of a Pilot Study to Analyse the Flows of Public Expenditure into Local Areas*, for the Department of the Environment, Transport and the Regions. London: DETR.

Higher Education Statistics Agency (HESA). This was for Bradford NDC (defined by postcodes) and Bradford District in the years 1999/00 and 2005/06 FTE counts of students by (a) subject group (b) institution location (London/non London (c) year of study (d) level of study (e) main source of fee and the number of part time students.

We have made the following assumptions: standard resource has been calculated based on FTE, PT, course price group, London/non London. Due to unavailability of data and a risk of small numbers leading to disclosure we have not included student premiums for long courses and Institutional premiums for: institution specific premium, small institutions and old and historic buildings.

We have calculated assumed total income from tuition fees as assumed fees paid by students whose main source of fee is not Department of Health/NHS/Social Care, Department of Social Services, Department of Education and Skills and Other HM government departments/public bodies.

Annex 5: Methods – public expenditure on housing capital

Public expenditure on housing capital projects, in the form of Housing Corporation grants, was estimated using data from the Continuous Recording System (CORE) and Housing Corporation grant allocation data, following a similar method to that used by Bramley and colleagues¹⁶.

There were some availability issues: CORE data for Bradford are incomplete before 2003, when final remaining local authority housing stock was transferred, hence only one time point is used (2005/06). There is also an issue with the small numbers of housing units involved in a given year and the tendency for numbers to fluctuate from year to year.

We have assumed that Housing Corporation grant allocations equate to actual spend.

For both general needs and supported housing, counts of 'new lets' (newly built or refurbished social housing units) in Bradford District, disaggregated by postcode, were obtained from CORE. An approximate count of new lets for the NDC area was produced, matched by postcode.

Average amounts of capital grant per unit for Bradford District were calculated from the Housing Corporation allocation statement 2004–2006, for both general needs and supported housing units. These average amounts were then multiplied by the number of new lets to produce an estimated total spend figure for each type of housing.

¹⁶ Bramley, G. Evans, M. and Atkins, J. (1998), *Where Does Public Expenditure Go? Report of a Pilot Study to Analyse the Flows of Public Expenditure into Local Areas*, for the Department of the Environment, Transport and the Regions. London: DETR.

Annex 6: Methods – public expenditure on personal social services

Bradford District-level expenditure on Personal Social Services (PSS) was taken from PSS EX1 returns, available from the Department of Health/NHS Information Centre. As well as total PSS spend in 2001/02 and 2005/06, data for some sub-categories were available:

- children and Families Services 2001/02 and 2005/06
- older people 2001/02 and 2005/06
- adults under 65 with physical disabilities, learning disabilities or mental health needs 2001/02 and 2005/06.

No spend or activity data relating to PSS were available below district level. Regression modelling (based on data for all 149 top tier local authorities) was used to attempt to 'predict' levels of PSS expenditure in the Bradford NDC area, based on the characteristics of the area. This should be treated with caution as it involves a major assumption: that there is a linear relationship between PSS spend and the predictors used in the model (proportion of 18–64 year olds in the area, proportion of 65+ year olds in area, IMD score) and that this holds even for the extremely high IMD scores found in NDC areas, not covered by the 'known' values.

Linear regression was carried out with district-level (149 top tier authorities) PSS net current expenditure (2001/02 and 2005/06 in two separate models) as the dependent variable and the proportion of 18–64 year olds, proportion of 65+ year olds and Index of Multiple Deprivation score (2004 and 2007¹⁷) as predictors (Department of Health, NHS Information Centre, NOMIS, SDRC).

'Stepwise' selection was used to produce the best fit model for each category of expenditure. Summaries of the resultant models are displayed in the tables below.

Bradford NDC data were then entered into each model equation to give estimated annual spend.

¹⁷ IMD 2004 uses mostly 2001/02 data and IMD 2007 uses mostly 2005/06 data

Dependent	2001/02				
	R	R square	Predictors in model	Coefficients	Sig.
Total personal social services, spend per person	0.836	0.699	(Constant)	-1.586	0.000
			propn 18–64 years	2.577	0.000
			IMD score	0.005	0.000
			propn 65+ years	0.804	0.002
Children and families services, spend per person	0.866	0.750	(Constant)	-0.284	0.000
			IMD score	0.002	0.000
			propn 18–64 years	0.496	0.000
Older people spend, per person	0.761	0.580	(Constant)	-0.426	0.000
			IMD score	0.001	0.000
			propn 18–64 years	0.658	0.000
			propn 65+ years	0.510	0.000
Adults under 65 with physical disabilities, learning disabilities or mental health needs, spend per person	0.788	0.621	(Constant)	-0.295	0.000
			propn 18–64 years	0.521	0.000
			IMD score	0.001	0.000
			propn 65+ years	0.121	0.050

