



Tracking economic deprivation in New Deal for Communities areas



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Kate Wilkinson and Michael Noble, Social Disadvantage Research Centre,
University of Oxford
Department for Communities and Local Government

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.

Department for Communities and Local Government
Eland House
Bressenden Place
London
SW1E 5DU
Telephone: 0303 444 0000
Website: www.communities.gov.uk

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Executive summary

This report provides an in-depth analysis of the trends in economic deprivation in the New Deal for Communities (NDC) areas, comparator areas and other neighbourhoods in England between 1999 and 2005.

It seeks to address two questions:

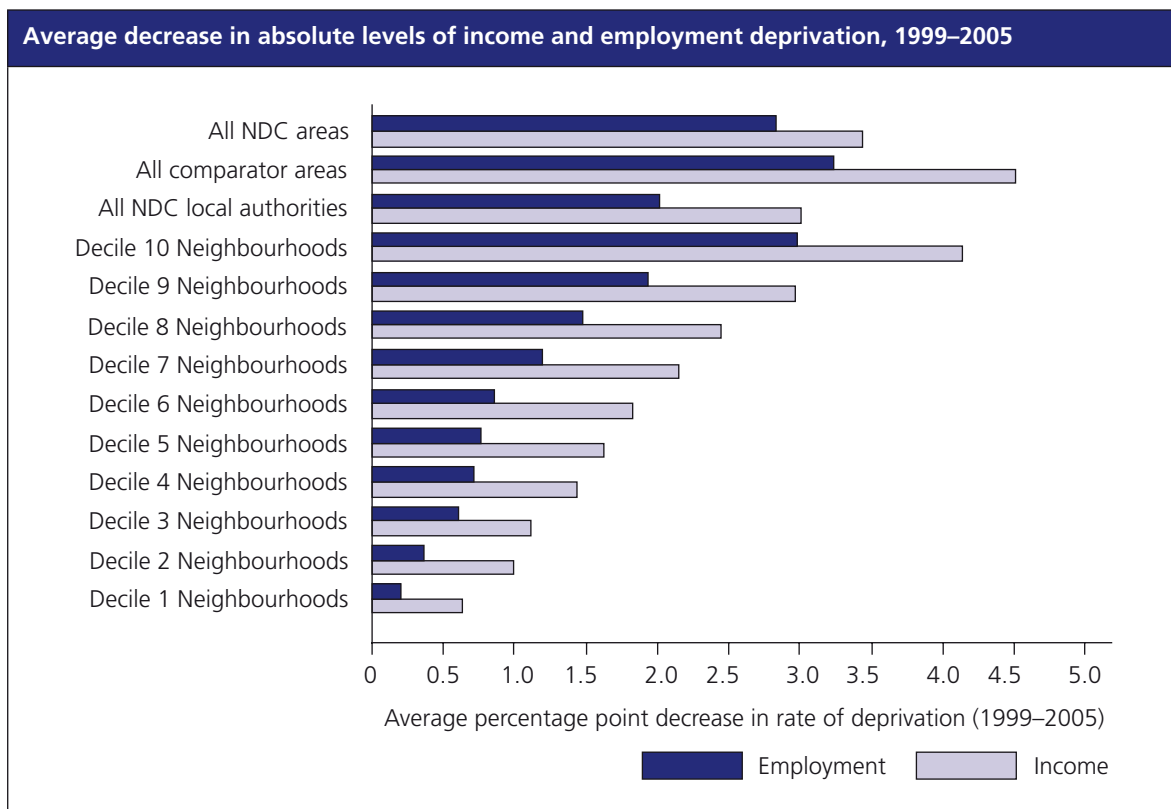
- has there been a reduction in economic deprivation in the NDC areas; and
- how does the progress of the NDC areas compare to the wider locality and similarly deprived neighbourhoods?

The analyses draw on data from the recently constructed Economic Deprivation Index (EDI) which provides a consistent measure of overall economic deprivation and income and employment deprivation that can be used to compare different areas and track change over time. The analyses also make use of specially constructed 'neighbourhoods' in order to compare the NDC areas with other geographically contingent areas of similar size.

Programme-wide change

The analyses contained within this report examine change in relative and absolute levels of economic deprivation. Relative economic deprivation is measured by the neighbourhood's population weighted average rank on the EDI or its component income and employment domains. Absolute levels of economic deprivation are measured in terms of the population weighted average rate of income and employment deprivation within a neighbourhood.

At the Programme-wide level there is little change in relative levels of economic deprivation in the NDC areas or comparator areas. This means that the relative position of the NDC areas changes little over time. However, this is in a context where absolute rates of income and employment deprivation are falling across the majority of neighbourhoods in England. Although there is little relative change in the NDC areas, on aggregate, absolute rates of deprivation do fall quite significantly in most NDC and comparator areas. These trends are summarised in the chart below (Figure 21 from the main report) which shows the average decrease in absolute levels of income and employment deprivation between 1999 and 2005.



The relationship between income and employment deprivation

NDC areas experience relatively higher levels of income deprivation than employment deprivation. The NDC areas in London, in particular, have noticeably higher relative levels of income deprivation than employment deprivation. There is nevertheless a strong correlation between relative levels of income deprivation and relative levels of employment deprivation i.e. areas that are highly income deprived are also likely to be highly employment deprived. In addition, there is also a strong correlation between relative levels of deprivation in 1999 and 2005. Neighbourhoods which were highly deprived in 1999 are most likely to remain amongst the most deprived neighbourhoods in 2005.

Despite the fact that there is relatively little change at the aggregate NDC-level looking at each NDC area individually shows that some areas have experienced large changes in both relative and absolute levels of economic deprivation. There is general trend of better progress being made by the NDC areas in terms of decreasing rank on the employment domain as opposed to the income domain; however, for both domains less than half of the NDC areas improved their relative position more than their comparator area.

Comparing NDC areas with other deprived neighbourhoods

When comparing NDC areas with other deprived neighbourhoods in England it is clear that the NDC areas do not compare favourably with either the comparator areas or other deprived neighbourhoods in terms of improvement in rank on the income domain. Less than half of the NDC areas experienced a relative decrease in income deprivation between 1999 and 2005 compared to around 60 per cent of comparator areas and other deprived neighbourhoods.

As already discussed, absolute rates of income and employment deprivation fell over the period 1999 to 2005. The magnitude of the decrease in income deprivation rates was larger than that for employment deprivation; however, income deprivation rates were generally higher to start with. The NDC areas did not experience as large a fall in income deprivation rates as might be expected given the trends in other similarly deprived areas and this explains the poor relative performance of the NDC areas in terms of changes in rank on the income domain.

Having said that, absolute rates of economic deprivation are falling in most NDC areas, which is a positive sign. All but one of the NDC areas experienced a fall in employment deprivation rates and more than half experienced a fall in income deprivation rates. There is evidence that the majority of NDC areas are narrowing the gap with their parent local authority in terms of both income and employment deprivation although larger reductions in absolute rates of income and employment deprivation are seen in the comparator areas and less than half of the NDC areas outperform their comparator areas on this measure.

Again, comparing the progress of the NDC areas with other similarly deprived neighbourhoods in England, a smaller proportion of NDC areas are in the top 10 per cent of 'improvers' in terms of reducing income and employment deprivation than might be expected.

Within-NDC change

The final part of the report looks at trends within NDC areas. This involved tracking the progress of the LSOAs¹ within each NDC area. This highlighted some very interesting trends which are masked by analyses at the larger neighbourhood geography.

There is a surprising amount of variation in the EDI ranks of the LSOAs within each NDC area. Some NDC areas contain LSOAs which have below average levels of economic deprivation. By contrast, there are a few areas which tend to be very homogenous, particularly the more deprived NDC areas. In these areas there is very little within-NDC variation.

¹ LSOAs (Lower Layer Super Output Areas) are small areas with a population of around 1500, there are generally around 6–10 LSOAs within an NDC area. See sections 5 and 6 for further details.

Analysis of the trajectories of the LSOAs within each NDC area indicated that the EDI ranks of the LSOAs are generally becoming more diverse over time (both in NDC areas and other deprived areas) indicating a trend of increasing variation in relative levels of economic deprivation within deprived neighbourhoods. However, looking at absolute rates of deprivation the picture is more mixed. The NDC areas tend towards diversifying rates of employment deprivation and converging rates of income deprivation although a number of areas do not follow these general trends.

Five case studies were used to explore within-NDC change in more detail. Although the trajectory of each NDC area is unique, the case studies are helpful in highlighting some general trends. Firstly, the changes in relative levels of economic deprivation in each case study area closely mirror those occurring in the wider locality and the local authority. Thus, NDC areas do appear to be strongly influenced (as might be expected) by their surroundings and the potential of the Programme to affect change must be taken in the context of the changes occurring in the wider locality. Secondly, the case studies show that many NDC areas are far from being homogenous neighbourhoods. In some cases, small areas within NDC areas are travelling on quite different trajectories and potentially creating smaller pockets of deprivation that are hidden by the improved performance (on average) of the whole area.

Implications for area-based initiatives

The findings of the analyses have implications for the evaluation of area-based initiatives. First, the ability to compare NDC areas with comparator areas and other neighbourhoods in England provides a more coherent picture of the position of the NDC areas in relation to other neighbourhoods with differing levels of deprivation. Constructing a neighbourhood geography which facilitates this type of analysis can be very beneficial.

Second, regardless of the size of the intervention area, it is important to undertake analyses at the smallest geographical unit possible as aggregate area-level data can hide within-area trends. Furthermore, the case study work shows the extent to which neighbourhoods are affected by changes in the wider locality. It is important that interventions are analysed whilst taking into account changes occurring around the area of intervention as this may impact upon the potential of the intervention to affect and sustain positive change.

1. Introduction

This report is an in-depth study of economic deprivation in the New Deal for Communities (NDC) areas. The analyses consider overall NDC area change and within-NDC area change. This report seeks to measure change in levels of economic deprivation in NDC areas, but it does not explore the mechanisms underlying the changes observed. Thus the findings presented here should be contextualised by other qualitative and case study work for example the recent paper *Tackling Worklessness in NDC areas – a policy and practice update*².

1.1 Background

The NDC Programme is a 10 year programme targeting 39 of the most deprived neighbourhoods across England. The NDC Programme is a key element of the Government's National Strategy for Neighbourhood Renewal which has the goal of reducing multiple deprivation and disadvantage in deprived areas across five key themes: worklessness, crime, health, education and skills, housing and the physical environment. This report focuses on economic deprivation in NDC areas. This relates directly to the worklessness theme but also has broader links with all themes as people living in economically deprived areas are more likely to experience deprivation in multiple forms.

This report is part of the second phase of the national evaluation of the NDC Programme. The national evaluation is being conducted by a consortium of researchers lead by the Centre for Regional Economic and Social Research at Sheffield Hallam University.

1.2 Aims

This report addresses two questions:

- has there been a reduction in economic deprivation in the NDC areas; and
- how does the progress of the NDC areas compare to the wider locality and similarly deprived neighbourhoods?

These questions are addressed by analysis of the recently constructed Economic Deprivation Index³ (EDI) for NDC areas and other neighbourhoods in England. The analyses look at relative economic deprivation, measured by ranking neighbourhoods by level of economic deprivation, and absolute rates of economic deprivation, measured as the proportion of people experiencing

² Dickinson et al. (2008), *Tackling worklessness in NDC areas – a policy and practice update*, New Deal for Communities National Evaluation Research Reports.

³ Noble et al. (2009), *Tracking Neighbourhoods: The Economic Deprivation Index 2008*, Communities and Local Government.

economic deprivation. The trajectories of NDC areas are compared to other neighbourhoods (including the NDC comparator areas) and NDC local authorities. The report therefore tackles the question of whether NDC areas are outperforming similarly deprived neighbourhoods and also whether they are narrowing the gap with more affluent neighbourhoods.

1.3 Outline of methods

This report draws on the recently constructed EDI to track the path of economic deprivation in NDC areas, comparator areas and other similarly deprived areas in England between 1999 and 2005. The EDI is a composite measure of income and employment deprivation and the results presented here relate to overall economic deprivation as well as income and employment deprivation independently. The EDI itself provides a picture of the relative levels of deprivation; however, the scores on its composite domains represent absolute levels of income and employment deprivation. Hence the data here gives an indication of the changes occurring in NDC areas both in absolute and relative terms.

1.4 Report structure

The report is structured as follows:

- section 2: describes how the EDI was constructed and how it was applied to the NDC areas
- section 3: compares the trajectories in relative levels (rank) of economic deprivation in the NDC areas compared to other neighbourhoods in England
- section 4: compares the absolute changes in average levels of income and employment deprivation in NDC areas and other neighbourhoods
- section 5: considers within-NDC change. Here some case studies are chosen as examples to illustrate particularly interesting trends; and
- section 6: presents the conclusions and policy implications arising from the analyses.

2. Measuring economic deprivation in NDC areas

This section describes how the Economic Development Index (EDI) is constructed and how it is used to analyse the changes in levels of economic deprivation in New Deal for Communities (NDC) areas and other neighbourhoods in England.

2.1 Background to the Economic Deprivation Index

Since 2000, the Social Disadvantage Research Centre (SDRC) has produced three English Indices of Deprivation for Communities and Local Government and their predecessors to allocate considerable resources for neighbourhood renewal. These are the Indices of Deprivation 2000 (ID 2000) (Noble et al., 2000), the Indices of Deprivation 2004 (ID 2004) (Noble et al., 2004), and the Indices of Deprivation 2007 (ID 2007) (Noble et al., 2007). The three indices cited have a common conceptual framework. A single index of multiple deprivation is constructed as the weighted combination of individual dimensions or domains of deprivation (see Noble et al., 2006). The ID 2004 and ID 2007 both consist of the same domains of deprivation measured at the same spatial scale – Lower Layer Super Output Area (LSOA)⁴.

The indices were constructed to represent the best possible measure of multiple deprivation for each of the time points for which they were constructed (1998 for the ID 2000, 2001 for the ID 2004, and 2005 for the ID 2007). Improvements in data and/or new data sources and/or changes in administrative data sources are all incorporated to ensure the most up to date and best measure of deprivation is used when allocating regeneration resources.

The one disadvantage of the quest to have the Indices of Deprivation as the best measure for their time is that ‘backwards comparability’⁵ and the construction of a time series is compromised.

In order to address and, in part, overcome this challenge, an Economic Deprivation Index (EDI) was constructed in a consistent way at LSOA level for each year from 1999 to 2005.

⁴ See www.statistics.gov.uk/geography/soa.asp for a guide to Super Output Areas including LSOAs

⁵ See Noble et al. (2004), p. 116 for a discussion of ‘backwards comparability’

2.2 How the EDI is constructed

Full details of the construction of the EDI are not given here. For a detailed outline of the method see Noble et al. (2009)⁶.

In brief the EDI contains a number of key indicators from the Income and Employment Domains of the ID 2004 and ID 2007 that were available on a consistent basis from 1999 onwards. The ID 2004 and ID 2007 contained a measure of multiple deprivation, known as the Index of Multiple Deprivation (IMD), which is a composite measure of various 'domains' of deprivation. In the IMD 2007, both the Income Domain and the Employment Domain were assigned weights of 22.5 per cent of the overall IMD score. These two domains were weighted higher than the other five domains of the IMD in recognition of the importance of these two dimensions of deprivation in any measure of overall multiple deprivation. As such, the Income and Employment Domains are the two major drivers of the overall IMD.

The EDI has an Income Domain and an Employment Domain and they are constructed as follows:

- The *Income Deprivation Domain* of the EDI represents the proportion of people living in a small area who have low incomes. This is measured by the proportion of people aged under 60 living in households receiving one of two means-tested benefits: Income Support⁷ or income-based Jobseeker's Allowance⁸. Ideally, those over 60 would also have been included here but as the means of support for the over 60s on low incomes changed from Income Support to Pension Credit in 2004, it was not possible to consistently measure income deprivation for this group across the time series of the EDI.
- The *Employment Deprivation Domain* of the EDI represents the proportion of people of working age who are involuntarily excluded from the labour market due to unemployment or ill health. This is measured as the proportion of males aged 18–64 and females aged 18–59 claiming one of three out-of-work benefits: Jobseeker's Allowance (income-based or contribution-based), Severe Disablement Allowance⁹ or Incapacity Benefit¹⁰. Note that those claiming contribution-based Jobseeker's Allowance, Severe Disablement Allowance or Incapacity Benefit may not necessarily have low incomes so they are not included in the numerator in the income deprivation domain.

⁶ See Noble et al. (2009), *Tracking Neighbourhoods The Economic Deprivation Index 2008*, Communities and Local Government

⁷ Income Support is a benefit available to people who are unable to engage in full-time work (for example lone parents) and do not have enough income to live on.

⁸ Income-based Jobseeker's Allowance is available to those seeking work who are on low incomes and have not paid sufficient contributions to be able to claim contribution-based Jobseeker's Allowance.

⁹ Severe Disablement Allowance is a benefit paid to people who were unable to work due to illness or disability for an extended period prior to April 2001. Severe Disablement Allowance has since been replaced with other benefits for new claimants; however, existing claimants are able to continue claiming the benefit if their circumstances have not changed.

¹⁰ Incapacity Benefit is a benefit paid to people who were unable to work due to an illness or disability sustained prior to October 2008. From 2009 onwards Incapacity Benefit will be replaced with the Employment and Support Allowance.

Both the Income and Employment Domains do differ slightly from those used in the main IMD so that a consistent time series can be maintained. The main differences between the IMD and the EDI are that the Income Domain of the EDI is limited to those under the age of 60 (whereas the Income Domain of the main IMD 2007 includes Pension Credit enabling coverage of the entire age range) and that it is restricted to households receiving out-of-work means tested benefits (whereas the Income Domain of the main IMD also includes 'in work' low income households that receive Tax Credits). Furthermore the Employment Domain of the EDI does not incorporate those on certain New Deal programmes as was the case with the Employment Domain of the ID 2007. Despite this the EDI correlates very highly with the IMD (around 0.95 when comparing data from the same time point) and is therefore considered a valid proxy for multiple deprivation.

2.3 Constructing the EDI for NDC areas – creating a geography for analysis

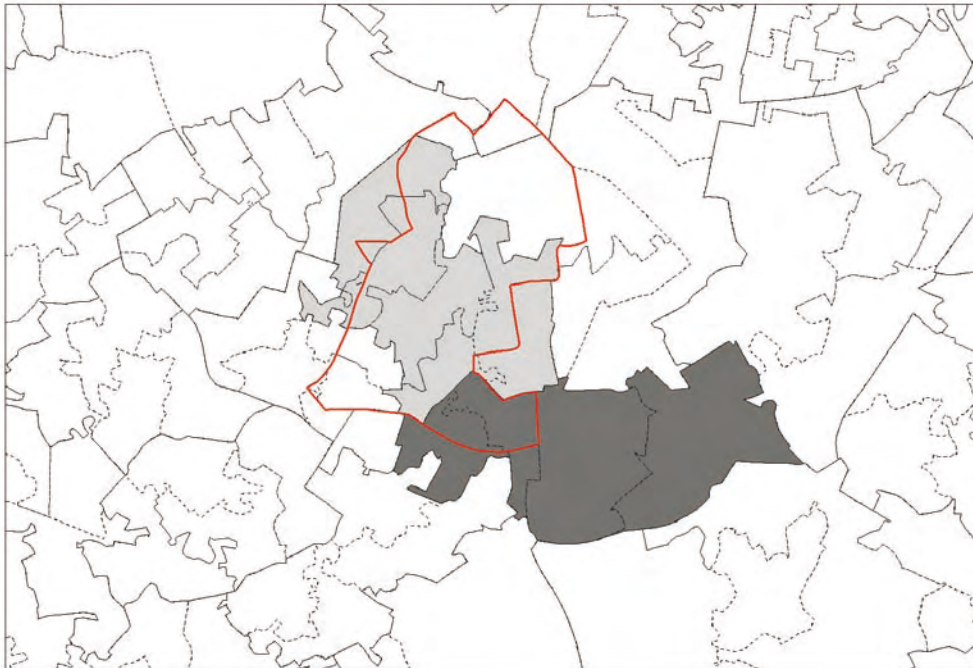
The EDI and its component domains are constructed at LSOA level, so some reworking of the data was necessary to create EDI and domain ranks and scores for NDC areas. The aim in this report is to compare the progress of NDC areas with other similarly sized areas. Clearly the NDC comparator areas are useful here, but it is also helpful to look at other neighbourhoods in England. It is more instructive to look at areas of a similar size because the size of an area has an influence on the volatility of statistical measures over time. For example, levels of income and employment deprivation are likely to exhibit more variation over time in a small area (such as an LSOA) than in a larger area (such as a local authority). The chosen geography used as a base to create neighbourhood areas is the Middle Layer Super Output Area (MSOA). MSOAs have an average population of around 7,200 in 1999 (compared to the NDC mean population of about 9,800) so, although they are slightly smaller, they are considered the most appropriate geography for the analyses in this report.

For these analyses England has been split into a number of small areas or 'neighbourhoods'. These neighbourhoods are non-overlapping areas of approximately equal population size and include the NDC areas, the comparator areas and MSOAs (for areas which are neither NDC areas nor comparator areas). All neighbourhoods are constructed from smaller areas (LSOAs). In some cases LSOAs are mapped directly into neighbourhoods, i.e. a number of LSOAs join together to form a neighbourhood, but in the case of NDC and comparator areas LSOAs do not always map directly into these areas.

Figure 1 shows an example of how LSOAs and MSOAs are used to construct neighbourhoods. In Figure 1 the red line indicates the boundary of the Bradford NDC area, the solid lines are MSOA boundaries and the dashed lines are LSOA boundaries. It is clear that the MSOA boundaries do not align with the NDC boundary. When this happens there needs to be a decision on

what to do with the remaining part of any MSOA which lies partly within an NDC area. The two MSOAs shaded in light grey and dark grey each provide an example of this situation.

Figure 1: Mapping LSOAs and MSOAs into 'neighbourhoods'



Example 1: The MSOA shaded dark grey has a small overlap with the NDC area. The remaining part of the MSOA outside of the NDC area is still large enough to be considered a neighbourhood in its own right.

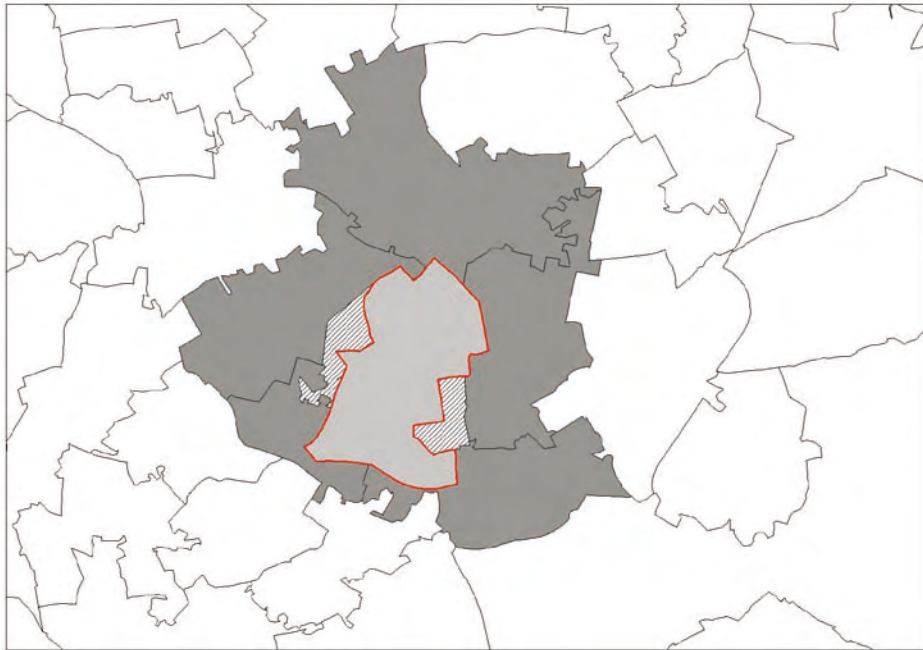
Example 2: By contrast, the MSOA shaded light grey lies mostly within the NDC area boundary and the small parts of this MSOA left outside of the NDC area are not large enough to be a viable unit of analysis at the neighbourhood level.

In order to determine, for each MSOA, whether it should follow example 1 or example 2 the following rules were applied: if more than 25 per cent of the MSOA's population was part of an NDC area and the remaining MSOA population was less than 4,000 then the remaining part of the MSOA was dropped from the analyses.

Figure 2 shows how neighbourhoods were constructed around the Bradford NDC area following the rules set out above. The NDC area itself is treated as a neighbourhood and its surrounding MSOAs (shaded grey) are also considered to be neighbourhoods if they satisfy the criteria set out above. As the MSOA shaded in light grey in Figure 1 does not satisfy the criteria set out above, the portion of this MSOA that lies outside of the NDC area (indicated by diagonal lines) is excluded from the analyses. Thus the neighbourhood

geography effectively results in a small number of gaps around the NDC and comparator areas where areas cannot be easily mapped into neighbourhoods. This is not considered to be a significant limitation to the analyses as less than 0.5 per cent of potential neighbourhoods were dropped from the analyses following the application of this method to construct neighbourhoods.

Figure 2: Final neighbourhood geography around the Bradford NDC area



The areas constructed using the process outlined above are referred to collectively throughout this report as 'neighbourhoods'. These neighbourhoods are used as units of analysis throughout this report. The neighbourhood geography therefore includes NDC areas, comparator areas and other neighbourhoods (for example, the areas shaded in dark grey in Figure 2).

2.4 Constructing the EDI for NDC areas – calculating neighbourhood ranks and scores

Having constructed the neighbourhood geography the next step is to calculate ranks and scores for the EDI and the Income and Employment Domains for each neighbourhood. The EDI scores and ranks (and scores and ranks on the Income and Employment Domains) for neighbourhoods were constructed using the population weighted scores and ranks for the LSOAs within each neighbourhood. For example if a neighbourhood contained one LSOA with a population of 1,500 and an EDI rank of 20,000 and one

LSOA with a population of 2,500 and an EDI rank of 25,000 then the neighbourhood rank would be calculated as:

$$\sum \left(\frac{LSOA_population}{neighbourhood_population} \times EDI_{LSOA} \right) = \left(\frac{1500}{4000} \times 20000 \right) + \left(\frac{2500}{4000} \times 25000 \right) = 23,125$$

Thus the average neighbourhood rank on the EDI is 23,125.

The ranks and scores used in these analyses are therefore based on the EDI LSOA ranks and scores. Thus, as there are 32,482 LSOAs in England, ranks on the overall EDI or the Income or Employment Domain range from 1 to 32,482 where a rank of 32,482 is the most deprived and 1 is the least deprived. The domain scores represent rates of employment deprivation and rates of income deprivation. By ranking neighbourhoods on the same measure as has been used for LSOAs it is possible to compare different geographical units. Thus, the findings in this report can be compared to previous analyses of the EDI for regions and local authorities in England (see Noble et al., 2009).

2.5 Data quality

The data used to construct the EDI are drawn from records of benefit claimants supplied by the Department for Work and Pensions (DWP). These data form the basis of Official Statistics and National Statistics produced by DWP and published through, for example, the Neighbourhood Statistics Service (NeSS), the National Online Manpower Information System (NOMIS) and the DWP's Tabulation Tool (TabTool). The analysis of these data for the NDC areas has highlighted potential issues of data robustness for data relating to child dependents for a very small numbers of LSOAs in 1999.

The information on child dependents that is used within the Income Deprivation Domain of the Economic Deprivation Index is sourced from Child Benefit records. In a small number of LSOAs across England, the number of dependent children living in income deprived households can be seen to either increase or decrease quite substantially between any two years. These LSOAs are, in general, spread fairly randomly across the country. However, there is a small spatial clustering of LSOAs within the Birmingham local authority that experienced notable increases in income deprived children between 1999 and 2000. These increases may be due to real change or alternatively due to changes in data coverage in these areas between the two years. It is acknowledged by the DWP that the quality, consistency and completeness of the Child Benefit data have all increased over time from the 1999 starting point. Whilst it is not possible to categorically state the reasons for these increases to income deprived children in this cluster of LSOAs, it is our judgement that the most likely cause is under-recording of Child Benefit claims at source in 1999. The DWP have considered the various options

and are in agreement with us that incomplete source data is the most likely explanation. Possible explanations for incomplete source data that have been suggested by the DWP include data recording problems at the local benefit office in this cluster of LSOAs and problems with the upload of the local Child Benefit scans to the centralised DWP computer system.

The cluster of LSOAs that we have identified as being potentially subject to partially incomplete Child Benefit data in 1999 do in fact overlap somewhat with the Birmingham Aston NDC Partnership. For this reason any data relating to the Income Domain of the EDI in 1999 for the Birmingham Aston NDC area should be treated with caution. Throughout this report any figures relating to income deprivation in 1999 for the Birmingham Aston NDC area have been included within tables but excluded from charts where they can give a distorted picture. Wherever a figure has been excluded, or should be interpreted with caution, a footnote is included in the text to that effect.

3. How have relative levels of economic deprivation changed in NDC areas?

This section focuses on relative levels of economic deprivation. As discussed previously the measure used in the average neighbourhood rank on the Economic Deprivation Index (EDI) or the average neighbourhood rank on the Income or Employment Domain.

3.1 How do relative levels of economic deprivation in the NDC areas compare to neighbourhoods in the rest of England?

New Deal for Communities (NDC) areas are amongst the most economically deprived neighbourhoods in England. Figure 3 shows the relative position of the NDC areas, comparator areas and the NDC local authorities compared to all neighbourhoods in England divided into deciles. For each of the analyses in Figures 3–5, neighbourhoods are placed in deciles according to their rank on the EDI in 1999. The EDI ranks increase as levels of deprivation increase so the more deprived neighbourhoods are at the top of Figures 3–5.

The average ranks of the NDC areas and comparator areas are very close at each time point¹¹ and are slightly lower (less deprived) than the 10 per cent most deprived neighbourhoods in England¹². The average ranks of the NDC and comparator areas are much closer to the 10th decile neighbourhoods than the 9th decile indicating that NDCs and comparators are indeed very deprived relative to the rest of the country. The NDC local authorities have similar levels of deprivation to the 8th decile neighbourhoods and become relatively less deprived in relation to this decile over time. Importantly, the relative position of the NDC areas changes very little over time (although the comparator areas show some slight relative improvement), thus the NDC areas, on aggregate, are not improving relative to other neighbourhoods in England.

¹¹ Note that in 2001, the average NDC and Comparator ranks are almost identical, suggesting that the group of comparator areas constructed for the NDC National Evaluation represent a very good match in this baseline year.

¹² Note that all neighbourhoods are included in the deciles. Hence the 9th and 10th deciles include the NDC and comparator areas. The NDC and comparator areas only represent a small fraction of the 10 per cent most deprived neighbourhoods (around 10 per cent of these areas) so they have a small impact on the overall results for the 9th and 10th decile.

Figure 4 and Figure 5 show the ranking of the NDC areas on the Employment and Income Domains of the EDI respectively. It is clear that the NDC areas are relatively less employment deprived than income deprived. The average rank of the NDC areas on the Income Domain is higher than the average rank on the Employment Domain in every year, the largest difference is in 2005 where the average Employment Domain rank is 27,604 and the average Income Domain rank is 29,013. The NDC areas also seem to be improving relative to the comparator areas in terms of employment deprivation (but not income deprivation) since 2003. Whereas the NDC and comparator average ranks for employment deprivation are slightly below those for the 10 per cent most deprived neighbourhoods in each year, it is clear from Figure 5 that income deprivation in NDC and comparator areas is in line with income deprivation in the 10 per cent most deprived neighbourhoods in England across the whole time series. When looking at aggregate NDC level change the average rank of the NDC areas changes very little on either the EDI or its two component domains.

Figure 3: Average rank on EDI for NDC areas, comparator areas, NDC local authorities and neighbourhood deciles (1999–2005)

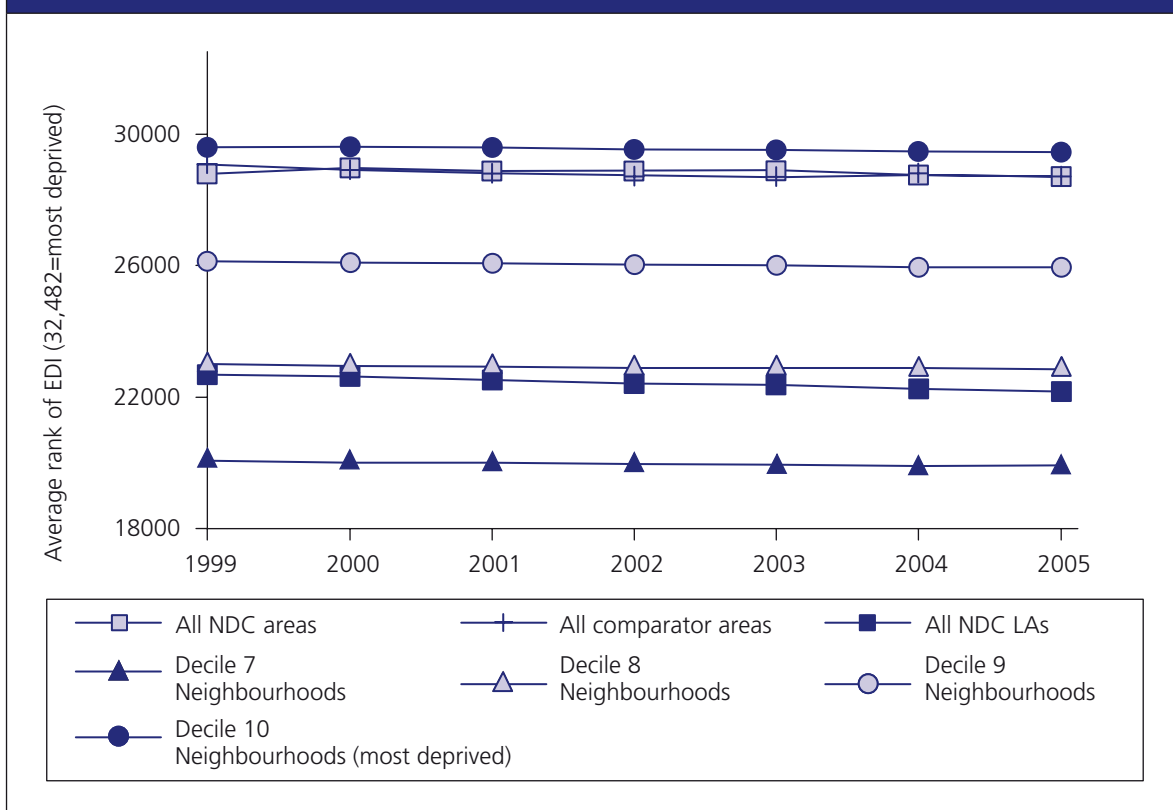


Figure 4: Average rank on the Employment Domain for NDC areas, comparator areas, NDC local authorities and MSOA deciles (1999–2005)

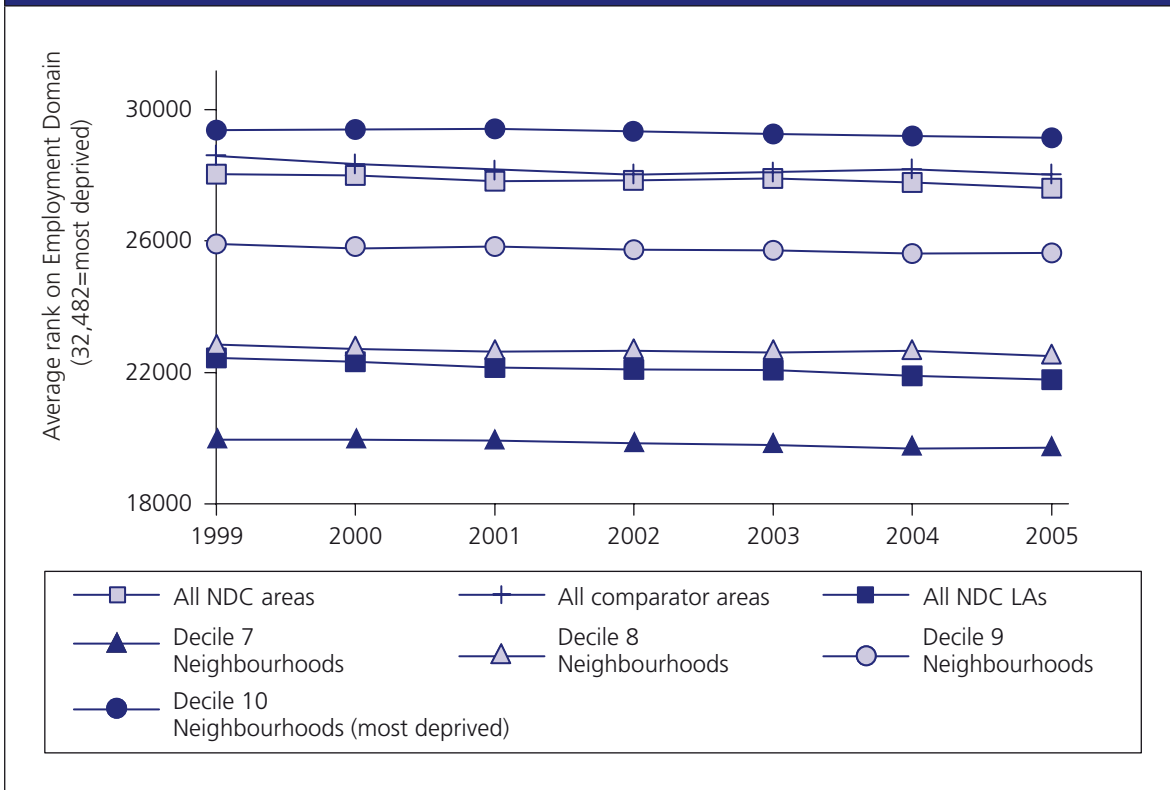
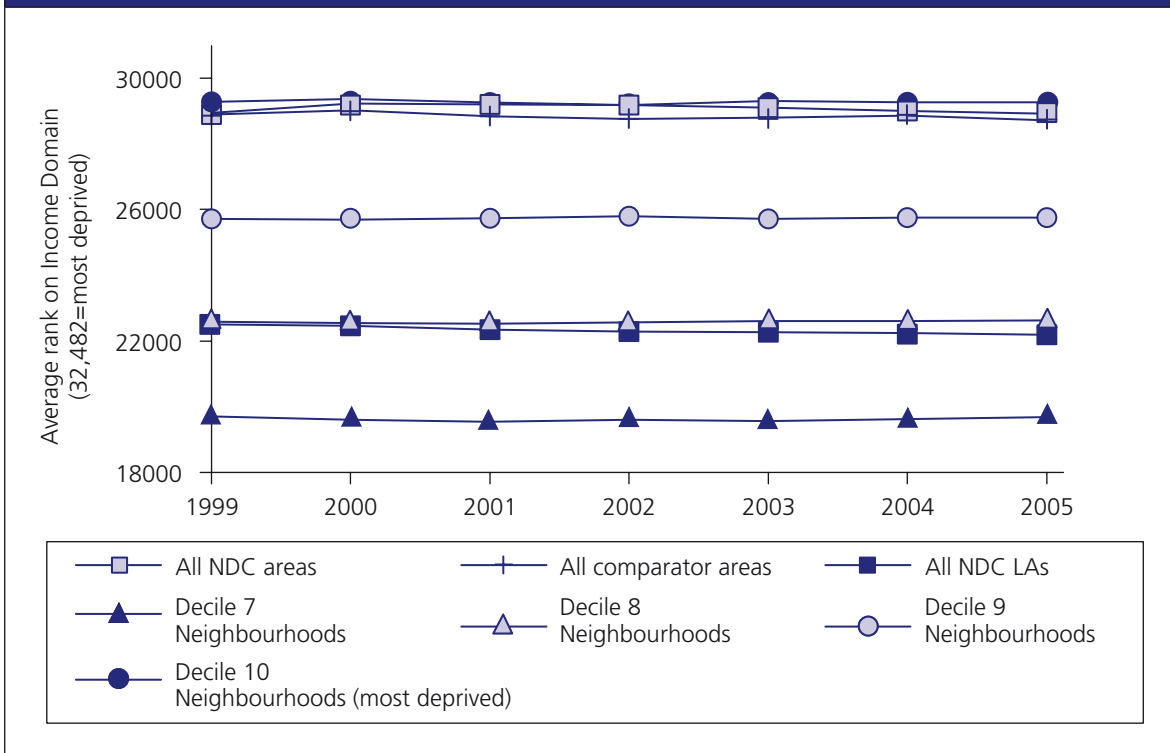


Figure 5: Average rank on the Income Domain for NDC areas, comparator areas, NDC local authorities and MSOA deciles (1999–2005)



3.2 Is there a link between relative levels of income and employment deprivation in each NDC area?

The overall picture suggests little change in relative levels of deprivation over time and relatively higher levels of income deprivation. This section investigates if these trends are observed in each NDC area.

Table 1 presents the rank of each NDC area on the EDI, Employment Domain and Income Domain in 1999 and the change in rank for each measure between 1999 and 2005. A negative change indicates a fall in rank and hence a decrease in relative deprivation. The NDC areas are ordered according to their EDI rank in 1999 thus the most deprived areas in 1999 appear at the top of Table 1. In each column of the table the figures are presented in bold in a shaded cell if the NDC area has seen an improvement in rank between the two time points. Nineteen NDC areas improved their overall rank on the EDI, whereas 23 NDC areas improved their rank on the Employment Domain and 18 NDC areas improved their rank on the Income Domain.

There is a significant correlation ($\rho=0.90$, $p<0.01$) between the EDI rank in 1999 and the EDI rank in 2005. There is also a significant, albeit weaker, correlation between rank on the Income Domain and rank on the Employment Domain ($\rho=0.67$, $p<0.01$) in 2005. These large and positive correlations imply that there is a positive association between economic deprivation in 1999 and economic deprivation in 2005 and between income and employment deprivation. It is perhaps not surprising that the level of economic deprivation in 1999 is a very good predictor of the level of economic deprivation in 2005.

Thus, in general, relative levels of economic deprivation (at the Programme-wide level) do not alter very much between 1999 and 2005 and areas with high relative levels of income deprivation also have high relative levels of employment deprivation. However, as described in later sections of the report, there have been changes in relative levels of deprivation for individual NDC areas and within NDC areas.

Figure 6 plots the rank of each NDC area on the EDI in 1999 and 2005. The diagonal line divides NDC areas experiencing a relative improvement (those to the right of the line) from those experiencing a relative worsening (those to the left of the line). Although around half of the NDC areas have seen a relative decline, most of these have not moved far from the centre line, whereas, amongst the relative improvers some have made substantial progress (such as Nottingham and Newcastle). The average NDC value is represented by a triangle in Figure 6. The position of the average NDC value is very slightly to the right of the line indicating a marginal improvement in relative deprivation between 1999 and 2005.

Figure 7 shows the rank on the Income Domain in 2005 against the rank on the Employment Domain in the same year.

Table 1: EDI, Employment Domain and Income Domain ranks for NDC areas: 1999 and 2005

NDC areas	NDC rank EDI (1999)	NDC rank EDI (2005)	NDC rank Employment Domain (1999)	NDC rank Employment Domain (2005)	NDC rank Income Domain (1999)	NDC rank Income Domain (2005)
Knowsley	32,361	-354	32,285	-313	32,350	-406
Manchester	32,110	-316	32,067	-378	31,937	-324
Liverpool	32,015	-974	31,977	-1,119	31,858	-1,125
Doncaster	31,246	-1,093	31,521	-717	30,490	-1,784
Kingston upon Hull	31,139	-777	30,401	-864	31,427	-696
Plymouth	30,990	731	30,453	1,024	31,138	539
Newcastle	30,957	-1,963	30,557	-2,402	30,892	-1,971
Sunderland	30,814	71	31,192	27	29,810	198
Coventry	30,468	462	29,369	973	30,977	260
Hartlepool	30,396	134	31,062	-110	29,097	563
Sheffield	30,255	-873	30,730	-1,312	29,334	-297
Brent	29,975	420	29,393	-2	30,066	721
Birmingham KN	29,888	737	28,972	1,218	30,359	353
Middlesbrough	29,569	-648	29,548	-468	29,271	-813
Newham	29,364	-558	28,025	-1,157	30,115	-88
Haringey	29,347	452	27,972	78	30,162	551
Hackney	29,164	3	27,818	-614	29,842	352
Nottingham	29,160	-2,581	29,145	-2,935	28,800	-2,245
Brighton	29,052	309	27,622	220	29,748	385
Bradford	28,999	-914	28,260	-1,121	28,660	-568
Oldham	28,946	146	29,352	109	28,087	382
Leicester	28,676	972	26,561	1,280	29,669	863
Birmingham A	28,129	2,121	29,785	-256	25,186	5,395
Wolverhampton	28,048	927	28,309	1,040	27,535	827
Sandwell	28,017	516	28,419	556	27,318	437
Norwich	27,978	141	26,135	39	28,993	146
Southwark	27,885	-737	26,241	-846	29,024	-547
Tower Hamlets	27,821	-319	25,839	-2,679	29,041	379
Derby	27,748	-352	26,881	80	28,128	-396
Islington	27,283	-291	25,757	-1,365	28,347	407
Walsall	27,105	841	27,314	752	27,003	978
Luton	27,078	773	24,791	1,054	28,515	674
Lewisham	26,817	-710	25,132	-1,392	27,852	-410
Rochdale	26,659	-508	27,481	-387	25,188	-592
Lambeth	26,413	158	24,146	-623	27,931	496
Fulham	25,865	-1,104	23,910	-1,634	26,855	-902
Salford	25,218	-828	22,440	-539	25,640	-901
Southampton	25,042	91	22,773	501	27,007	-103
Bristol	24,507	795	22,984	1,467	25,220	339

Figure 6: EDI rank in 1999 and 2005 for all NDC areas¹³

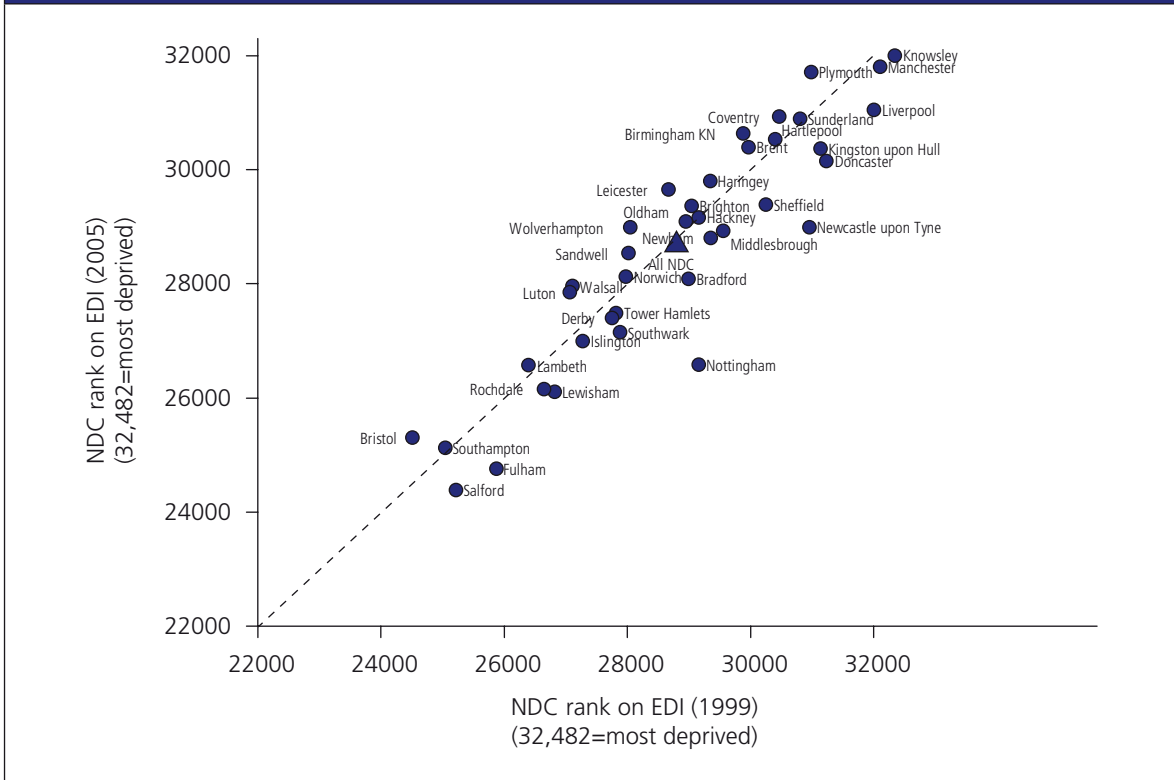
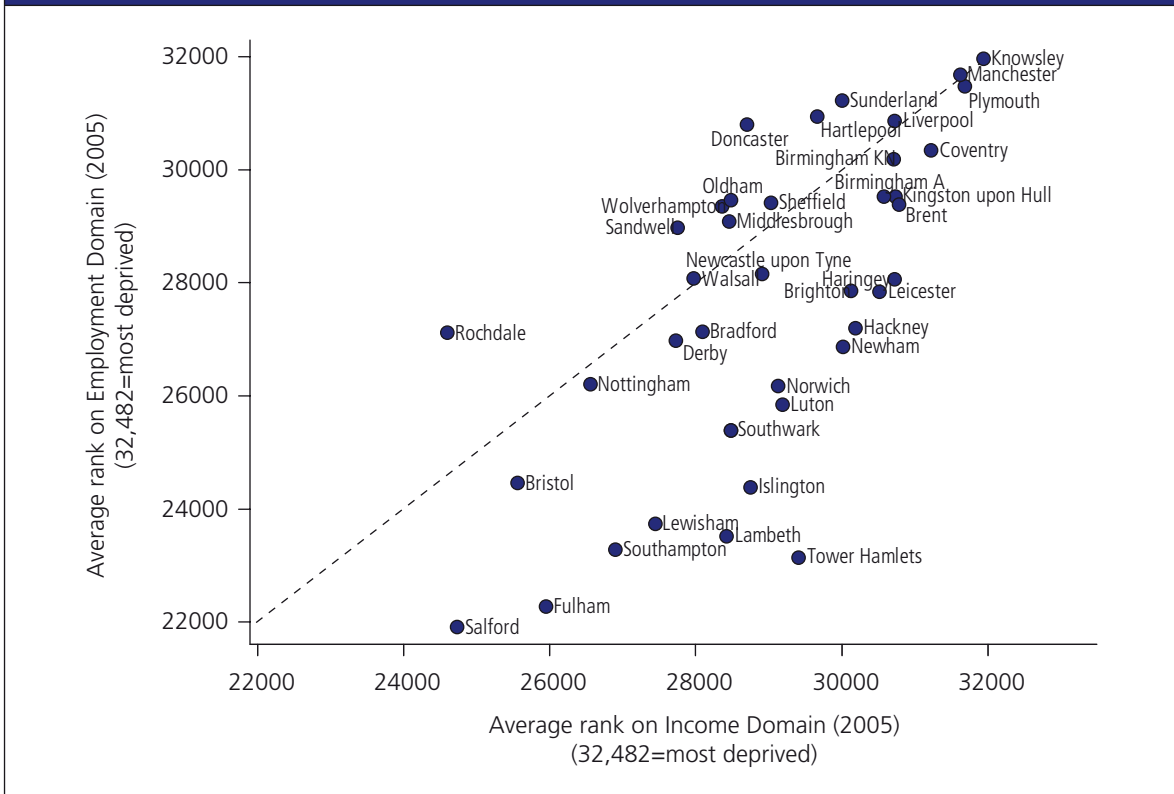


Figure 7: Rank on the Income Domain against rank on the Employment Domain for all NDC areas in 2005



¹³ Birmingham Aston is excluded – see Section 2.5.