Dependent	2005/06				
	R	R square	Predictors in model	Coefficients	Sig.
Total personal social services, spend per person	0.771	0.594	(Constant)	-1.275	0.000
			propn 18–64 years	2.166	0.000
			IMD score	0.006	0.000
			propn 65+ years	0.996	0.002
Children and families services, spend per person	0.875	0.765	(Constant)	-0.164	0.012
			IMD score	0.003	0.000
			propn 18–64 years	0.373	0.000
			propn 65+ years	-0.210	0.031
Older people spend, per person	0.670	0.449	(Constant)	-0.444	0.000
			IMD score	0.002	0.000
			propn 65+ years	0.798	0.000
			propn 18–64 years	0.666	0.000
Adults under 65 with physical disabilities, learning disabilities or mental health needs, spend per person	0.651	0.424	(Constant)	-0.335	0.000
			propn 18–64 years	0.615	0.000
			IMD score	0.001	0.000
			propn 65+ years	0.240	0.022

Annex 7: Methods – public expenditure on policing, community safety and the fire services

Policing

West Yorkshire Police total net expenditure, less spend on pensions, was obtained from West Yorkshire Police Authority (WYPA) and the Chartered Institute of Public Finance and Accountancy (CIPFA) (see Bramley et al¹⁸ for methodology). This was then apportioned to Bradford District, weighted by:

- the proportion of West Yorkshire incidents occurring in Bradford for five categories of crime: violence against the person, burglary, theft, criminal damage and robbery, taken from 'notifiable offences recorded by the police' on Neighbourhood Statistics
- unit costs attributed approximately to these categories of crime (Dubourg et al., 2005) in order to allow for certain crimes being more expensive to deal with than others¹⁹.

This district-level estimate of spend was then apportioned to Bradford NDC area in a similar way, this time using the proportion of district incidents occurring in the NDC area for four major categories of crime: violence against the person, burglary, theft and criminal damage, provided by SDRC.

It should be noted that the definitions of crimes used in the unit costs of crime and in creating the 'county to district' and 'district to NDC' ratios are not entirely consistent or compatible with one another and hence should be treated as an approximation.

We have assumed that the weights generated by data on certain types of crime can be used to generalise to all crime and that the unit costs of crimes, intended for use with survey recording of crimes (which generally gives bigger numbers than police recorded data), are proportional to actual unit costs of police recorded crimes.

¹⁸ Bramley, G. Evans, M. and Atkins, J. (1998), *Where Does Public Expenditure Go? Report of a Pilot Study to Analyse the Flows of Public Expenditure into Local Areas*, for the Department of the Environment, Transport and the Regions. London: DETR.

¹⁹ Dubourg, R., Hamed, J., and Thorns, J. (2005) *The economic and social costs of crime against individuals and households 2003/04*. Home Office On-Line Report 30/05 www.homeoffice.gov.uk/rds/pdfs05/rdsolr3005.pdf

Fire and rescue

Fire service expenditure has been estimated using proportional weights and expenditure data from the West Yorkshire Fire and Rescue Service (WYFRS) annual accounts.²⁰

Proportional weights were calculated using fire and rescue service incident statistics downloaded from the Neighbourhood Statistics website and associated unit costs by incident type. Incident statistics were gained at a Local Authority level – to create totals for WYFRS area and Bradford District – and at a Middle Layer Super Output Area (MSOA) level to estimate incidents at NDC level, using look-up tables provided by SDRC.

Totals were obtained for the number of primary fires, secondary fires, chimney fires, special services and false alarms. National incident type average unit costs were taken from a Home Office report *The Economic Cost of Fire: Estimates for 2004*. For the purpose of the research UK average costs for the period 2000–2004 were used as these provided estimates for a greater variety of incident types. No unit costs of special services were available.

Incident counts and their associated unit costs were combined to create totals, the ratios of which between WYFRS and Bradford District/NDC were used as proportional weights.

We have assumed that national average unit prices are correct for proportionally weighting West Yorkshire Fire and Rescue activities; no data were available of unit costs of special service activities so this has not been included in the calculation of weights. It was also assumed that for each level of geography (NDC, district and WYFRS area) average unit prices hold. That is for example, the NDC does not have a higher average cost of a primary fire than the district. It has also been assumed that incidents are equally spread across MSOAs.

²⁰ www.westyorksfire.gov.uk/new/media/documents/statementOfAccounts.pdf

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