In Figure 7 it is clear that most NDC areas (28) are relatively more income deprived than employment deprived (as indicated by their position to the right of the diagonal line). The London NDC areas in particular show considerably higher levels of income deprivation, whilst NDC areas exhibiting relatively higher levels of employment deprivation are concentrated in the northern and midlands regions. It is not possible to determine from the data what factors are causing the high levels of income deprivation in London NDC areas. This is likely to be due to high numbers of Income Support claimants, which suggests a high proportion of lone parents in these NDC areas. Unfortunately it is not possible to test if this is the case; however, other research has suggested that lone parents living in London are less likely to be working (and therefore more likely to be claiming low income benefits) than lone parents in the rest of the UK¹⁴.

3.3 How have relative levels of economic deprivation changed over time in NDC and comparator areas?

Although there is little change occurring at a Programme wide level (i.e. looking at the average levels of economic deprivation across the 39 NDC areas together), more change is seen when looking at each area independently.

In the following analyses, NDC and comparator areas have been grouped according to the typology developed by Beatty et al. (2008)¹⁵. NDC areas are classified into five clusters. These are:

- Cluster 1 – Low on human capital, high on fear of crime and relatively unstable (Liverpool, Knowsley, Nottingham, Doncaster, Coventry).
- Cluster 2 – Relatively stable, ‘working class’ with fewer entrenched problems (Leicester, Walsall, Bristol, Middlesbrough, Southampton, Derby, Oldham, Salford, Rochdale, Luton, Birmingham Kings Norton, Brighton, Norwich, Hartlepool).
- Cluster 3 – London NDCs; unstable population, least deprived (Brent, Southwark, Islington, Lewisham, Hackney, Lambeth, Haringey, Newham, Tower Hamlets, Fulham).
- Cluster 4 – Relatively thriving NDC areas with higher BME populations outside London (Bradford, Sandwell, Birmingham Aston, Wolverhampton).
- Cluster 5 – Low on human capital but relatively stable with low fear of crime (Sheffield, Newcastle, Hull, Plymouth, Manchester, Sunderland).

Analysis of the relative performance of the NDC and comparator areas within each cluster is helpful in order to relate the findings on economic deprivation to the other indicators of change. Findings from analyses of change in rank

¹⁴ See for example, McKay, S. (2004) *Lone Parents in London: Quantitative analysis of differences in paid work*, In-house Report 136, Department for Work and Pensions and GLA Economics

¹⁵ See Beatty, C., Foden, M., Lawless, P., Wilson, I. (2008), *New Deal for Communities: A Synthesis of New Programme Wide Evidence: 2006–07*, NDC National Evaluation Phase 2 Research Report 39.

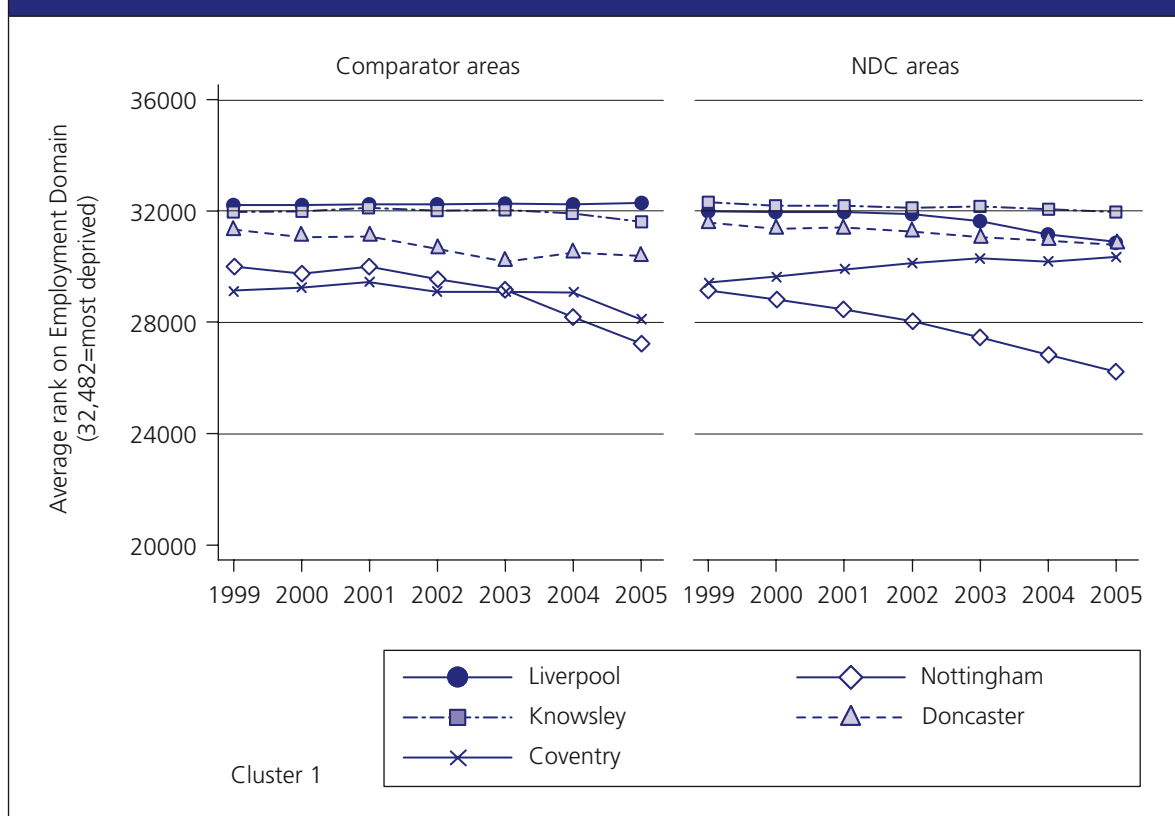
on the Employment Domain are presented first followed by the results of change in rank on the Income Domain.

The scales on the charts are kept constant for each cluster in order to easily see where each group of NDC areas lies in relation to the other clusters.

3.3.1 NDC and comparator average rank on Employment Domain by cluster

Cluster 1 (see Figure 8) contains NDC areas with high initial levels of worklessness (Knowsley has the highest levels of employment deprivation of all the NDC areas). Most of the NDC and comparator areas in this cluster see some relative improvements in employment deprivation with the exception of Knowsley, where little overall change is seen, and Coventry, in which there is a large increase in relative levels of employment deprivation. A large decrease in rank on the Employment Domain is seen for both the Nottingham NDC and comparator area. This is one of the largest improvements in employment deprivation rank observed for any of the NDC areas.

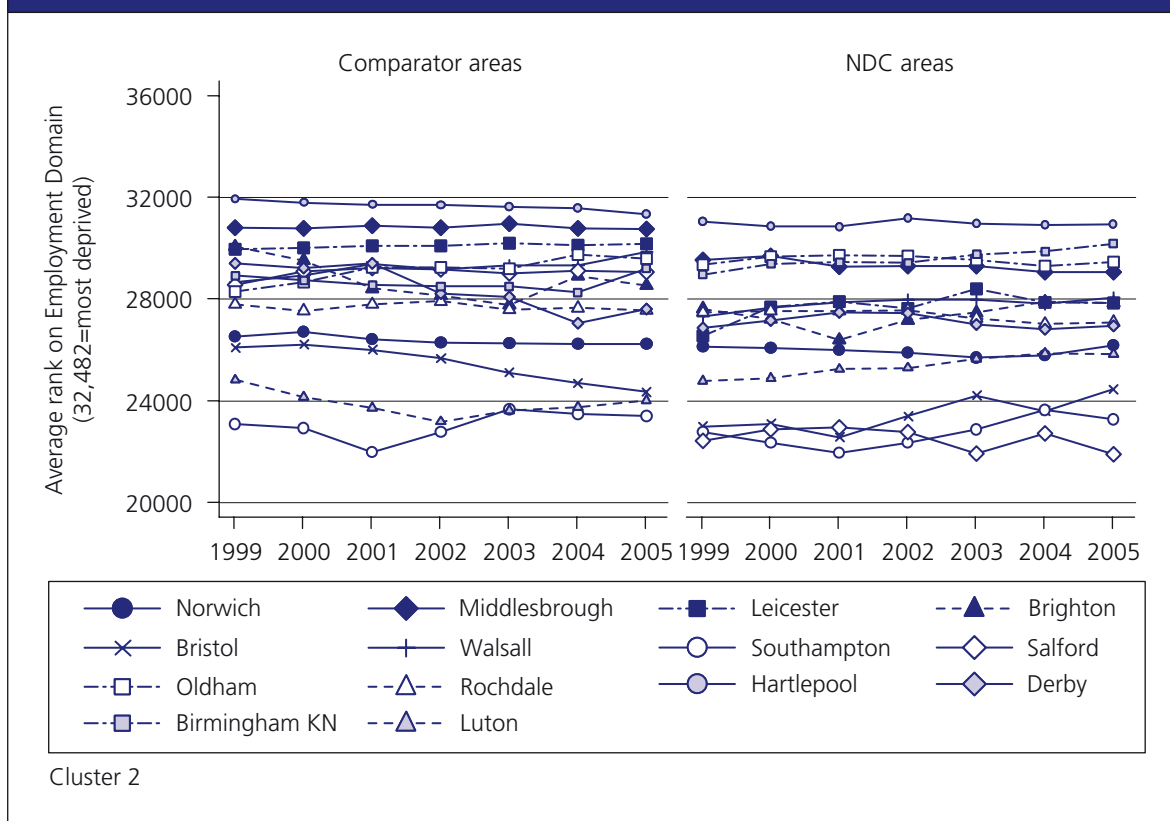
Figure 8: Cluster 1: average rank on the Employment Domain (1999–2005)



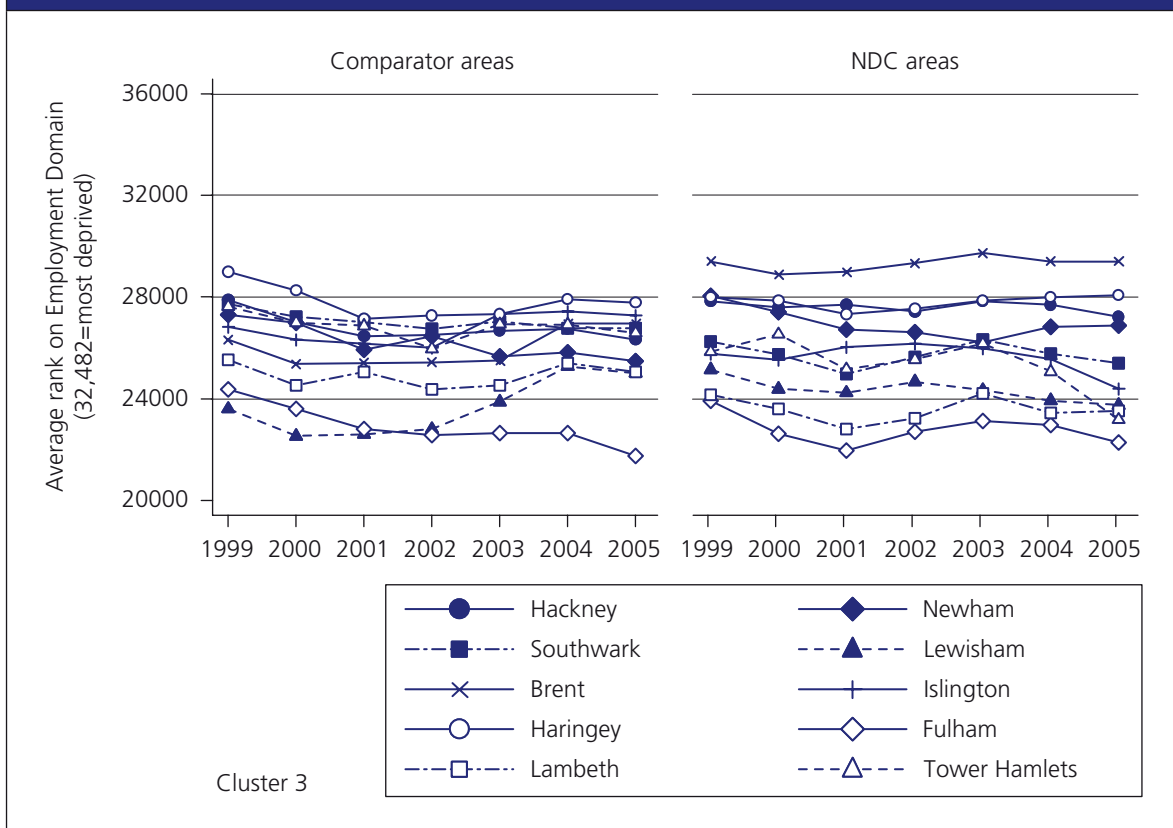
The NDC areas in cluster 2 (Figure 9) show a considerable variation in ranks. NDC areas such as Hartlepool, Oldham and Birmingham Kings Norton rank very highly in terms of employment deprivation whilst others (Salford, Southampton and Bristol) have some of the lowest ranks of all the NDC areas.

Cluster 2 NDC areas are described as having ‘relatively stable’ populations and indeed most have little change in relative levels of employment deprivation. There is however a trend of increasing relative employment deprivation in a number of NDC areas in this cluster (for example in Southampton and Luton). This trend does not appear to be mirrored in the comparator areas.

Figure 9: Cluster 2: average rank on the Employment Domain (1999–2005)



The London NDC areas in cluster 3 (Figure 10) are generally relatively less employment deprived than the majority of NDC areas in other clusters. There is considerable variation in rankings in this group with a number of areas experiencing an initial improvement in rank between 1999 and 2001, a worsening between 2001 and 2003 and an improvement between 2003 and 2005. As a result most of the NDC areas experience little overall change between 1999 and 2005 with the exception of Tower Hamlets where there is a noticeable improvement in rank. The trends seen for these NDC areas are similar to those occurring in the London region in general (an early improvement followed by a levelling off) which are reported in Noble et al. (2009).

Figure 10: Cluster 3: average rank on the Employment Domain (1999–2005)

Cluster 4 and cluster 5 (Figures 10 and 11) are fairly similar in terms of rank on the Employment Domain. NDC areas in these groups mostly experience less improvement than the other highly deprived group, cluster 1. Little positive change is seen in these clusters with the exception of Bradford NDC area (cluster 4) and Sheffield and Newcastle NDC areas (cluster 5).

3.3.2 NDC and comparator average rank on Income Domain by cluster

The trends in relative changes in income and employment deprivation are generally very similar. Section 3.1 indicated that NDC areas experienced relatively higher levels of income deprivation than employment deprivation. As has already been demonstrated in section 3.2, there is a strong correlation between relative levels of income and employment deprivation, and clusters 1, 4 and 5 tend to have higher levels of deprivation on both domains.

There is generally more stability in relative levels of income deprivation than in relative levels of employment deprivation. Few NDC areas experience large movements in rank on the income domain. In addition, the NDC and comparator areas are slightly more closely grouped together, i.e. there is less of a variation in ranks within each cluster. Cluster 1 (Figure 13) illustrates an exception to these general observations as Nottingham and Doncaster NDC areas exhibit a relative improvement in income deprivation relative to other members of the group.

Figure 11: Cluster 4: average rank on the Employment Domain (1999–2005)

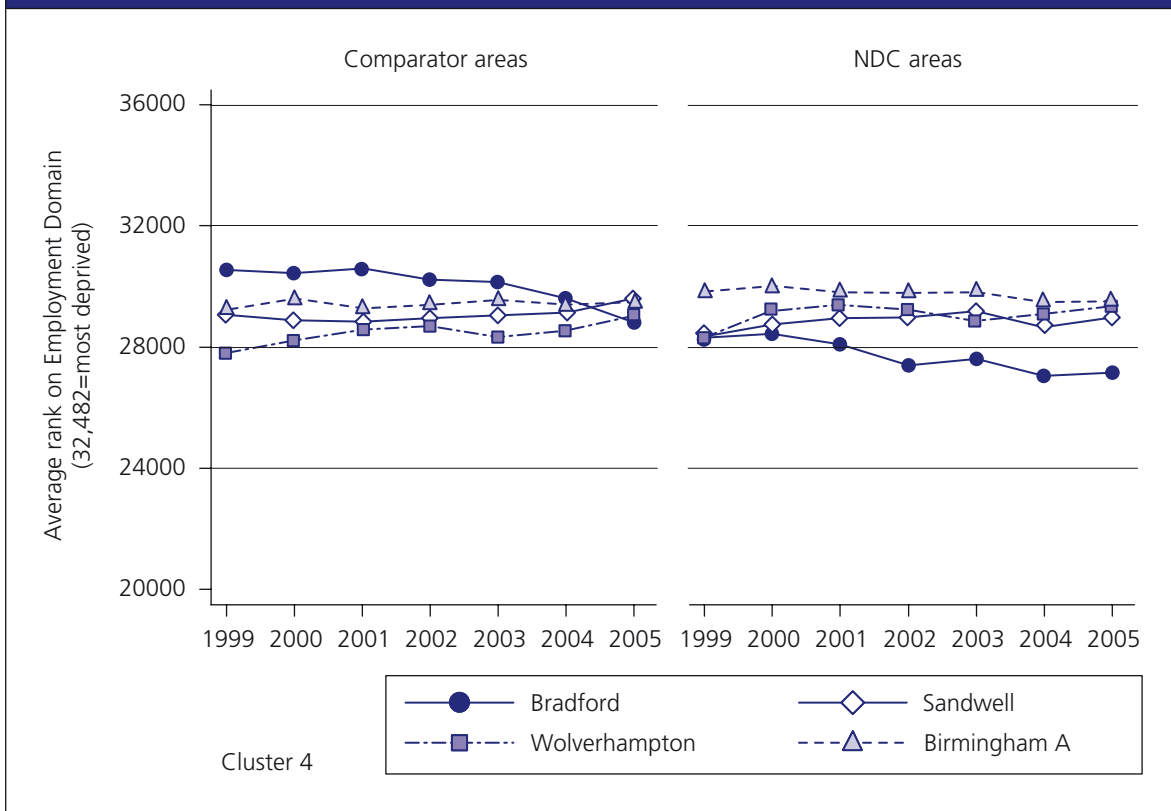


Figure 12: Cluster 5: average rank on the Employment Domain (1999–2005)

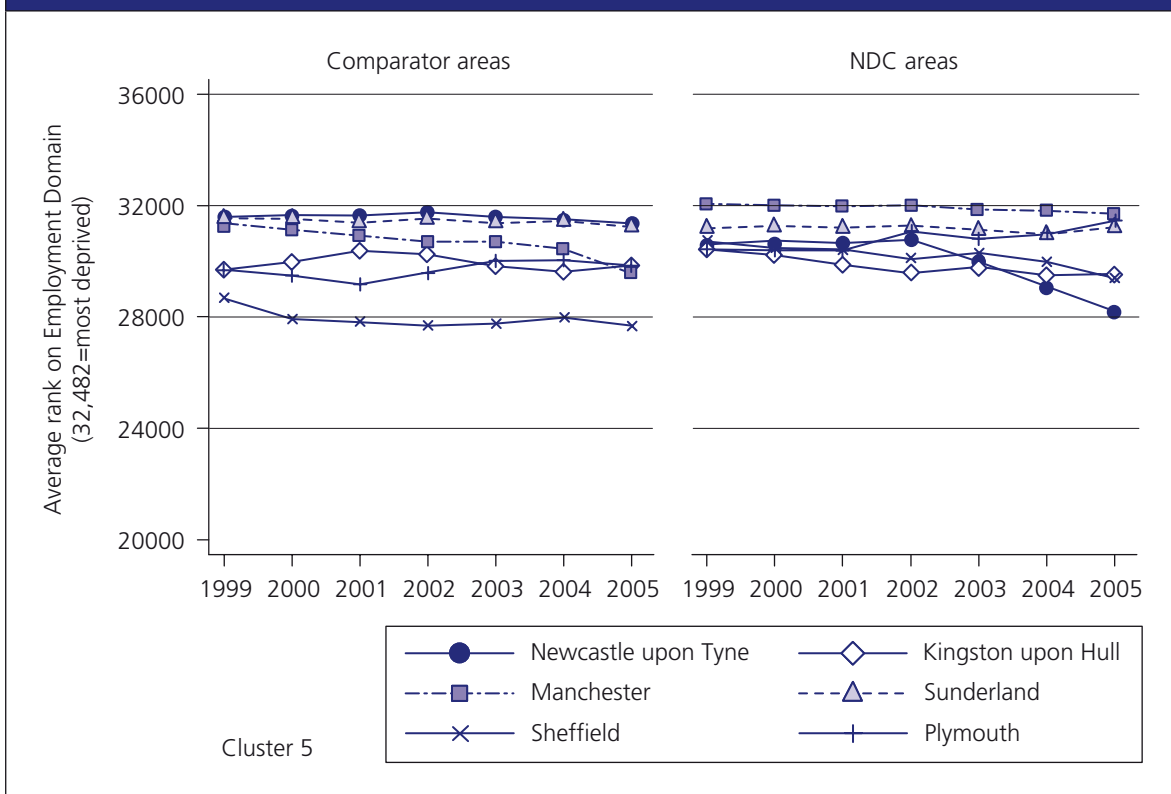
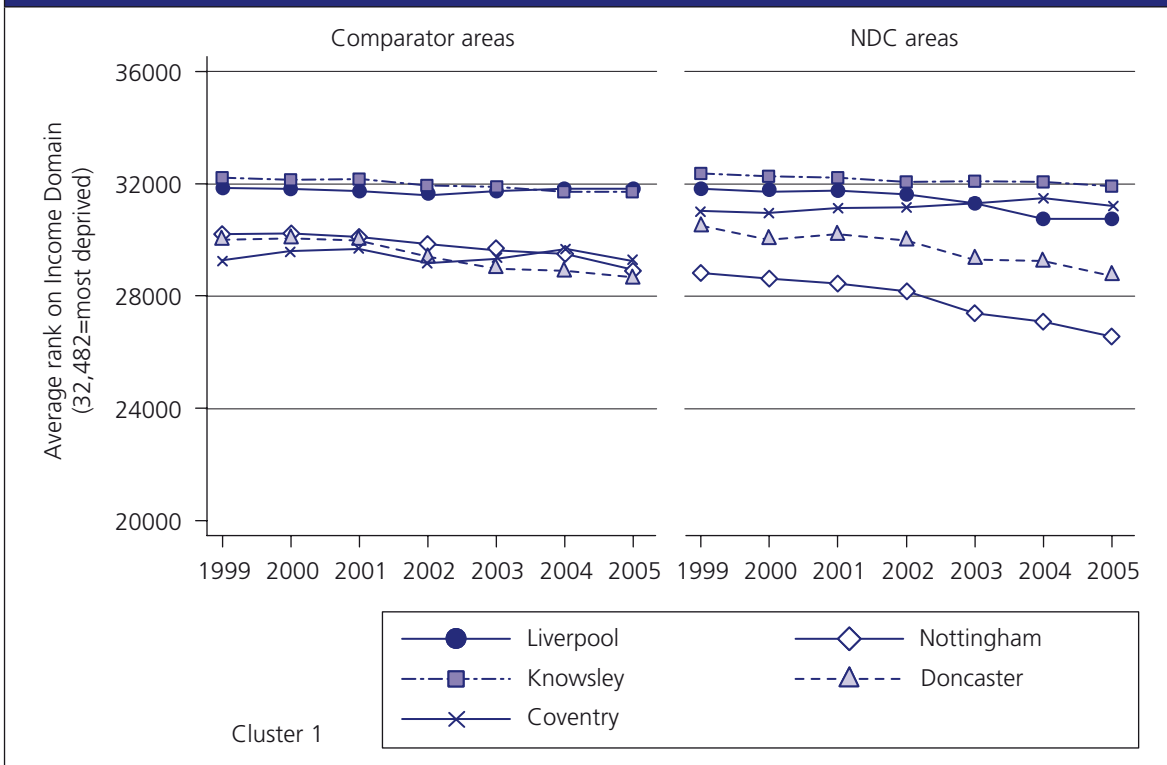


Figure 13: Cluster 1: average rank on the Income Domain (1999–2005)



Very little change is observed in the relative levels of income deprivation in clusters 2, 3, 4 and 5. Notably, Sheffield NDC area in cluster 5 sees a sizeable reduction in rank on the Income Domain.

Figure 14: Cluster 2: average rank on the Income Domain (1999–2005)

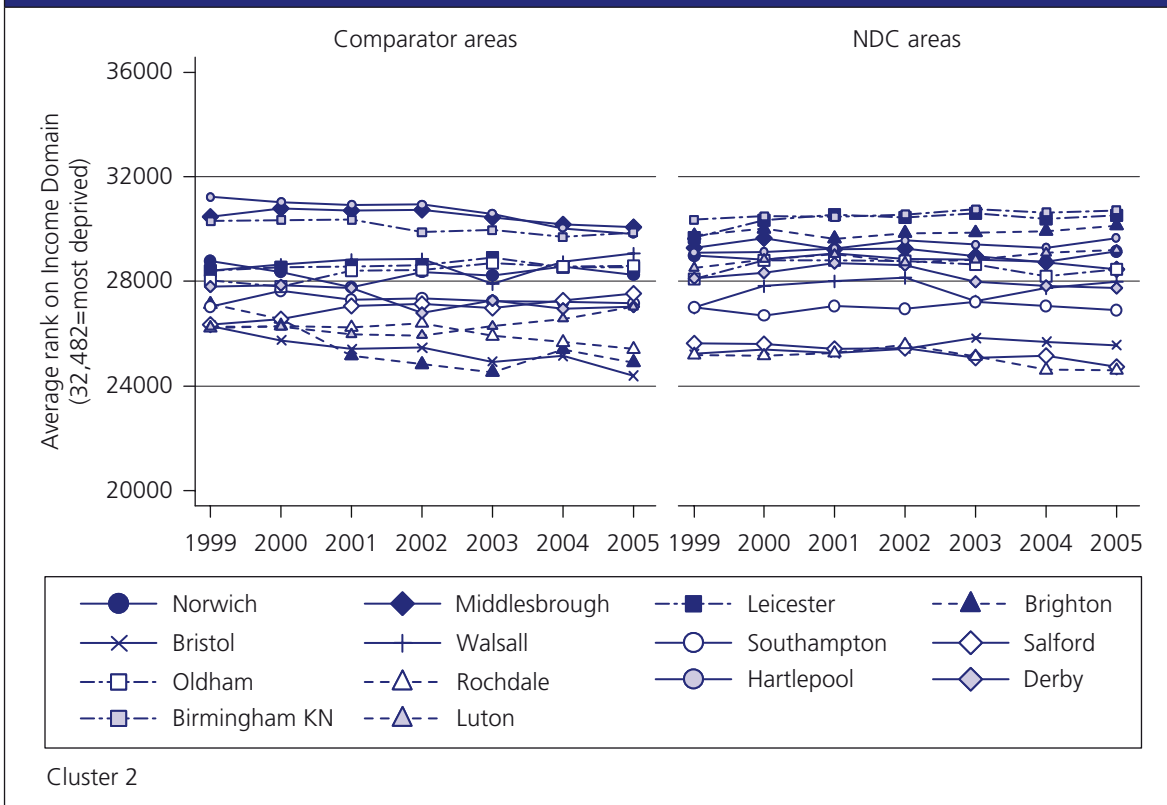


Figure 15: Cluster 3: average rank on the Income Domain (1999–2005)

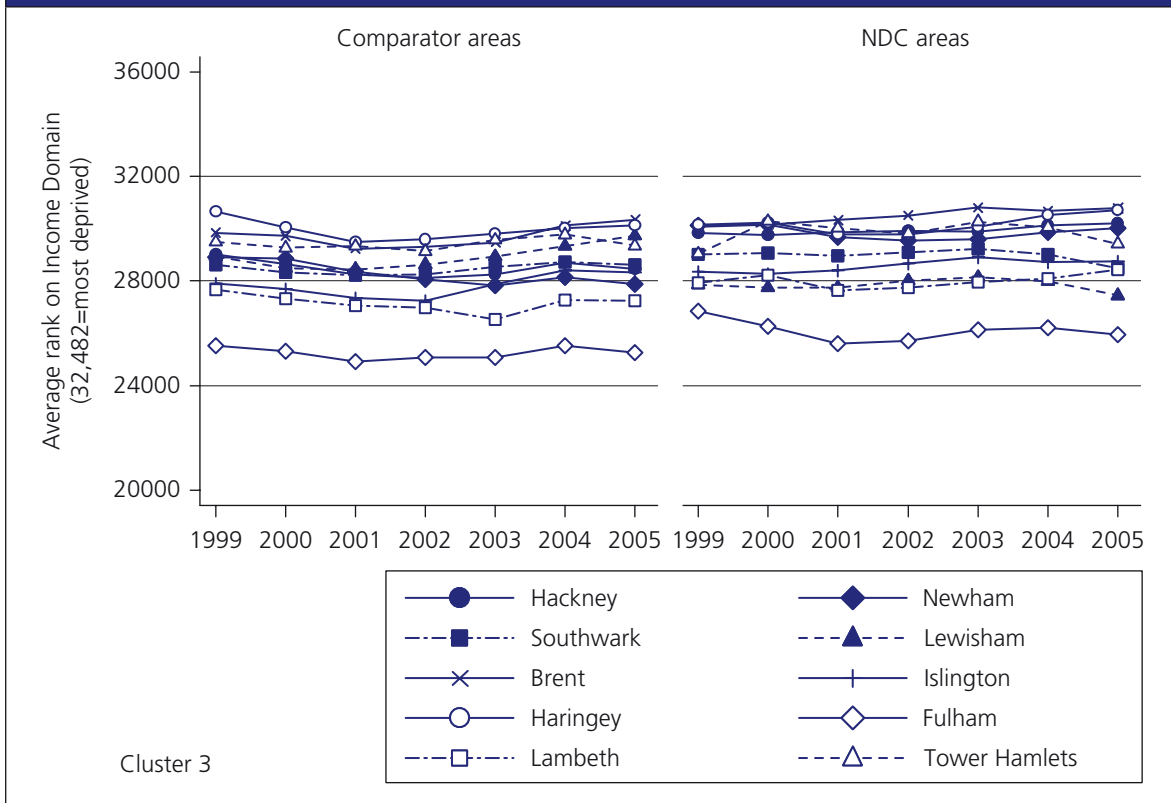
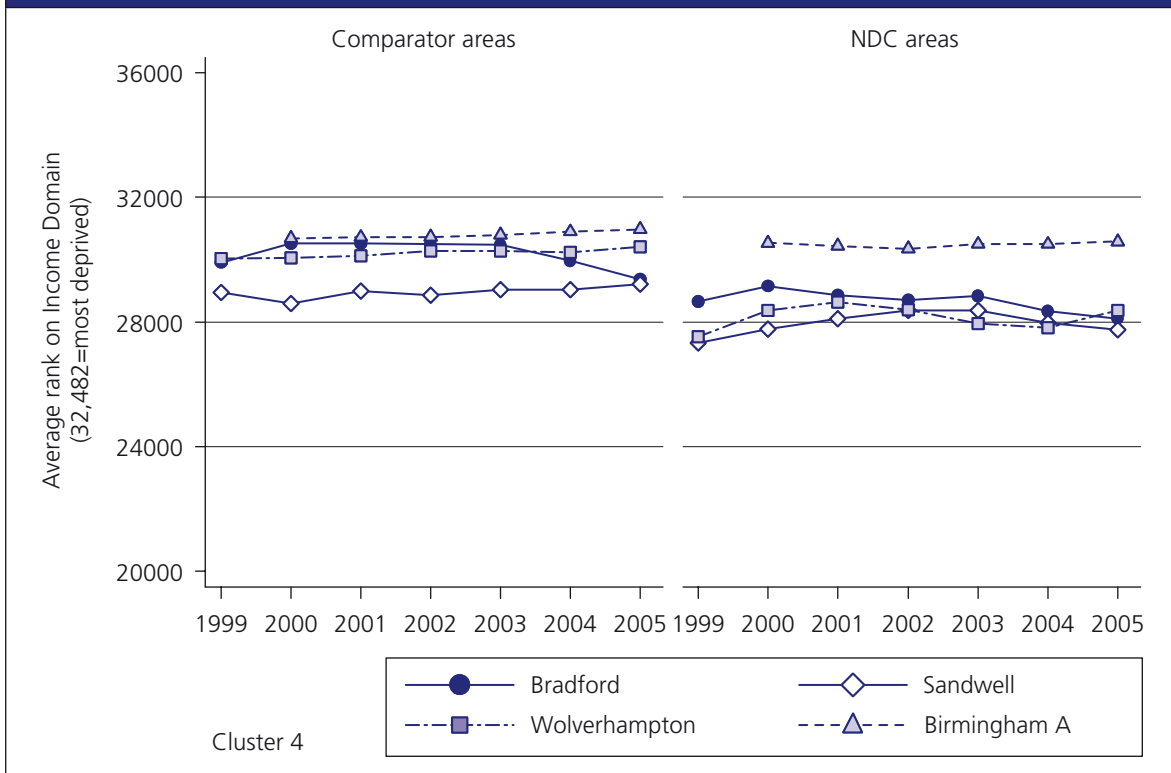
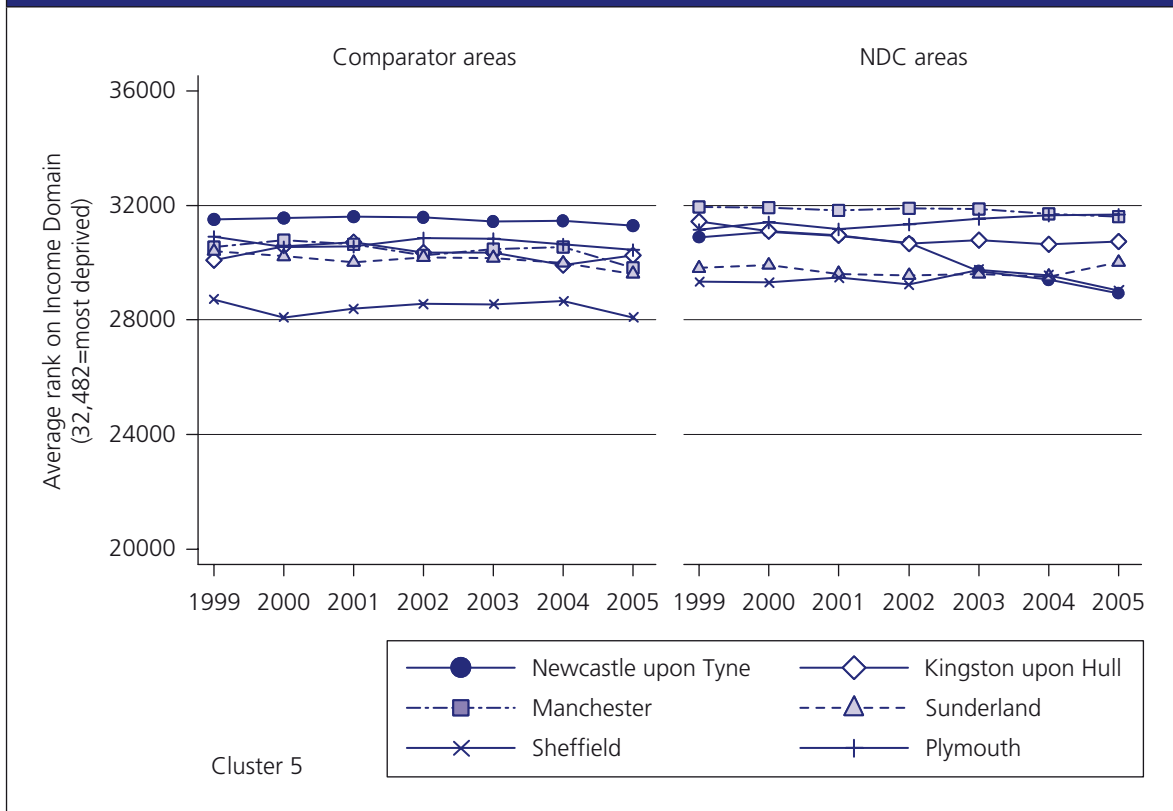


Figure 16: Cluster 4: average rank on the Income Domain (1999–2005)¹⁶



¹⁶ Note that the 1999 figures for Birmingham Aston are not displayed – see Section 2.5.

Figure 17: Cluster 5: average rank on the Income Domain (1999–2005)



The analyses in the previous two sections provide a general indication of the progress of the NDC areas and comparator areas in relative terms. The majority of NDC areas show little change in rank implying that compared to other areas in England their relative levels of deprivation stay fairly constant (although some improvement is seen on the Employment Domain).

The following section extends the analyses by quantifying the movement in ranks for each NDC area compared to its comparator area and parent local authority. By doing this it is possible to see which NDC areas have improved their relative position more than their comparator area and / or their parent local authority.

3.4 How have relative levels of economic deprivation in NDC areas changed in relation to comparator areas and parent local authorities?

In Table 2 the change in each NDC area's rank on the Employment Domain between 1999 and 2005 is calculated. The same figure is also calculated for the NDC's comparator area and its parent local authority. The table shows the change in rank on the Employment Domain for each NDC area between 1999 and 2005 and the difference between the NDC area's change in rank and the comparator area and local authority change. In this case a negative value in columns 4 and 5 of the table indicate that the NDC area has seen

a relative improvement (i.e. a greater fall in rank or a smaller increase in rank)¹⁷. The figures for NDC areas exhibiting an improvement in any of the measures presented in the table are in bold. The NDC areas are ranked within the table based upon the difference in change in rank between the NDC area and its comparator area, with the NDC area at the top of the table (in this case, Lewisham) having fared most favourably in comparison with its comparator area, and the NDC at the bottom of the table (in this case, Bristol) having fared most poorly relative to its comparator.

Table 2: Change in NDC rank on the Employment Domain compared to change in comparator area and local authority rank 1999–2005

NDC Area	Cluster	Difference in NDC rank (Employment Domain 1999–2005)	Difference in rank change between NDC and Comparator area (Employment Domain, 1999–2005)	Difference in rank change between NDC and local authority (Employment Domain, 1999–2005)
Lewisham	3	-1,392	-2,801	-1,362
Newcastle upon Tyne	5	-2,402	-2,137	-459
Islington	3	-1,365	-1,802	-96
Tower Hamlets	3	-2,678	-1,631	-939
Oldham	2	108	-1,198	388
Liverpool	1	-1,119	-1,180	101
Salford	2	-539	-1,046	-40
Kingston upon Hull	5	-864	-1,019	-151
Brent	3	-2	-639	-9
Birmingham A	4	-256	-514	-615
Walsall	2	752	-435	-490
Middlesbrough	2	-468	-406	266
Sheffield	5	-1,312	-315	711
Nottingham	1	-2,935	-212	-1,410
Wolverhampton	4	1,040	-190	-10
Rochdale	2	-387	-149	132
Lambeth	3	-623	-148	-100
Sandwell	4	556	48	-400
Knowsley	1	-313	50	1,361
Southwark	3	-846	113	276

continued

¹⁷ Note that this does not imply that the NDC area's rank has fallen (i.e. it is relatively less employment deprived) only that it has improved its relative position in relation to its comparator area.

Table 2: Change in NDC rank on the Employment Domain compared to change in comparator area and local authority rank 1999–2005

NDC Area	Cluster	Difference in NDC rank (Employment Domain 1999–2005)	Difference in rank change between NDC and Comparator area (Employment Domain, 1999–2005)	Difference in rank change between NDC and local authority (Employment Domain, 1999–2005)
Southampton	2	502	193	1,937
Doncaster	1	-716	210	915
Norwich	2	39	341	1,266
Sunderland	5	27	385	998
Hartlepool	2	-110	488	1,934
Bradford	4	-1,121	576	-529
Newham	3	-1,156	665	711
Plymouth	5	1,023	880	1,304
Birmingham KN	2	1,218	939	859
Hackney	3	-614	949	535
Fulham	3	-1,634	986	-1,308
Leicester	2	1,280	1,082	19
Manchester	5	-378	1,291	1,910
Haringey	3	78	1,312	587
Brighton	2	220	1,751	1,479
Luton	2	1,054	1,869	-311
Derby	2	80	1,885	454
Coventry	1	973	1,984	475
Bristol	2	1,467	3,206	1,955

More than half (23) of the NDC areas experienced a fall in rank (i.e. relative improvement) between 1999 and 2005. Seventeen NDC areas saw a relative improvement in rank compared to their comparator areas and 12 of these areas also improved relative to their parent local authority. There are no trends in terms of cluster membership and the relative performance of the NDC areas although three of the top four performing NDC areas (in terms of change relative to their comparator areas) are in London.

Table 3 shows the same data for the Income Domain ranks.

Table 3: Change in NDC rank on the Income Domain compared to change in comparator area and local authority rank 1999–2005

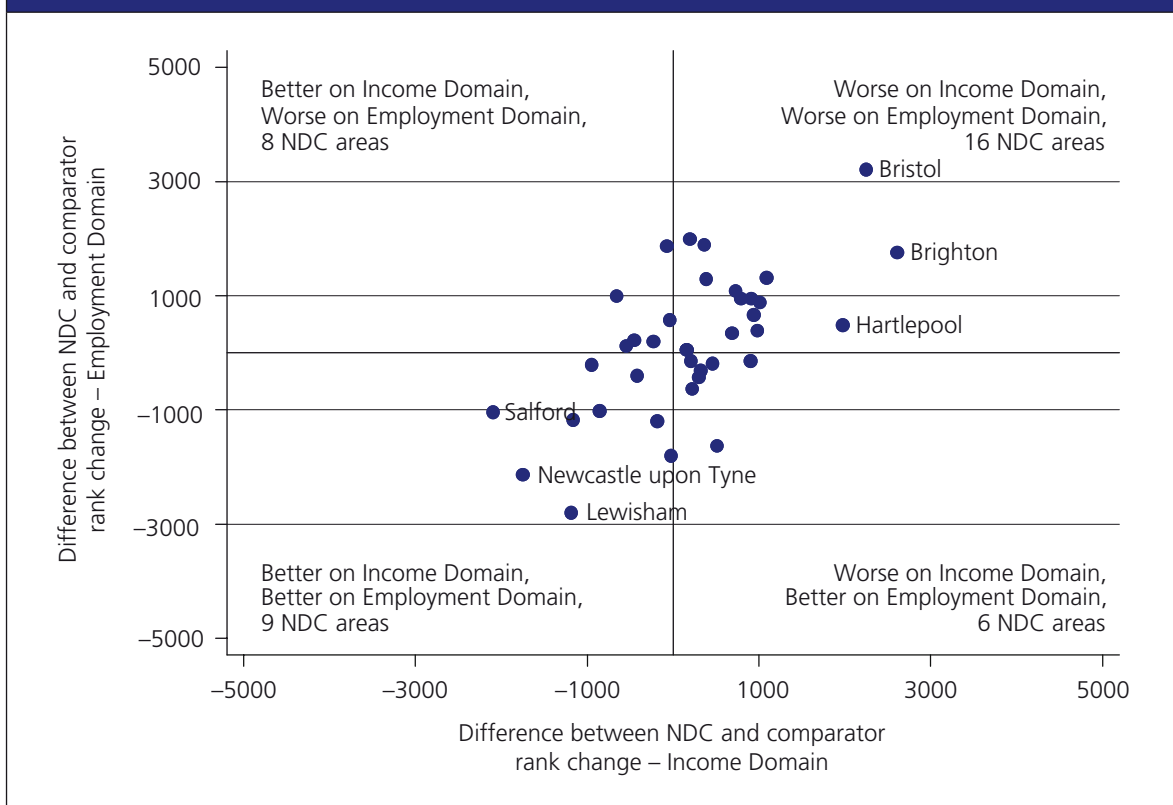
NDC Area	Cluster	Difference in NDC rank (Income Domain 1999–2005)	Difference in rank change between NDC and Comparator area (Income Domain, 1999–2005)	Difference in rank change between NDC and local authority (Income Domain, 1999–2005)
Salford	2	-901	-2,093	-820
Newcastle upon Tyne	5	-1,971	-1,754	-489
Lewisham	3	-411	-1,187	-493
Liverpool	1	-1,126	-1,164	43
Nottingham	1	-2,244	-944	-945
Kingston upon Hull	5	-695	-855	390
Fulham	3	-902	-651	-1,208
Southwark	3	-547	-546	99
Doncaster	1	-1,784	-451	-617
Middlesbrough	2	-813	-413	-91
Southampton	2	-103	-229	1,421
Oldham	2	382	-187	276
Luton	2	674	-75	-660
Bradford	4	-568	-38	-403
Islington	3	407	-18	515
Knowsley	1	-406	156	1,573
Sandwell	4	437	159	-212
Coventry	1	260	194	-413
Rochdale	2	-591	212	-232
Brent	3	721	222	-193
Walsall	2	979	302	322
Sheffield	5	-297	326	780
Derby	2	-396	370	-162
Manchester	5	-324	390	788
Wolverhampton	4	827	465	-203
Tower Hamlets	3	379	514	410
Norwich	2	145	686	1,058
Leicester	2	862	734	-570
Birmingham KN	2	353	788	-273
Lambeth	3	496	905	642
Hackney	3	352	908	703
Newham	3	-88	942	264
Sunderland	5	199	982	1,369
Plymouth	5	539	1,012	2,213
Haringey	3	551	1,092	623
Hartlepool	2	562	1,980	2,762
Bristol	2	340	2,250	1,056
Brighton	2	385	2,612	1,519
Birmingham A ¹⁸	4	5,395	4,632	4,769

¹⁸ See Section 2.5.

Less than half of the NDC areas (18) experience a fall in rank (i.e. relative improvement) on the Income Domain between 1999 and 2005. Fewer (15) NDC areas do relatively better in terms of change in rank than their comparator areas. Here there is less concurrence between performance relative to the local authority (where 17 NDC areas show an improvement) and performance relative to the comparator area. Nine NDC areas (Islington, Kingston upon Hull, Lewisham, Liverpool, Middlesbrough, Newcastle upon Tyne, Nottingham, Oldham and Salford) perform better than their comparator areas on both the income and employment measures.

Figure 18 summarises the information presented in Table 2 and Table 3 with some of the outlying NDC areas labelled. In total, 23 NDC areas did better than their comparator areas on either the Income Domain or the Employment Domain; however, the remaining 16 NDC areas did worse than their comparator areas on both domains.

Figure 18: NDC versus comparator performance on the Income and Employment Domains¹⁹



¹⁹ Note that Birmingham Aston is excluded – see Section 2.5.

3.5 How do relative levels of deprivation in the NDC areas change over time compared to other neighbourhoods in England?

It is helpful to compare the change in relative levels of deprivation in the NDC areas with the changes occurring in similarly deprived areas in England as well as for the comparator areas. As described in section 2.3, England is split into neighbourhood areas of approximately equal size which include NDC and comparator areas. In the analyses below the change in rank on the Employment and Income Domains between 1999 and 2005 is calculated for the NDC areas, comparator areas and other neighbourhoods in England. Here, and in later sections of the report, other neighbourhoods in England are split into quintiles based on their EDI rank in 1999. The first quintile (Q1) contains the 20 per cent most deprived neighbourhoods in England in 1999 (excluding NDC and comparator areas) and the fifth quintile (Q5) contains the 20 per cent most affluent neighbourhoods in 1999.

The average change in rank on the Income and Employment Domains for each group of neighbourhoods is then split into 10 deciles to indicate at a national level which of these groups of neighbourhoods have experienced the largest improvements (or largest increases) in relative levels of deprivation over the period.

Figure 19 and Figure 20 below show the results for the Income and Employment Domains respectively. The NDC and comparator areas all fall within the 20 per cent most deprived neighbourhoods in England so it is therefore most appropriate to compare them with Q1 neighbourhoods (as these will be neighbourhoods with similar initial levels of deprivation).

In both Figure 19 and Figure 20 a higher proportion of deprived neighbourhoods experience relative improvement (i.e. around 60 per cent of NDC areas, comparator areas and Q1 neighbourhoods) than more affluent areas. However, it is the second, third and fourth quintile neighbourhoods that have the highest proportions in the 'greatest improvement' category.

The NDC areas are making more progress reducing employment deprivation than they are in reducing income deprivation. More than half of the NDC areas experience a relative improvement in employment deprivation (although a higher proportion of comparator areas also experience a relative improvement). There are also a slightly higher number of NDC areas than comparator areas in the top 10 per cent of improvers. The NDC areas in the top 10 per cent of improvers nationally are Newcastle upon Tyne, Nottingham and Tower Hamlets. As indicated in Table 1, these NDC areas also do better than their comparator areas and parent local authorities.

Progress on reducing income deprivation is less positive. More than half of the NDC areas experience a worsening in ranks on this domain, whereas around 60 per cent of the comparator areas and Q1 neighbourhoods experience an improvement. Although, Nottingham and Newcastle NDC areas are in the top 10 per cent of improvers nationally, in general, the NDC areas are showing significantly less improvement in terms of reducing levels of income deprivation than either the comparator areas or other similarly deprived neighbourhoods.

3.6 Summary – relative changes in economic deprivation

This section has looked at the relative position of the NDC areas, their comparator areas and other similarly deprived neighbourhoods in England by rank on the overall EDI and the Income and Employment Domains.

Overall, at Programme wide level, it appears that there has been little relative improvement in economic deprivation in the NDC areas. Although more than half of the NDC areas have improved their rank on the employment domain, the picture is less encouraging for income deprivation.

A number of NDC areas (slightly less than half) have improved their position relative to either their comparator areas or their parent local authorities on the Employment Domain and three areas are amongst the top 10 per cent in England in terms of improvement in rank on the Employment Domain.

The relative position of the NDC areas is, however, only one strand of the analyses. Changes in rank do not necessarily coincide with absolute changes in income and employment deprivation. Thus, as an NDC area may potentially experience a decrease in absolute rates of employment deprivation but a simultaneous increase in its relative employment deprivation rank due to changes in other areas, the change in rank does not tell us the extent to which the absolute gap between NDC and other areas is narrowing. The following section examines the changes in the absolute levels of income and employment deprivation in NDC areas between 1999 and 2005 and how these changes compare to those occurring in the comparator areas and other similarly deprived areas.

4. How have absolute levels of economic deprivation changed in NDC areas?

This section presents the results of analyses of the scores on the Income and Employment Domains of the Economic Deprivation Index (EDI). The domain scores can be thought of as rates of income or employment deprivation, i.e. the proportion of people in an area experiencing income or employment deprivation.

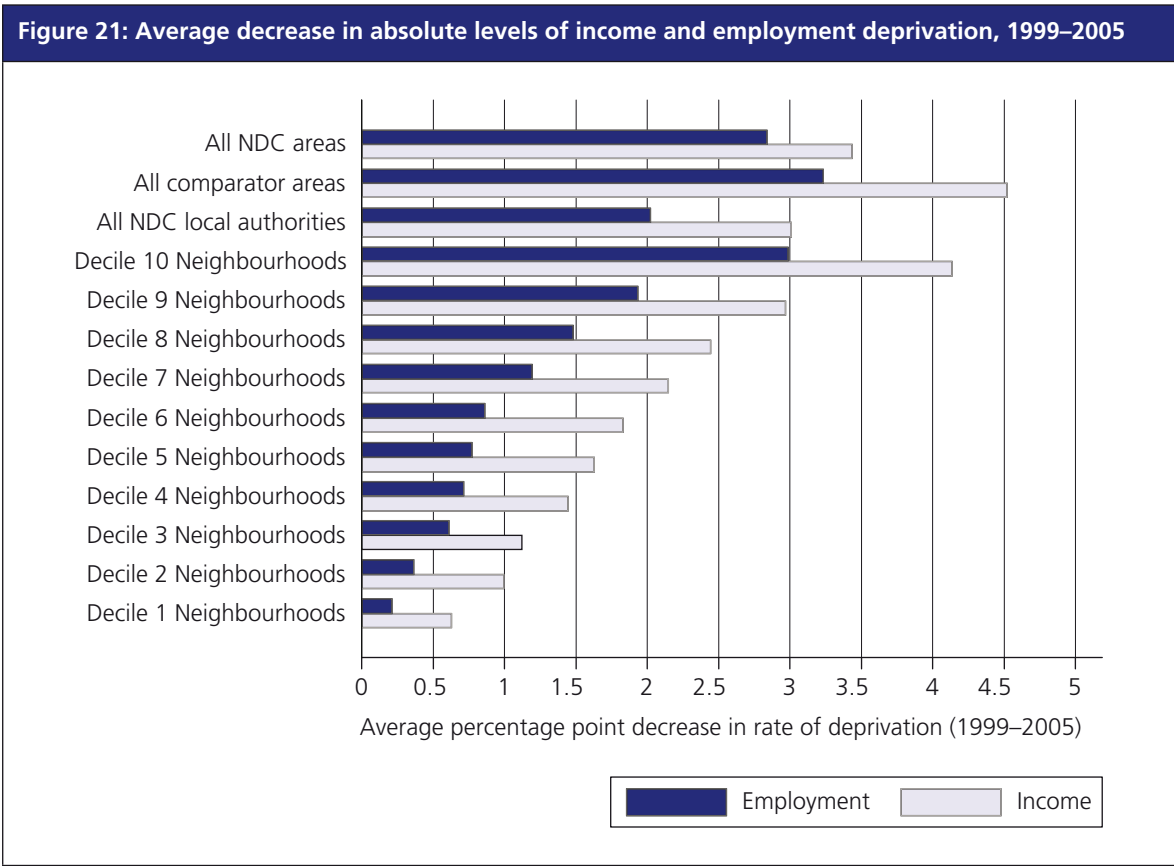
4.1 How do changes in absolute levels of economic deprivation compare to other neighbourhoods in England?

Absolute rates of employment and income deprivation fell nationally between 1999 and 2005. This trend occurred in the most and least deprived areas, although by far the largest changes were seen in the most deprived areas.

Figure 21 shows the average percentage point decrease in absolute levels of income and employment deprivation between 1999 and 2005 in the NDC areas, comparator areas, NDC local authorities and neighbourhoods split into deciles (where the deciles include the NDC and comparator areas as in section 3.1). In all cases the percentage point reduction in income deprivation is larger than the percentage point reduction in employment deprivation. The NDC areas are unusual in that there is a fairly small difference between the decrease in the rate of income and employment deprivation (i.e. NDC areas are not experiencing as large a reduction in income deprivation as might be expected given the trends in other areas).

4.2 How have absolute levels of economic deprivation changed over time in NDC and comparator areas?

The analyses in the previous section showed that absolute rates of income and employment deprivation have fallen on average across the NDC and comparator areas between 1999 and 2005. This section goes on to look at change over time within each NDC and comparator area.



4.2.1 Change in absolute rates of employment deprivation in NDC and comparator areas over time

The rates of employment deprivation (i.e. the proportion of residents of working age who are employment deprived) in the NDC and comparator areas are presented in the figures below. Again the NDC areas have been grouped into area typologies to identify any trends within clusters²⁰.

There is more consistency in the trends observed in rates of employment deprivation within each cluster than there is for change in rank on the Employment Domain. The majority of the NDC areas experience a decline in rates of employment deprivation, albeit sometimes a very small decline. However, Coventry NDC shows more or less stable employment deprivation rates across the entire period whereas its comparator area shows significant falls across the period.

The NDC areas in cluster 1 (Figure 22) experience the largest falls in employment deprivation. In fact there is a general trend for the largest percentage point decreases to be seen in areas with the highest initial employment deprivation rates. Whilst deprived areas have more ‘scope’ for improvement than less deprived areas, this is nevertheless an important finding.

²⁰ It should be noted that the average rates of employment deprivation (and income deprivation) are based on the population weighted scores from the LSOAs that lie within the NDC and comparator areas. As such these figures are different from the workless indicators that are supplied as part of the NDC indicator packages.

Figure 22: Cluster 1: average rate of employment deprivation (1999–2005)

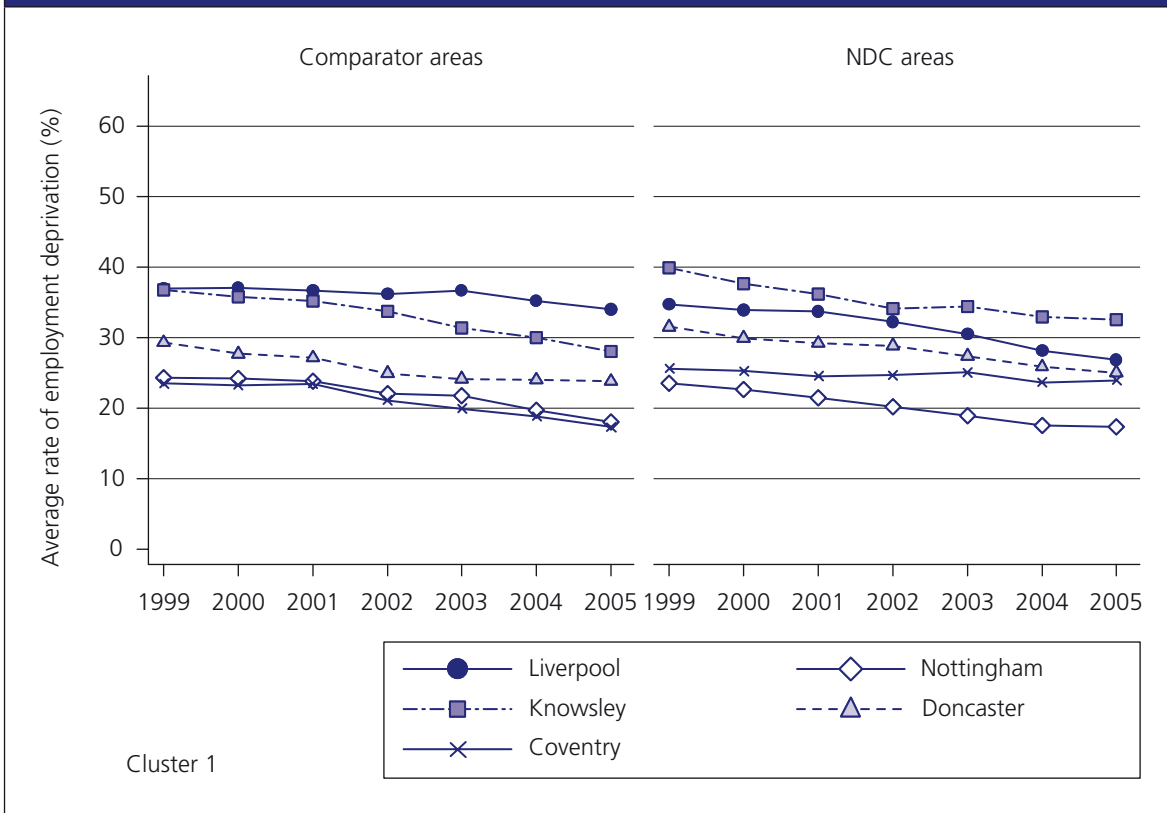
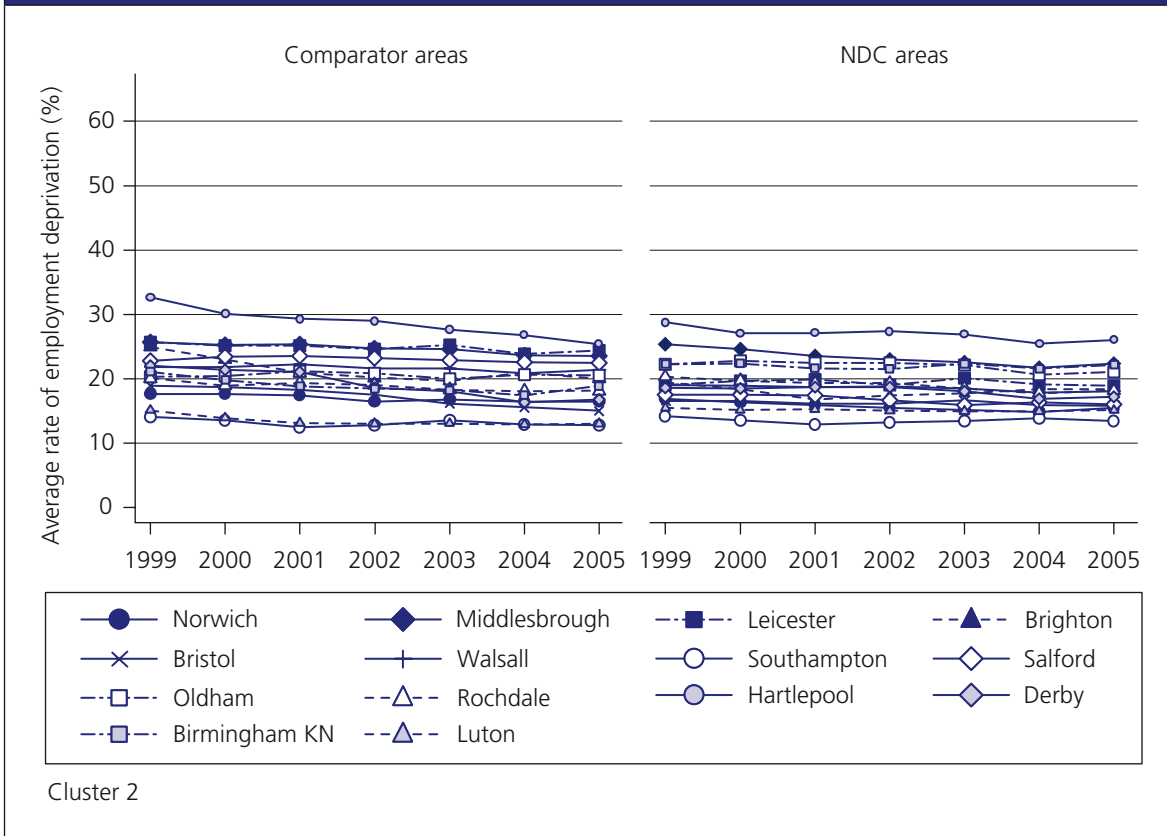


Figure 23: Cluster 2: average rate of employment deprivation (1999–2005)

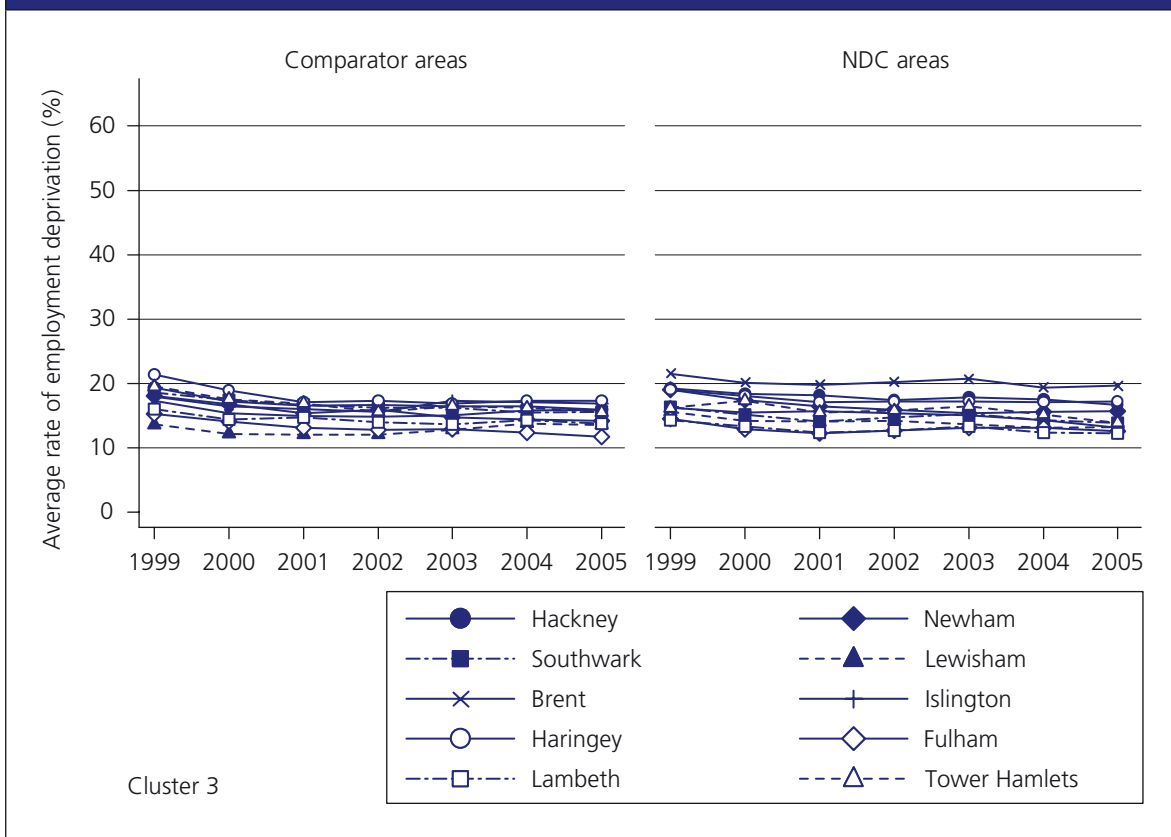


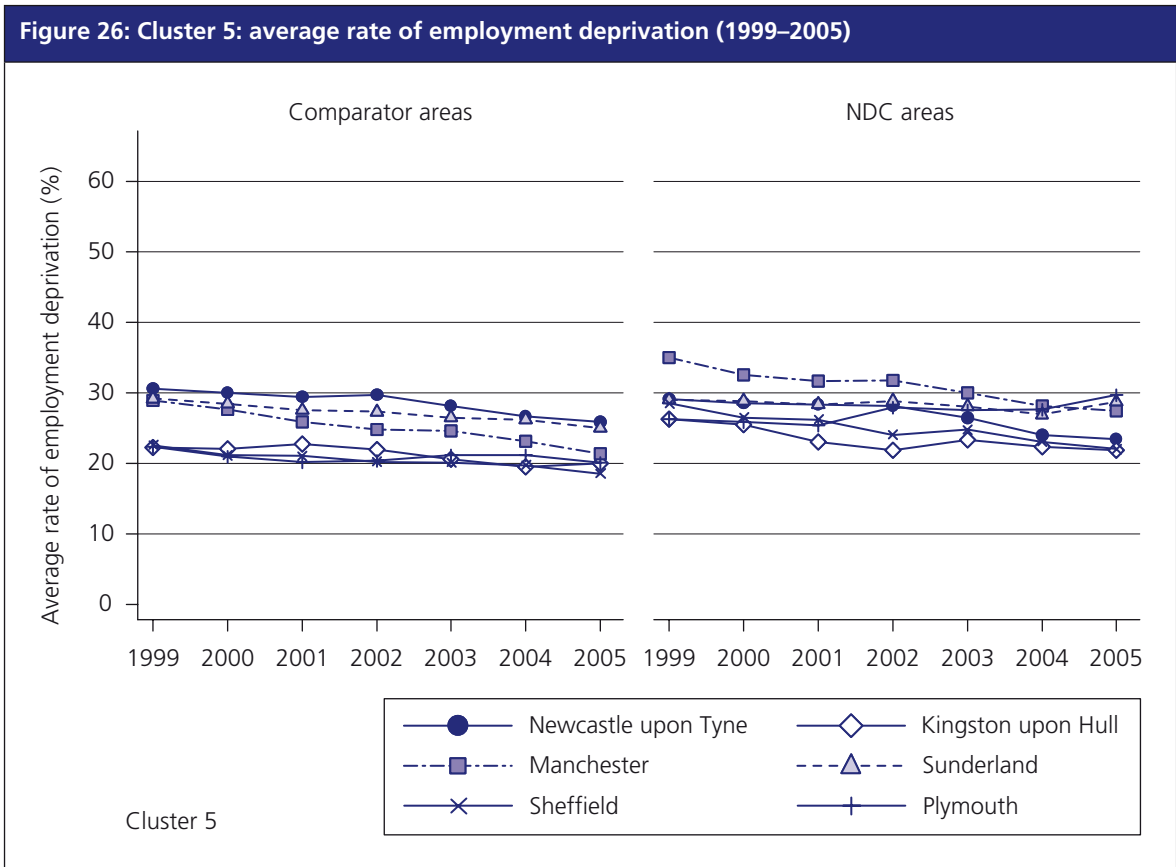
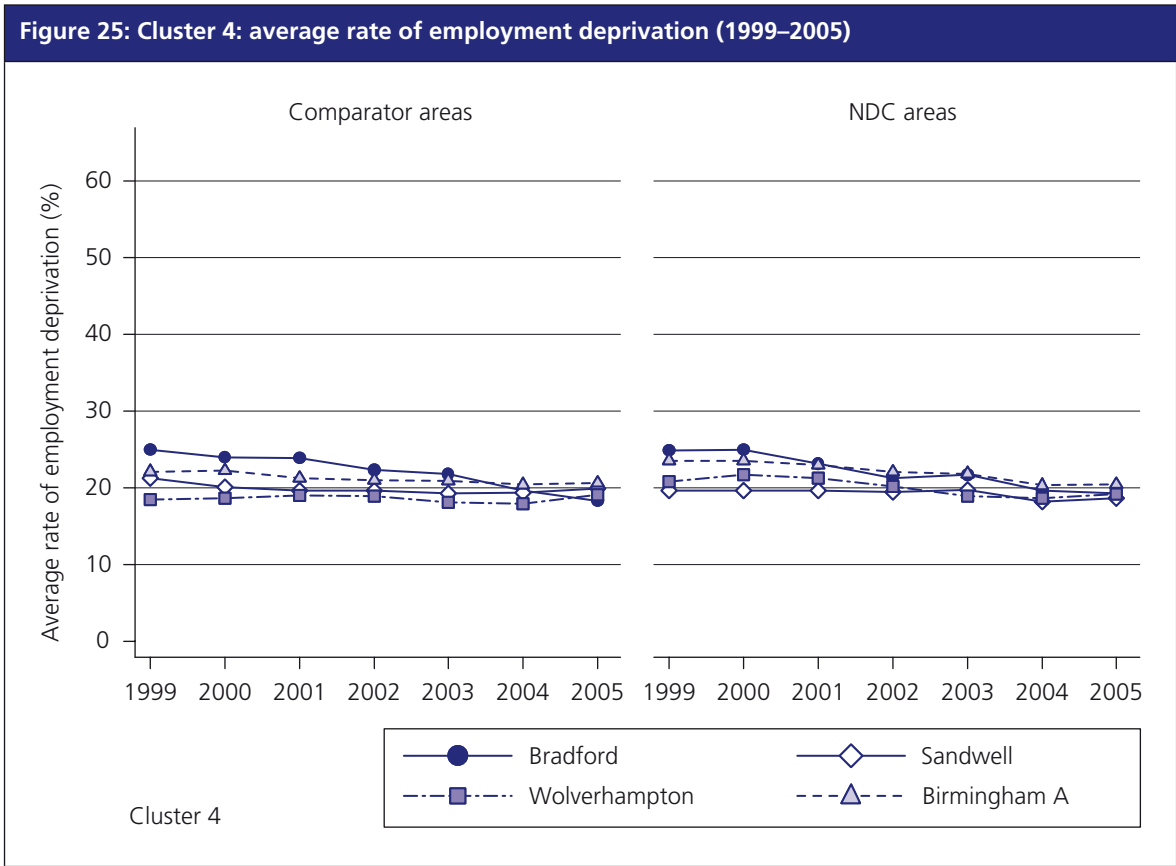
Compared to cluster 1, cluster 2 (Figure 23) experiences less change, consistent with the classification of these areas as having stable, long-term populations. The NDC areas with the highest initial rates of employment deprivation in this cluster (Hartlepool and Middlesbrough) appear to have the largest decrease in employment deprivation over time.

Cluster 3 (London NDC areas) (Figure 24) shows evidence of a small initial fall in rates of employment deprivation (as also seen in relative terms) followed by a levelling off in later years. Rates of employment deprivation in these NDC areas are generally low relative to other NDC areas and vary little over the time period of the analyses.

Finally, the NDC areas in clusters 4 and 5 (Figure 25 and Figure 26) have moderate levels of employment deprivation and generally exhibit a moderate improvement in this measure over time.

Figure 24: Cluster 3: average rate of employment deprivation (1999–2005)





4.2.2 Change in absolute rates of income deprivation in NDC and comparator areas over time

Figures 27 to 31 present the average rates of income deprivation in NDC and comparator areas over time.

Rates of income deprivation are generally higher in the NDC and comparator areas than rates of employment deprivation. In section 3.3.2 it was noted that there was little change in rank on the Income Domain of the EDI over time. However, absolute rates of income deprivation do fall for most of the NDC areas. NDC areas in cluster 1 and cluster 5 are exceptional in that they do experience noticeable falls in income deprivation whilst the majority of the NDC areas in other clusters show more stable rates. Very few NDC areas experience an increase in absolute levels of income deprivation although a notable increase is observed in Tower Hamlets (Figure 29). Although Coventry NDC (Figure 27) sees little change in income deprivation rates this is unusual given that the other NDC areas in the cluster show a significant downward trend.

Figure 27: Cluster 1: average rate of income deprivation (1999–2005)

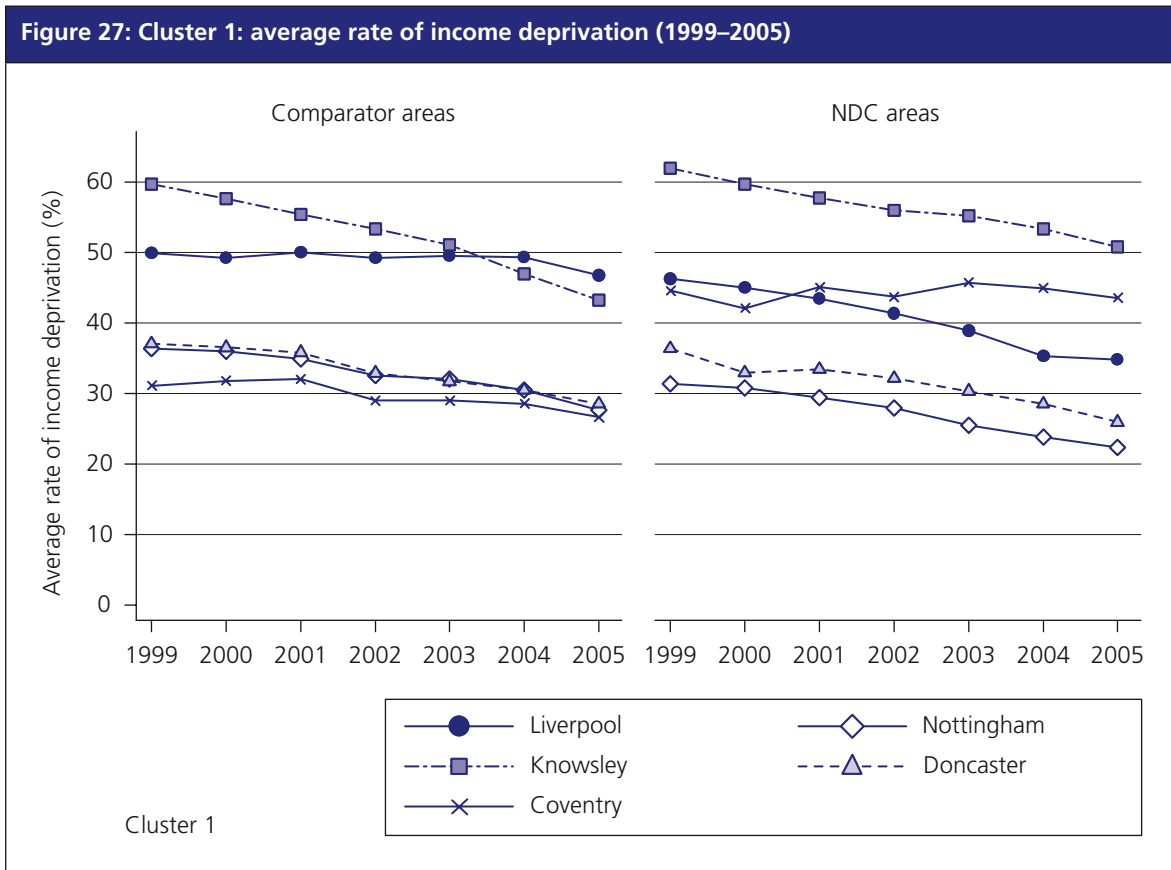


Figure 28: Cluster 2: average rate of income deprivation (1999–2005)

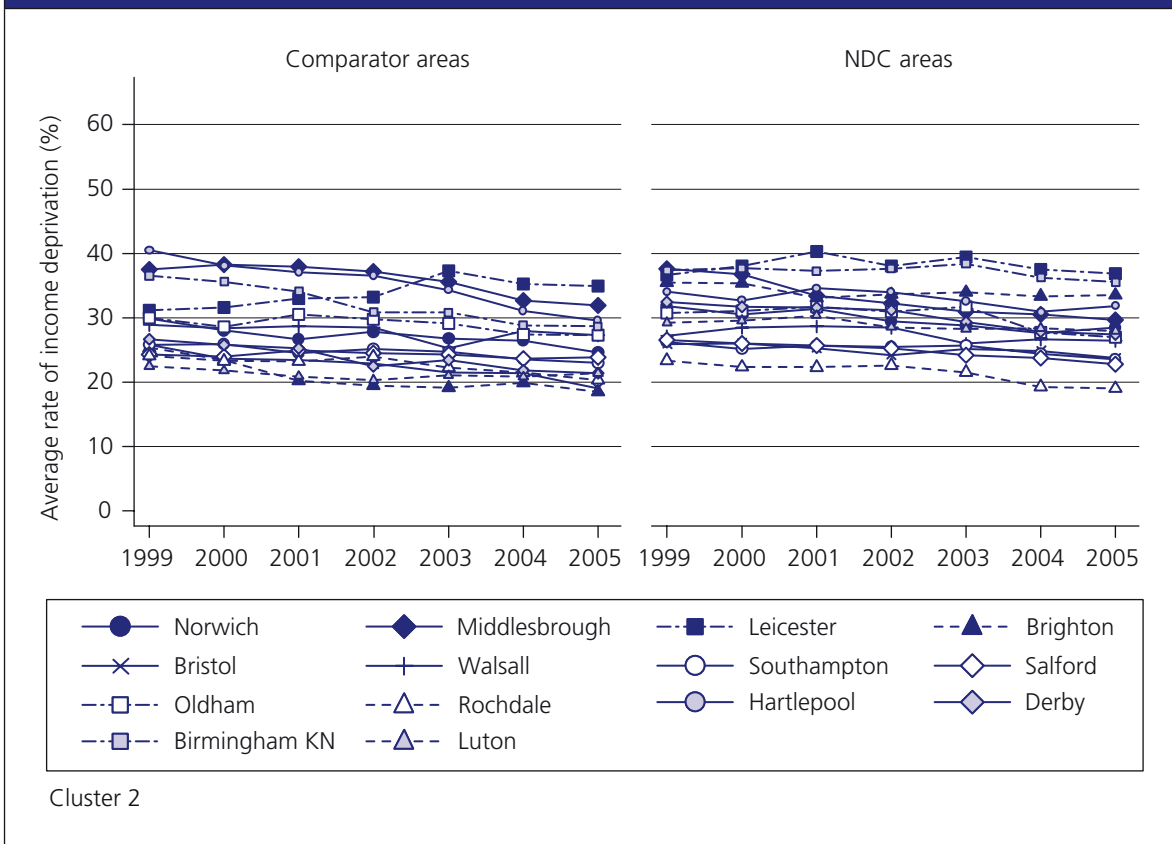


Figure 29: Cluster 3: average rate of income deprivation (1999–2005)

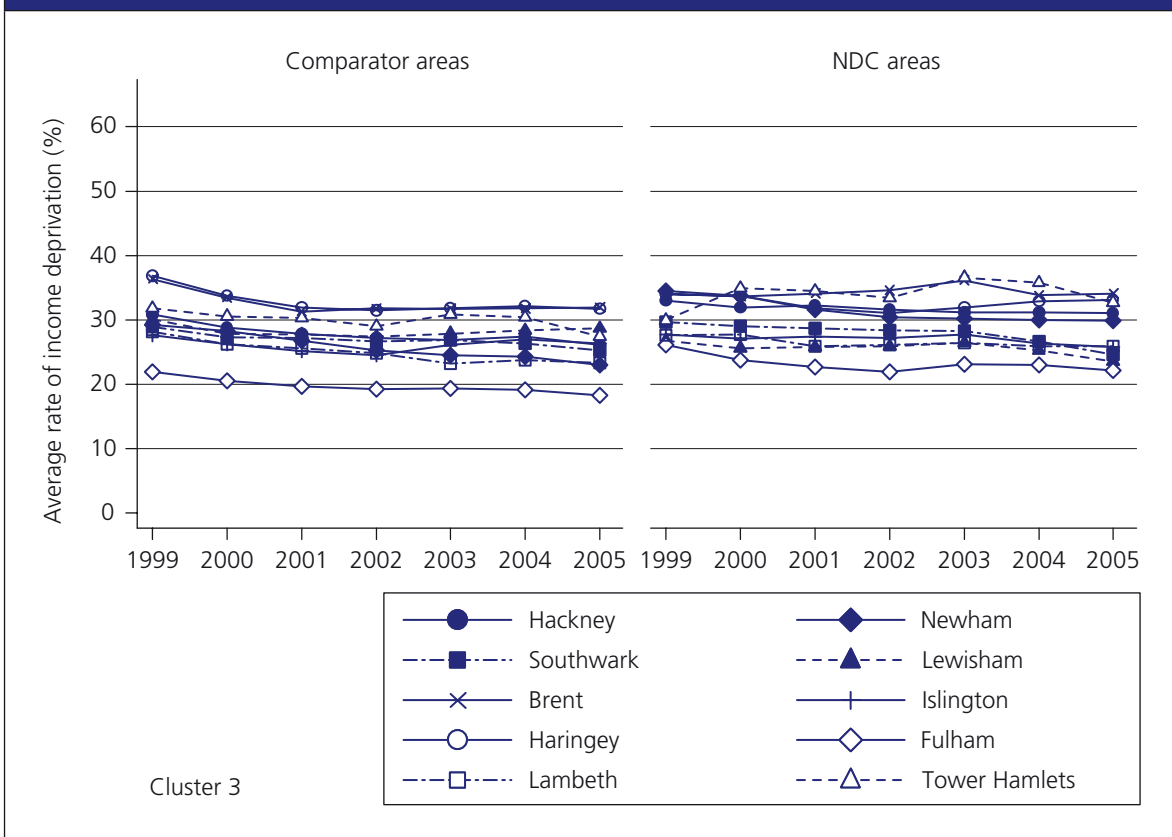


Figure 30: Cluster 4: average rate of income deprivation (1999–2005)²¹

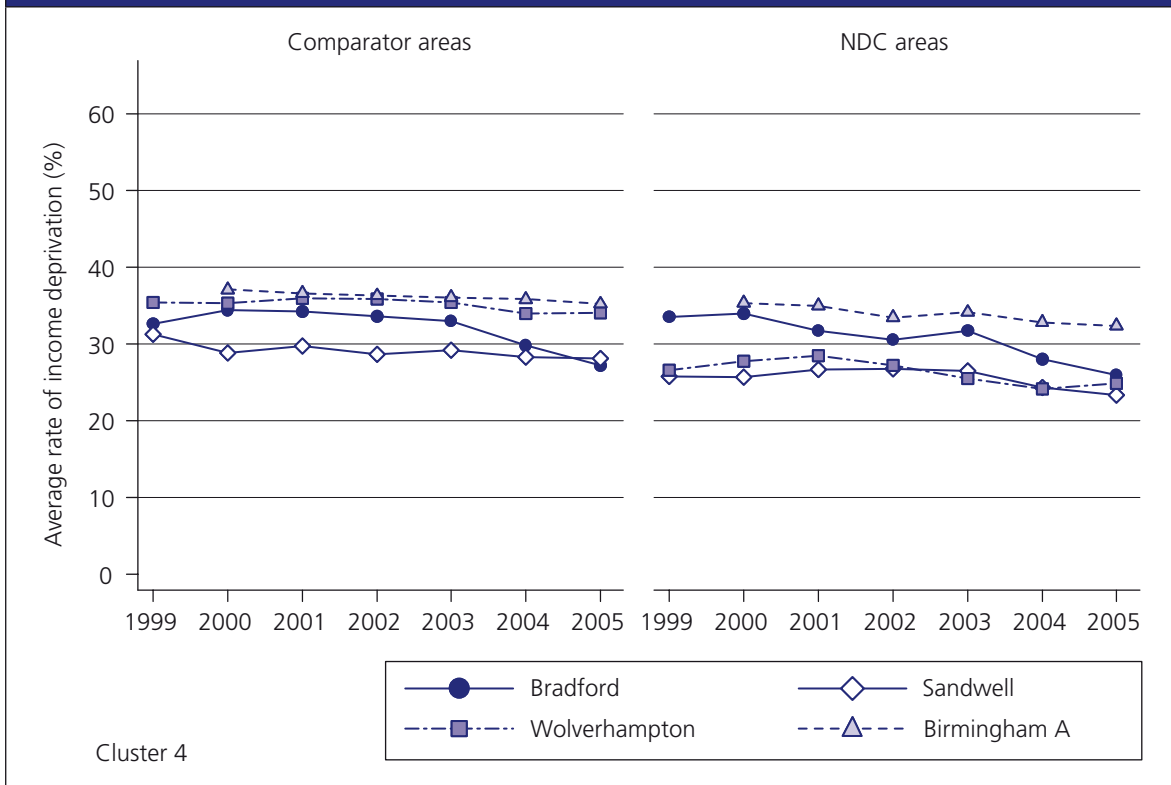
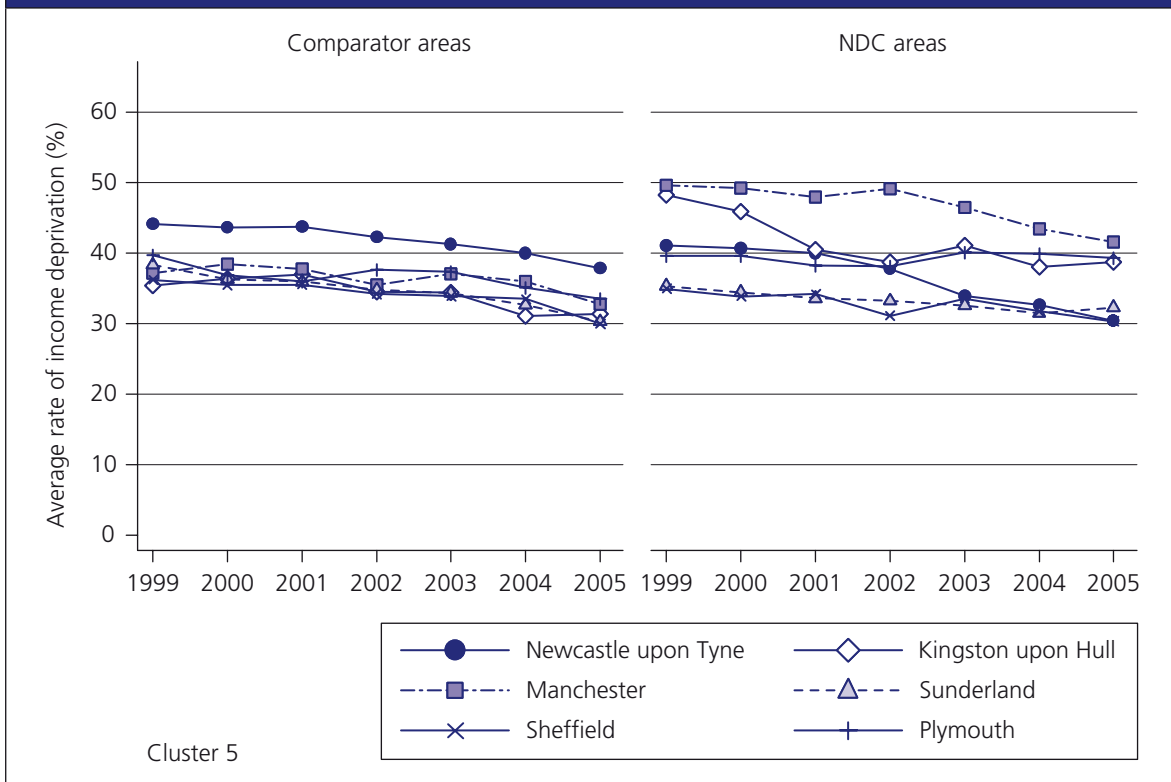


Figure 31: Cluster 5: average rate of income deprivation (1999–2005)



²¹ Note that the figure for 1999 for Birmingham Aston is excluded – see Section 2.5.

4.3 How have absolute levels of economic deprivation in NDC areas changed in relation to comparator areas and parent local authorities?

The graphical representations of the changes in income and employment rates show the general trends in NDC and comparator areas in each cluster. As in section 3.4, it is also useful to quantify the size of these changes and to compare the change in the NDC areas with the change in comparator areas and their parent local authorities. As the analyses here focus on the absolute rates of deprivation, it is possible to determine the extent to which NDC areas are 'narrowing the gap'. Comparing the change in the absolute rates of deprivation in the NDC area and its parent local authority indicates the degree of convergence between the NDC area and the, generally less deprived²², local authority. In Table 4, NDC areas which are converging towards the local authority rates of employment deprivation have a negative value in column 5. The table is ranked on the difference between NDC and comparator change in ranks.

All but one of the NDC areas sees a reduction in the rate of employment deprivation between 1999 and 2005 and 25 areas show 'convergence' with the local authority. The NDC areas perform less well in relation to the comparator areas as only 17 NDC areas see a greater reduction in employment deprivation rates than occurs in the comparator areas. As might be expected, the NDC areas performing well in relation to the comparator areas are largely the same group of areas that experience a relative improvement in ranks in Table 2.

Table 5 shows the changes in the absolute rates of income deprivation in the NDC areas between 1999 and 2005 and how these changes compare to the changes occurring in the comparator areas and the NDC local authorities. Again, most NDC areas (35) see a fall in absolute levels of income deprivation. The size of the decrease in income deprivation is of greater magnitude than the size of the decrease in employment deprivation, as has already been discussed (see Figure 21). Four NDC areas (Liverpool, Newcastle, Doncaster and Knowsley) see their income deprivation rates drop by more than 10 percentage points. These areas all had high levels of income deprivation in 1999.

Twenty-three NDC areas show convergence with their local authorities in terms of income deprivation and 18 NDC areas perform better than their comparator areas. Again, most of the NDC areas that out-perform their comparator areas in absolute terms also experience the largest relative improvements in income deprivation.

²² All NDC areas have higher rates of income and employment deprivation than their parent local authorities in 1999 with the exception of Birmingham Aston (lower rates of income deprivation than the local authority – see Section 2.5) and Tower Hamlets and Islington (lower rates of employment deprivation than the local authority).

Table 4: Change in NDC employment deprivation rate compared to change in comparator area and local authority rate 1999–2005

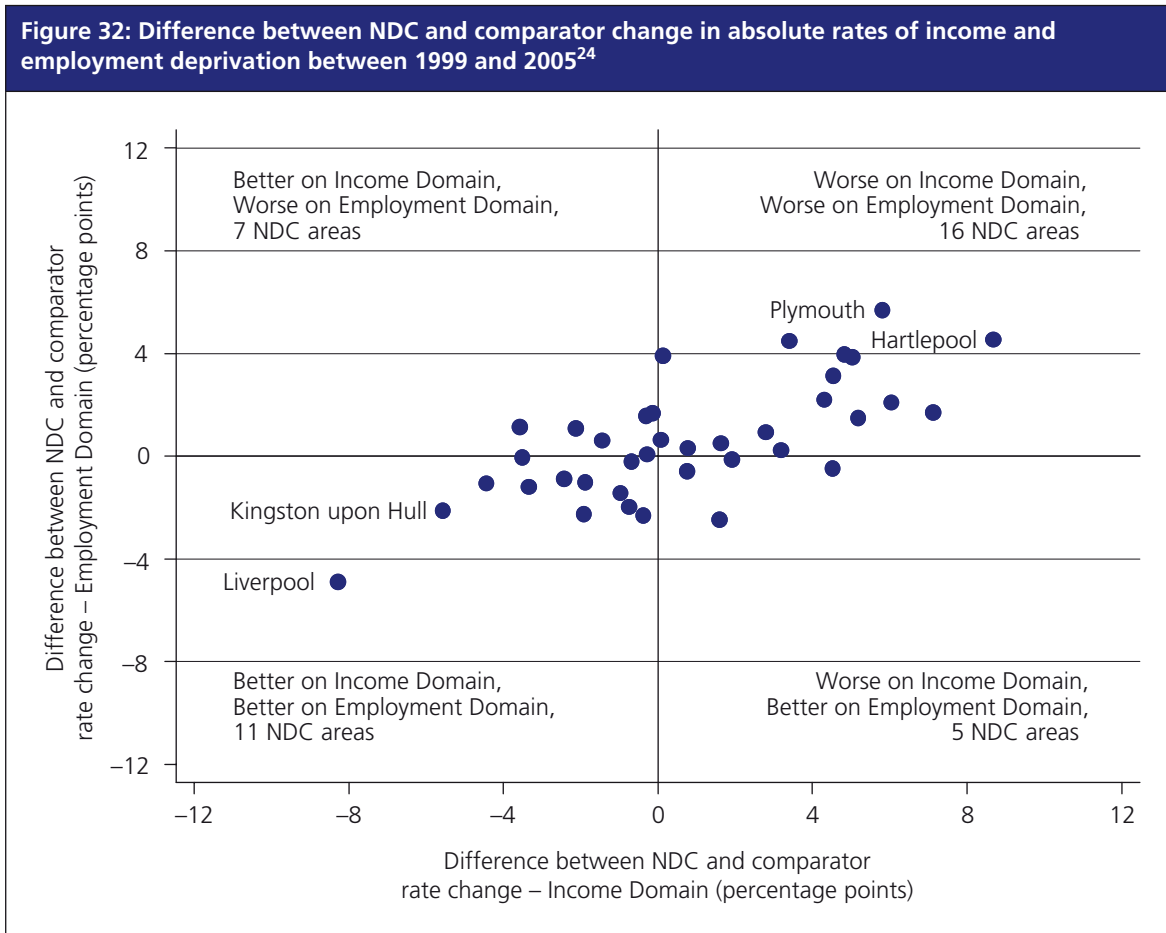
NDC Area	Cluster	NDC change in rate of employment deprivation (percentage points, 1999–2005)	Difference between NDC and comparator area change in rate of employment deprivation (percentage points, 1999–2005)	Difference between NDC and local authority change in rate of employment deprivation (percentage points, 1999–2005)
Liverpool	1	-7.85	-4.90	-3.58
Sheffield	5	-6.49	-2.48	-3.99
Wolverhampton	4	-1.67	-2.31	-1.32
Lewisham	3	-2.36	-2.27	-1.22
Kingston upon Hull	5	-4.40	-2.12	-2.34
Islington	3	-3.10	-1.99	-0.27
Birmingham A	4	-3.08	-1.58	-1.87
Oldham	2	-1.19	-1.44	0.04
Salford	2	-1.50	-1.19	0.18
Newcastle upon Tyne	5	-5.72	-1.08	-2.45
Doncaster	1	-6.48	-1.01	-3.42
Middlesbrough	2	-2.98	-0.88	-1.07
Walsall	2	-0.93	-0.57	-0.82
Brent	3	-1.89	-0.47	-0.86
Rochdale	2	-2.14	-0.20	-0.66
Norwich	2	-1.37	-0.13	0.31
Manchester	5	-7.53	-0.04	-3.01
Nottingham	1	-6.17	0.07	-3.50
Lambeth	3	-2.02	0.21	-0.35
Sandwell	4	-1.04	0.31	-0.43
Newham	3	-3.39	0.48	0.01
Southwark	3	-2.45	0.59	-0.23
Southampton	2	-0.70	0.63	0.96
Hackney	3	-2.54	0.93	0.32
Bradford	4	-5.55	1.08	-3.66
Leicester	2	-0.18	1.13	-0.15
Knowsley	1	-7.27	1.48	-1.76
Fulham	3	-1.98	1.56	-0.71
Luton	2	-0.41	1.68	-0.16
Tower Hamlets	3	-2.28	1.70	0.54
Birmingham KN	2	-0.09	2.09	1.12
Haringey	3	-1.92	2.17	-0.22
Bristol	2	-0.75	3.14	0.53
Sunderland	5	-0.31	3.86	2.61
Derby	2	-1.33	3.90	0.24
Brighton	2	-1.01	3.97	1.09
Coventry	1	-1.68	4.48	-0.80
Hartlepool	2	-2.74	4.52	1.80
Plymouth	5	3.38	5.70	4.65

Table 5: Change in NDC income deprivation rate compared to change in comparator area and local authority rate 1999–2005

NDC Area	Cluster	NDC change in rate of income deprivation (percentage points, 1999–2005)	Difference between NDC and comparator area change in rate of income deprivation (percentage points, 1999–2005)	Difference between NDC and local authority change in rate of income deprivation (percentage points, 1999–2005)
Liverpool	1	-11.40	-8.29	-5.47
Kingston upon Hull	5	-9.54	-5.56	-5.30
Newcastle upon Tyne	5	-10.64	-4.44	-5.84
Leicester	2	0.18	-3.58	0.20
Manchester	5	-7.97	-3.51	-2.86
Salford	2	-3.73	-3.34	-1.14
Middlesbrough	2	-8.03	-2.43	-3.98
Bradford	4	-7.53	-2.13	-4.78
Lewisham	3	-3.26	-1.91	-0.58
Doncaster	1	-10.43	-1.87	-6.41
Southwark	3	-5.11	-1.44	-1.29
Oldham	2	-3.66	-0.95	-2.07
Islington	3	-1.97	-0.75	1.09
Rochdale	2	-4.36	-0.67	-1.89
Wolverhampton	4	-1.75	-0.37	-0.98
Fulham	3	-3.99	-0.31	-1.77
Nottingham	1	-9.00	-0.28	-3.80
Luton	2	-1.27	-0.15	-0.60
Southampton	2	-2.68	0.08	0.86
Derby	2	-5.08	0.14	-2.31
Walsall	2	-0.81	0.75	0.45
Sandwell	4	-2.38	0.78	-0.55
Sheffield	5	-4.63	1.60	-1.59
Newham	3	-4.61	1.64	-0.16
Norwich	2	-3.34	1.92	-0.07
Hackney	3	-1.91	2.79	2.05
Lambeth	3	-1.64	3.19	1.49
Coventry	1	-1.03	3.39	0.43
Haringey	3	-0.85	4.32	1.90
Brent	3	0.09	4.52	1.24
Bristol	2	-2.18	4.54	0.38
Brighton	2	-2.00	4.84	1.38
Sunderland	5	-3.02	5.02	1.20
Knowsley	1	-11.26	5.19	-2.43
Plymouth	5	-0.31	5.82	3.40
Birmingham KN	2	-1.84	6.05	-0.28
Tower Hamlets	3	2.76	7.12	5.01
Hartlepool	2	-2.21	8.69	3.51
Birmingham A ²³	4	11.66	12.13	13.22

²³ See Section 2.5.

Again, the information presented in Table 4 and Table 5 can be summarised in a scatter chart. Figure 32 plots the difference between the NDC and comparator area change in rate of income and employment deprivation between 1999 and 2005, and Figure 33 compares the equivalent figures for NDC areas and local authorities.

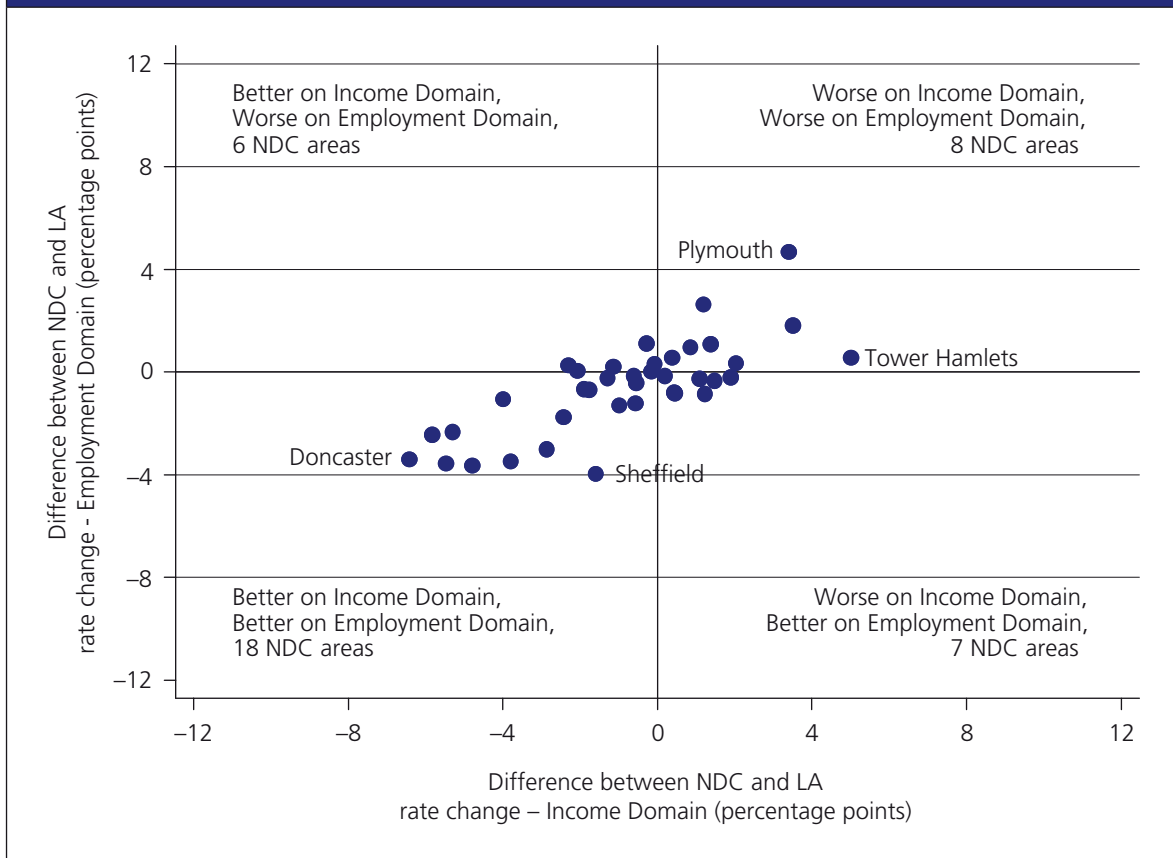


In both cases there is more spread in the results relating to changes in absolute rates of income deprivation, whereas the majority of the differences in absolute rates of employment deprivation are between ± 5 percentage points.

In Figure 33, only eight NDC areas performed worse relative to their local authorities on both domains so the majority of the NDC areas managed to narrow the gap in terms of absolute rates of income deprivation or absolute rates of employment deprivation, or both. Figure 33 shows that there is a positive correlation between improvement on the income domain (relative to the local authority) and improvement on the employment domain (relative to the local authority): Sheffield and Tower Hamlets NDC areas are notable exceptions to this general trend.

²⁴ Birmingham Aston is excluded – see Section 2.5.

Figure 33: Difference between NDC and local authority change in absolute rates of income and employment deprivation between 1999 and 2005²⁵



4.4 How do absolute levels of deprivation in the NDC areas change over time compared to other neighbourhoods in England?

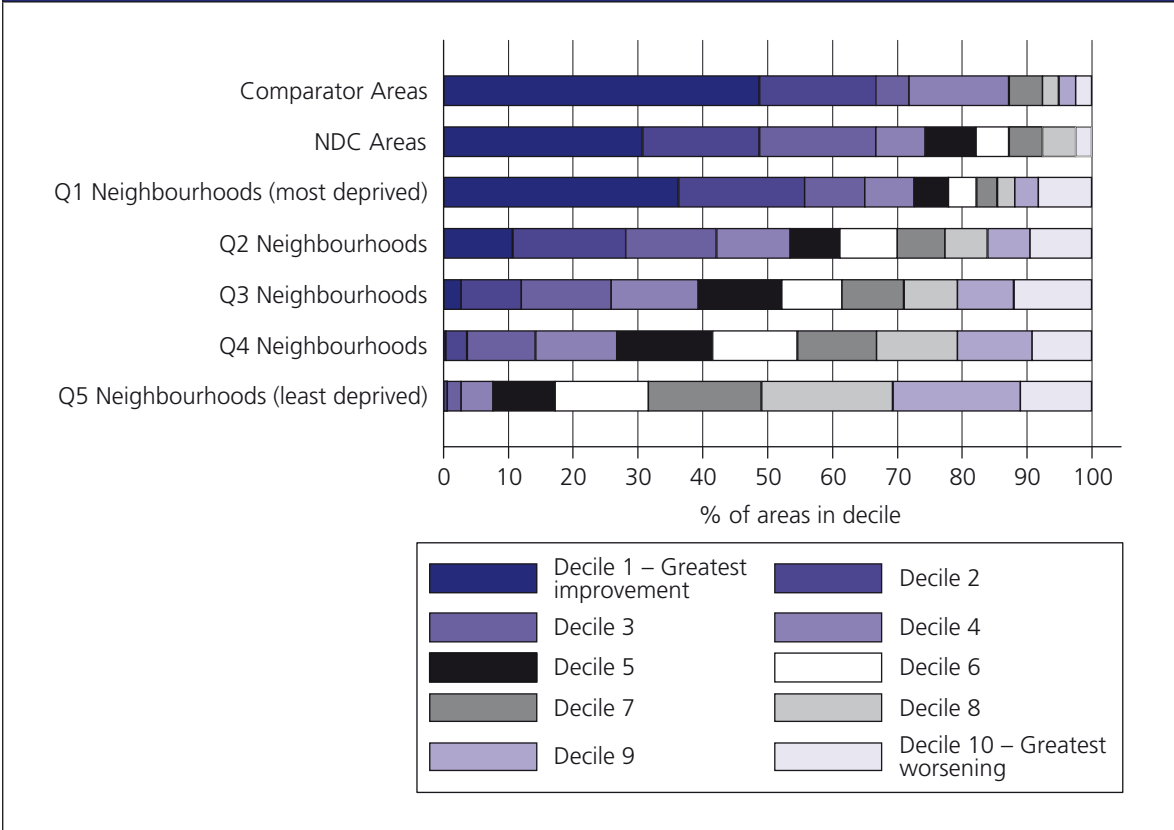
From the previous analyses it is clear that the majority of NDC areas experienced falling levels of income and employment deprivation between 1999 and 2005 even though the relative position of the NDC areas changed very little. The same trend of falling levels of economic deprivation was also observed nationally as illustrated in Figure 21.

Figure 34 shows how the changes in employment deprivation rates in the NDC and comparator areas compare with those occurring in each quintile of neighbourhoods in the rest of England²⁶. Around a third of the NDC areas are in decile 1 (the group with the highest reduction in employment deprivation over the period), compared to nearly 50 per cent of comparator areas and around 35 per cent of Q1 neighbourhoods.

²⁵ Birmingham Aston is excluded – see Section 2.5.

²⁶ Neighbourhood quintiles are defined as described in Section 3.5.

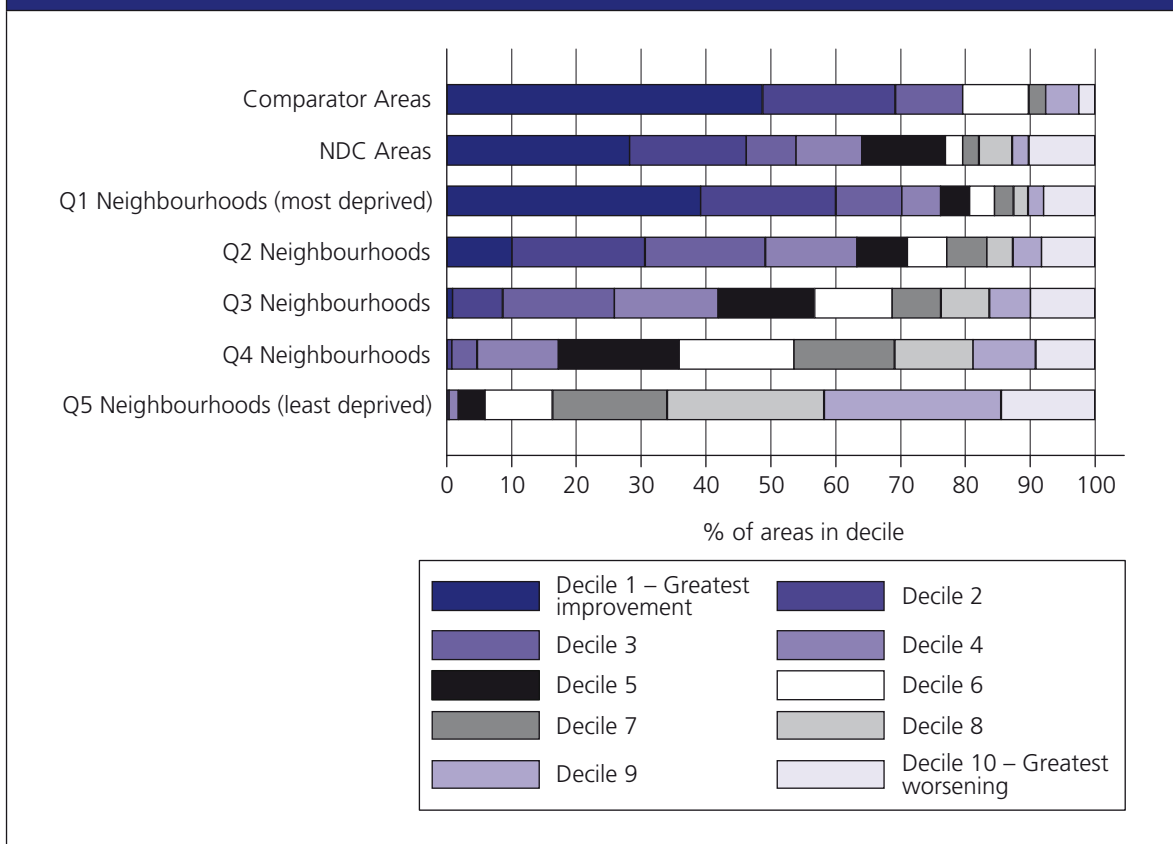
Figure 34: Deciles of change in employment deprivation rate between 1999 and 2005



The picture is slightly less encouraging for changes in income deprivation. Figure 35 (below) shows how the progress of the NDC areas compares with other neighbourhood groups. Slightly less than a third of NDC areas are in the top 10 per cent of 'improvers' (similar to Figure 34). Although a smaller proportion of NDC areas are in the top 10 per cent of improvers than comparator areas and Q1 neighbourhoods, a higher proportion of NDC areas are in this group compared to Q2 to Q5 neighbourhoods.

There are three NDC areas (Leicester, Brent and Tower Hamlets) amongst the worst performers nationally. However, the increase in income deprivation in these NDC areas is marginal: Brent and Leicester NDC areas experienced an increase in income deprivation of less than 1 percentage point (see Table 5), so their location amongst the worst performers is indicative of the extent of improvement throughout the rest of England.

Figure 35: Deciles of change in income deprivation rate between 1999 and 2005



4.5 Summary – absolute changes in economic deprivation

Although in relative terms the NDC areas have seen few improvements in levels of deprivation, in absolute terms economic deprivation has decreased over time. This finding can be explained by considering the changes occurring in economic deprivation at a national level. Absolute levels of income and employment deprivation have fallen in almost all areas between 1999 and 2005. As absolute levels of deprivation have fallen more rapidly in the most deprived neighbourhoods this has meant that, in England, the gap has narrowed between more deprived and less deprived neighbourhoods. However, in relative terms, the NDC neighbourhoods still rank amongst the most deprived neighbourhoods as they have improved by about the same amount as other similarly deprived neighbourhoods. In fact absolute levels of deprivation in the comparator areas are decreasing at a faster rate, particularly for income deprivation, than the NDC areas.

One fact that stands out from the analyses is that NDC areas have made slightly less progress reducing income deprivation than employment deprivation. However, absolute rates of income deprivation have still fallen in the majority of NDC areas. In the few areas where income deprivation rates have increased, these increases have been very small.

5. How have levels of economic deprivation changed within NDC areas?

Having examined the overall performance of the New Deal for Communities (NDC) and comparator areas, this section moves the focus to the changes occurring within NDC areas. The purpose of this part of the analyses is to determine how absolute and relative levels of deprivation vary within neighbourhoods. This involves comparing the trajectories of smaller areas (LSOAs) within NDC areas and other neighbourhoods. It is helpful to see how economic conditions vary within neighbourhoods, i.e. whether neighbourhoods are uniform in their characteristics or not. In addition, it is possible to explore how areas within neighbourhoods become more alike (or different) over time and if any changes are occurring uniformly across those smaller areas or whether variations are apparent.

As the analyses in this section focus on LSOA areas within NDC areas this creates a difficulty in that LSOAs do not map directly onto NDC areas. To resolve this issue, data for an LSOA is considered 'relevant' to the NDC / comparator area if more than 25 per cent of the LSOA (in population terms) lies with the NDC / comparator area²⁷. For example, when calculating the standard deviation of the EDI ranks of the LSOAs within a particular NDC area only LSOAs for which more than 25 per cent of the population is resident in the NDC area are included in the calculation.

5.1 How are relative levels of economic deprivation changing within NDC areas?

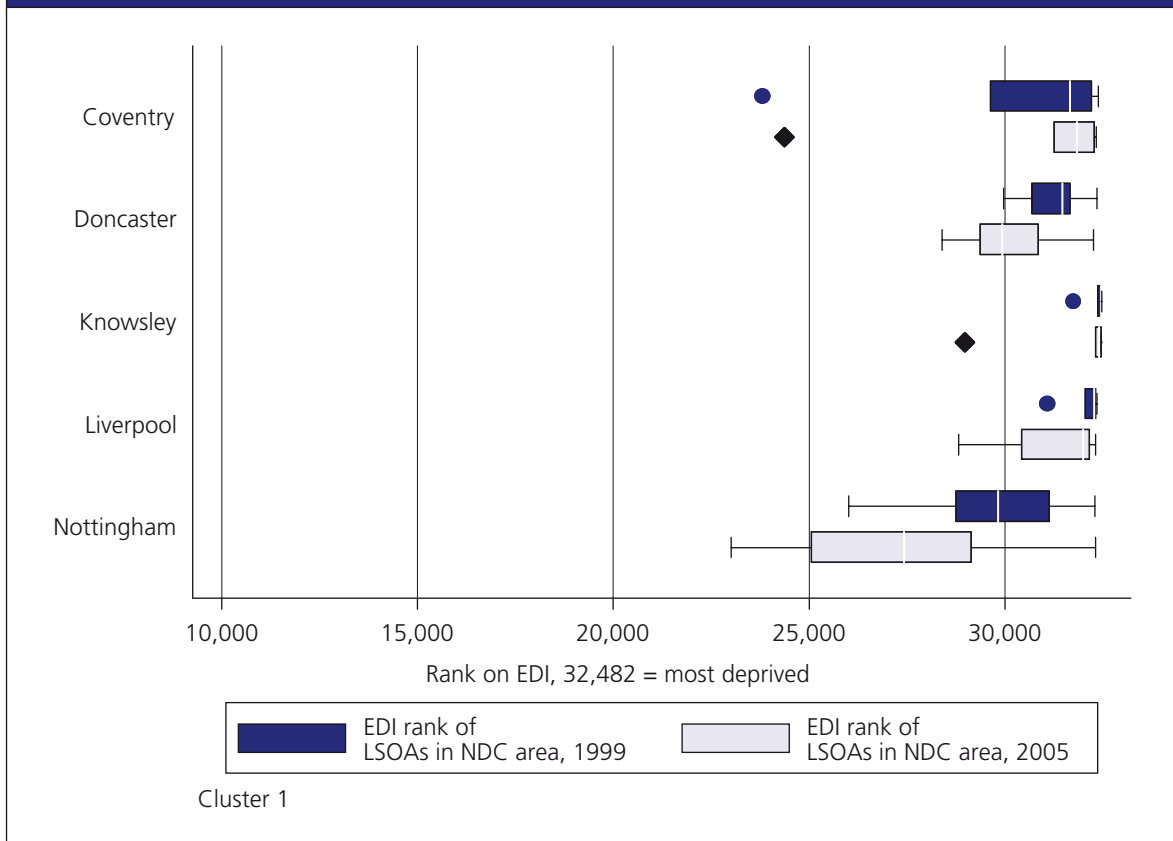
To give an idea of the overall variation in economic deprivation within the NDC areas, Figures 36 to 40 show the median, interquartile range (represented by a thick bar) and outlying values²⁸ (represented by dots) for the EDI ranks of the LSOAs within each NDC area in 1999 and 2005. Each chart has been drawn to the same scale so that NDC areas in different clusters can be easily compared. The EDI rank has been used to present the variation in relative deprivation seen within NDC areas as this allows the LSOAs in NDC areas to be easily compared with LSOAs in the rest of England. For example, as the EDI ranks range from 1 to 32,482, an LSOA with a rank less than 16,241 has below average levels of economic deprivation.

²⁷ The threshold of 25 per cent is somewhat arbitrary; however, it represents the point below which an LSOA might be expected to be influenced only marginally by the NDC programme given that the majority of the LSOA's population resides outside of the NDC boundary.

²⁸ Note that values are defined as outliers if they are more than 1.5 times the interquartile range away from the top or bottom of the boundaries of the interquartile range. This is a common approach to identifying outliers in distributions of data.

It is clear from the charts that some NDC areas are very homogenous and others are extremely mixed in composition. Typically, NDC areas in clusters 1, 4 and 5 tend to be the most homogenous (and also the most economically deprived) with Nottingham, Bradford and Newcastle showing a wider variation in relative levels of economic deprivation than is typical for these groups.

Figure 36: Cluster 1 – range of EDI ranks for LSOAs within NDC areas, 1999 and 2005



In clusters 2 and 3 there is an enormous range of economic deprivation at LSOA level. NDC areas in Southampton, Salford, Rochdale and Fulham contain LSOAs which have below the national average level of economic deprivation (i.e. a rank less than 15,241). Others, such as Birmingham Kings Norton, Brent and Newham have more consistent levels of deprivation. The charts also suggest that there is a considerable shift in the distribution between 1999 and 2005 both in terms of median levels of deprivation and the range of economic deprivation within each NDC area.

Figure 37: Cluster 2 – range of EDI ranks for LSOAs within NDC areas, 1999 and 2005

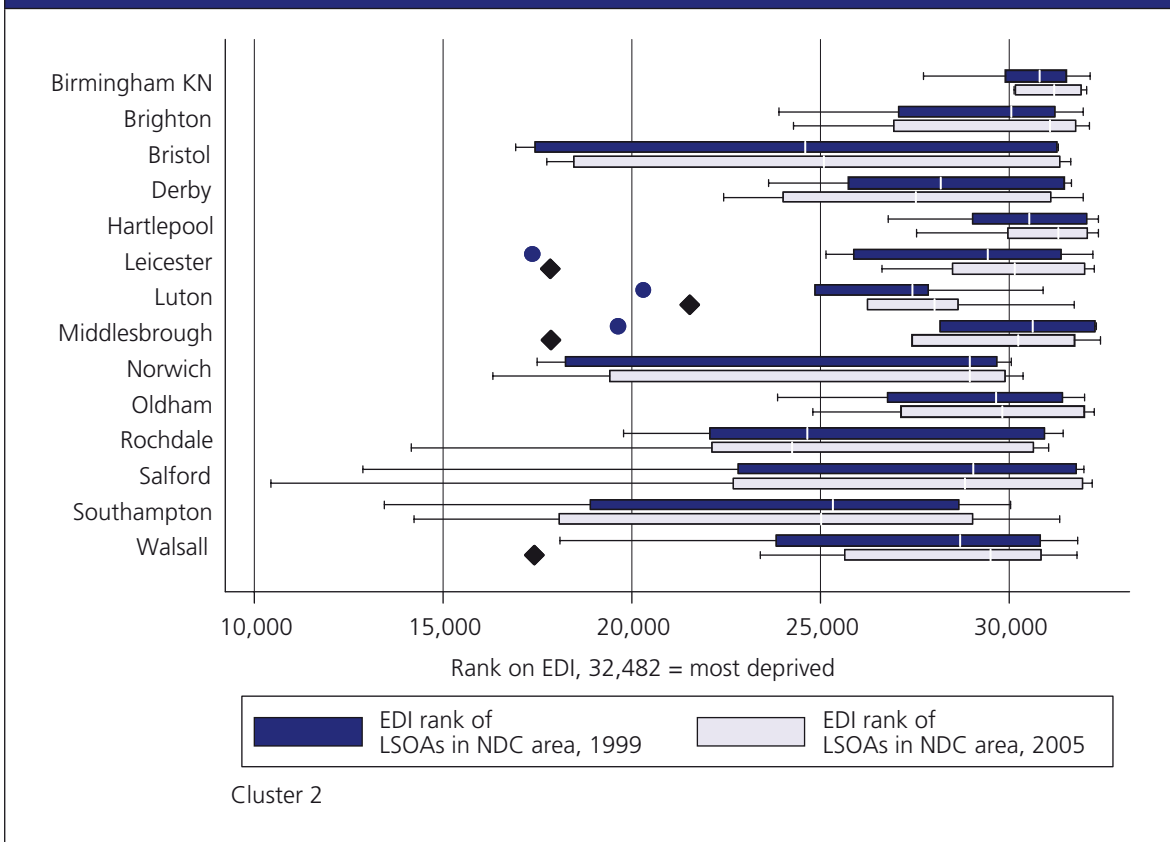


Figure 38: Cluster 3 – range of EDI ranks for LSOAs within NDC areas, 1999 and 2005

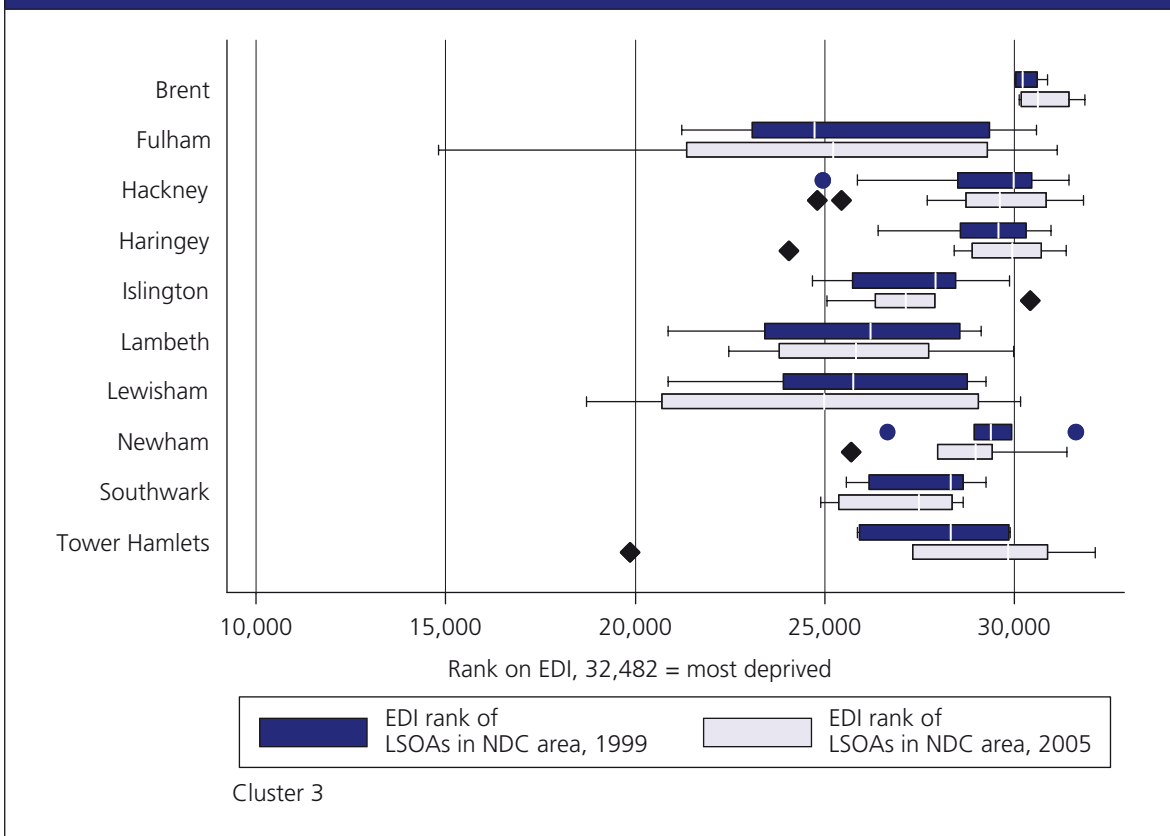


Figure 39: Cluster 4 – range of EDI ranks for LSOAs within NDC areas, 1999 and 2005²⁹

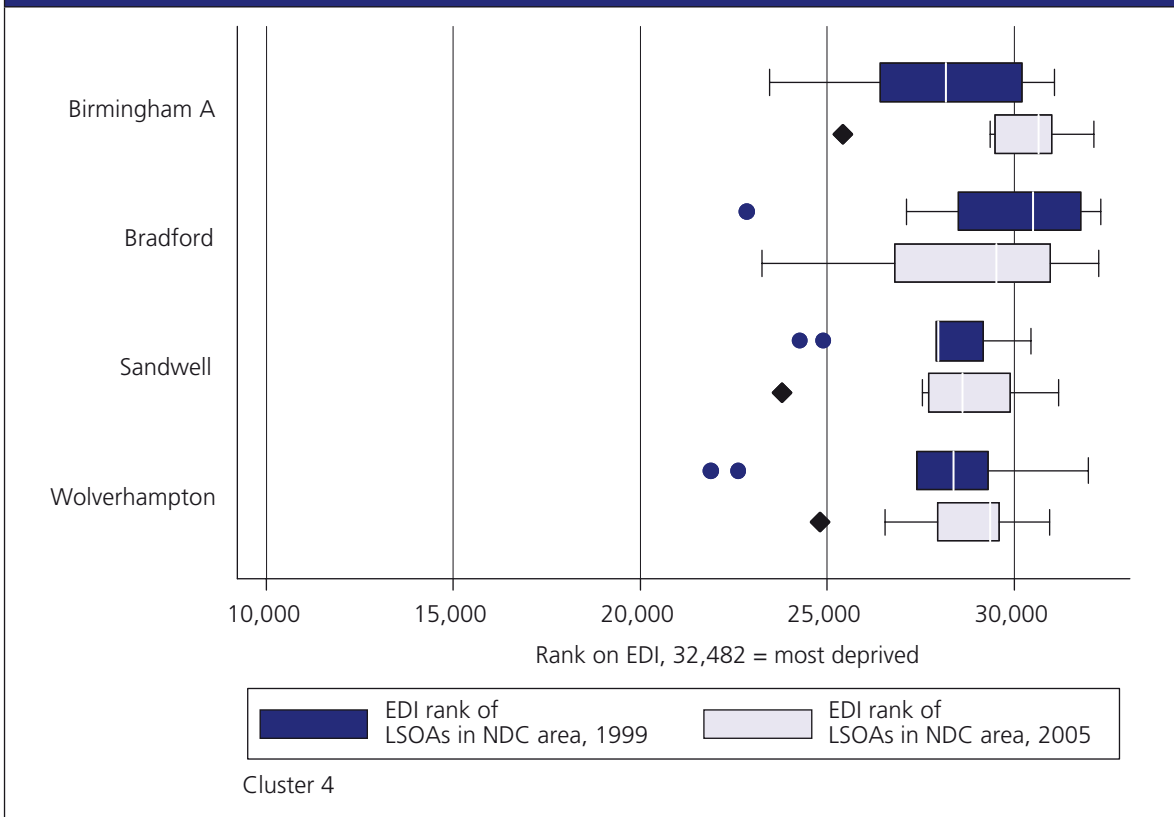
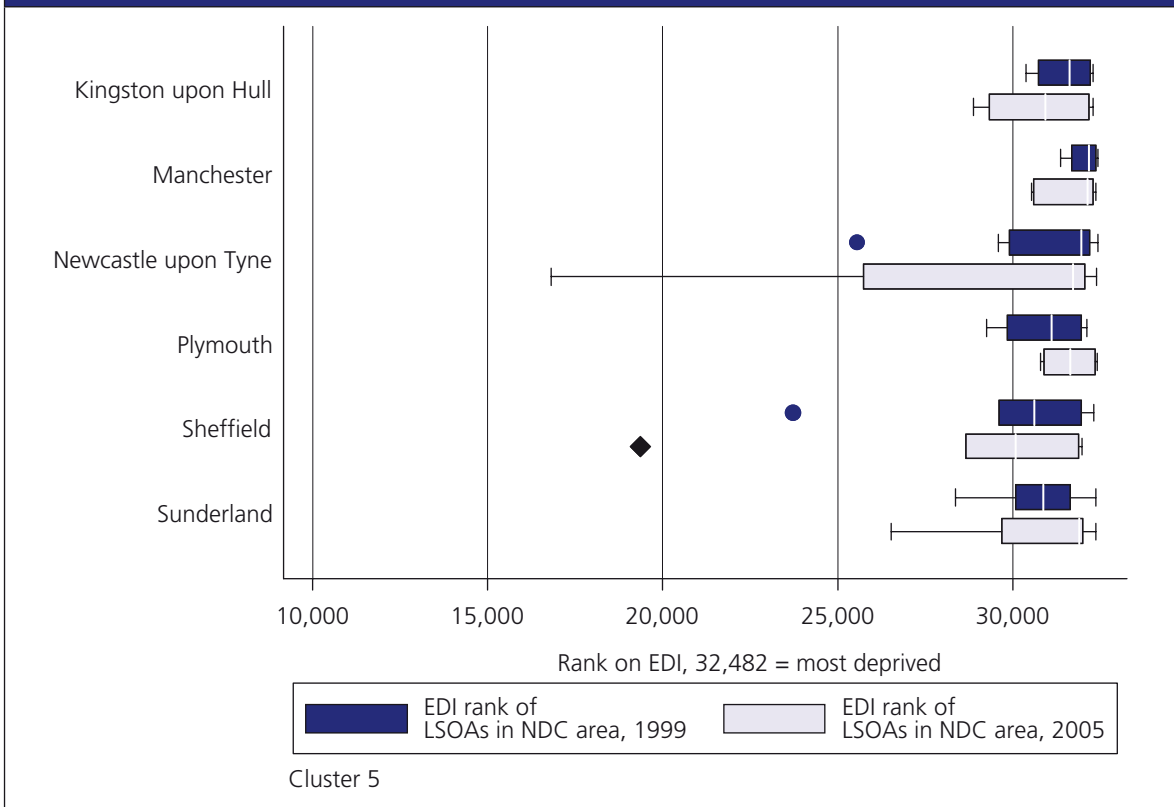


Figure 40: Cluster 5 – range of EDI ranks for LSOAs within NDC areas, 1999 and 2005

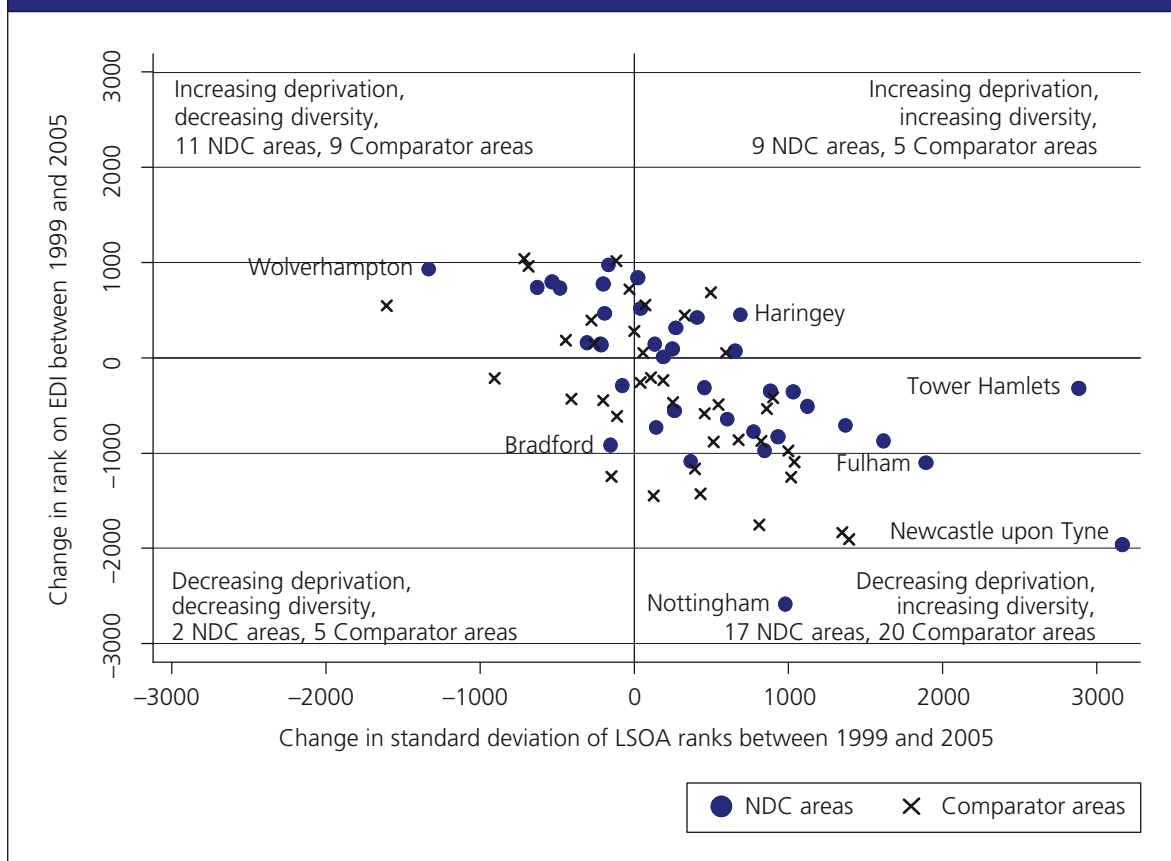


²⁹ See Section 2.5.

In Figure 41 the change in the average population weighted rank on the EDI between 1999 and 2005 is plotted against the change in the standard deviation of the LSOA EDI ranks over the same time period. The chart is split into quadrants which can be labelled as follows:

- top right – “increasing deprivation and increasing diversity”, areas which have become, on average, relatively more economically deprived and less homogenous (i.e. there is a wider variation in relative levels of economic deprivation within the area)
- top left – “increasing deprivation and decreasing diversity”, areas which have become relatively more deprived and more homogenous
- bottom right – “decreasing deprivation and increasing diversity”, areas which have become relatively less deprived and less homogenous
- bottom left – “decreasing deprivation and decreasing diversity”, areas which have become relatively less deprived and more homogenous.

Figure 41: Change in area deprivation vs. change in area homogeneity, NDC and Comparator areas, EDI ranks 1999–2005³⁰



Two key points stand out from Figure 41. Firstly, most (23) NDC areas are becoming more diverse over time and secondly that the largest concentration of NDC and comparator areas is in the “decreasing deprivation and

³⁰ Birmingham Aston is excluded – see Section 2.5.

increasing diversity” category i.e. areas which are improving in relative terms but also seeing an increase in the range of economic deprivation within them. Only two NDC areas: Bradford and Islington are becoming less diverse and less deprived.

Table 6 shows the classification of the NDC areas into each type according to Figure 41. The NDC areas are ordered so that those at the bottom of each group are those with the largest relative improvement (or smallest relative decline) in economic deprivation of their group.

Table 6: Classification of NDC areas according to change on average EDI rank and change in standard deviation of EDI ranks between 1999 and 2005

Increasing improvement in rank on EDI	Increasing deprivation, decreasing diversity	Increasing deprivation, increasing diversity
	Birmingham A ³¹ Leicester Wolverhampton Bristol Luton Birmingham KN Plymouth Coventry Lambeth Oldham Hartlepool	Walsall Sandwell Haringey Brent Brighton Norwich Southampton Sunderland Hackney
	Decreasing deprivation, decreasing diversity	Decreasing deprivation, increasing diversity
	Islington Bradford	Manchester Tower Hamlets Derby Knowsley Rochdale Newham Middlesbrough Lewisham Southwark Kingston upon Hull Salford Sheffield Liverpool Doncaster Fulham Newcastle upon Tyne Nottingham

It is hard to conceptualise what the implications are of increasing diversity emerging in the levels of relative deprivation observed within each NDC area. Earlier findings have shown that all neighbourhoods in England have become more similar, in terms of absolute levels of economic deprivation,

³¹ See Section 2.5.

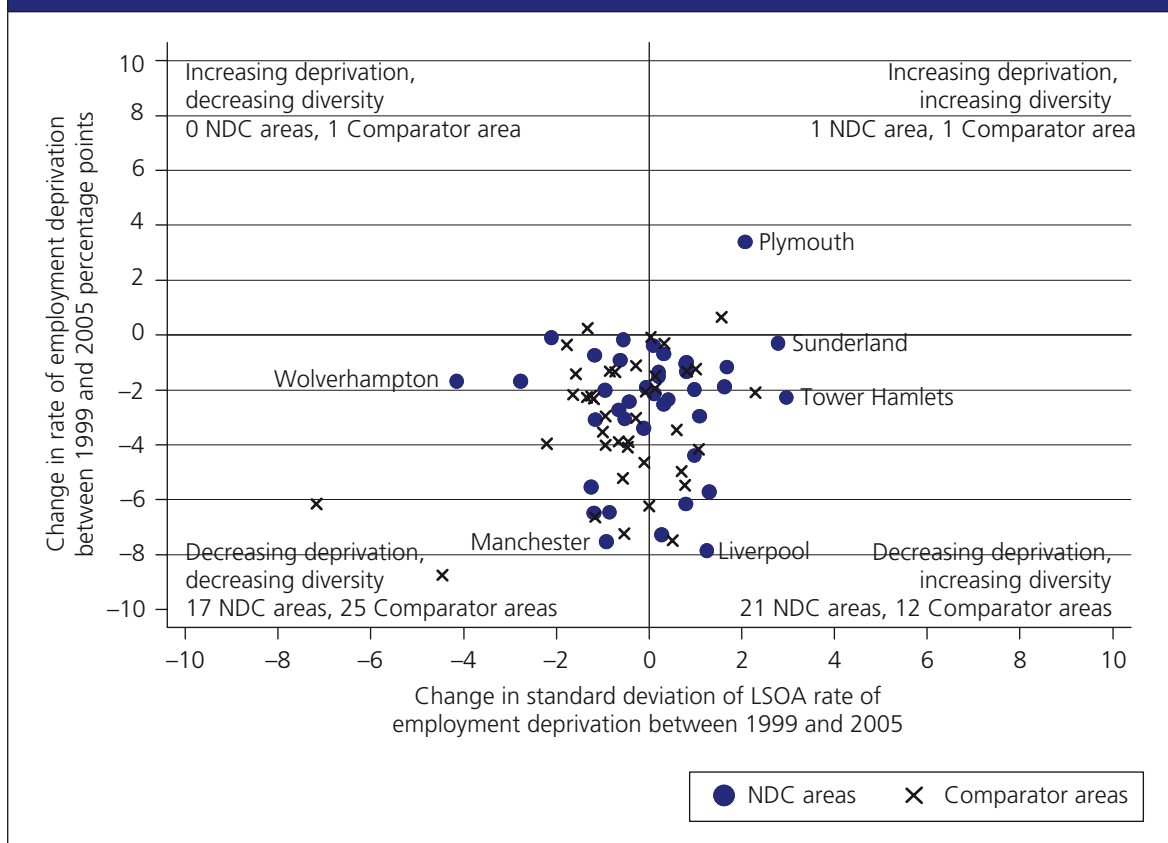
between 1999 and 2005. Thus, whilst the analyses above show that, in a relative sense, the LSOAs within NDC areas are moving apart, it is difficult to understand how this relates to the underlying changes in absolute levels of deprivation. The analyses above do suggest that LSOAs within NDC areas are improving at different rates and are on different trajectories. However, to explore these trends further it is necessary to also understand what is happening to absolute levels of economic deprivation within NDC areas, and this is the focus of the following section.

5.2 How are absolute levels of economic deprivation changing within NDC areas?

As in all the analyses presented in this report it is important to distinguish between absolute and relative change. The analyses in the previous section showed that relative levels of economic deprivation are diverging within NDC areas (as well as within other neighbourhoods); however, this does not necessarily mean that rates of economic deprivation are also diverging.

Figure 42 repeats the analyses presented in Figure 41, only this time the chart shows the change in rates of employment deprivation between 1999 and 2005 plotted against the change in the standard deviation of employment deprivation rates for LSOAs within NDC and comparator areas.

Figure 42: Change in area deprivation vs. change in area homogeneity, NDC and Comparator areas, rate of employment deprivation 1999–2005



The findings in section 4.2.1 highlighted that absolute rates of employment deprivation have fallen in almost all NDC areas, thus the majority of NDC areas lie in the bottom two quadrants in Figure 42. Slightly more NDC areas experience within-NDC divergence in rates of employment deprivation. Twenty-one NDC areas are classified in the “decreasing deprivation, increasing diversity” category compared to only 12 comparator areas. Conversely, 25 comparator areas and fewer (17) NDC areas are in the “decreasing deprivation, decreasing diversity” category. The Plymouth NDC area stands out as the only NDC area to experience an increase in rates of employment deprivation. Table 7 shows which NDC areas fall into which category.

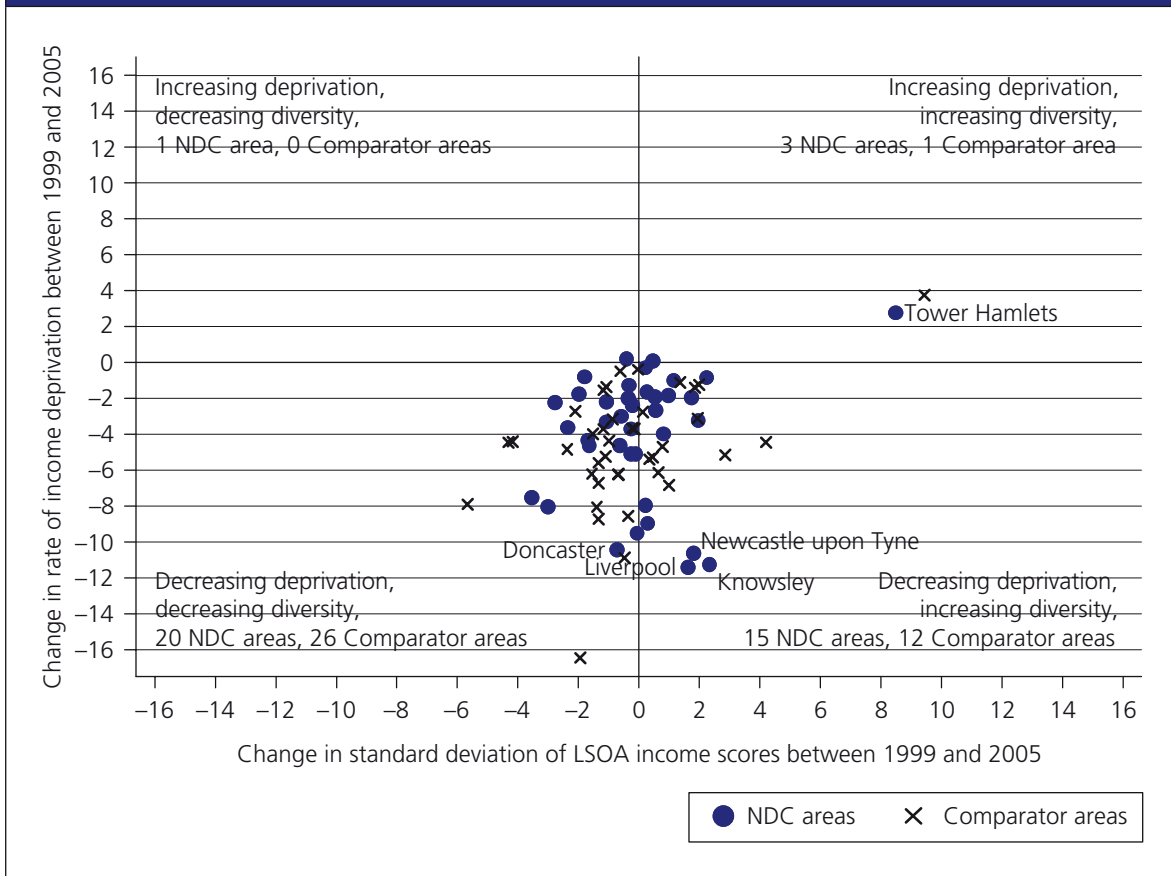
Table 7: Classification of NDC areas according to change rate of employment deprivation and change in standard deviation of employment deprivation rate between 1999 and 2005

	Increasing deprivation, decreasing diversity	Increasing deprivation, increasing diversity
 Increasing reduction in rate of employment deprivation	Decreasing deprivation, decreasing diversity	Decreasing deprivation, increasing diversity
	Sunderland	Birmingham KN
	Luton	Leicester
	Southampton	Bristol
	Brighton	Walsall
	Sandwell	Wolverhampton
	Oldham	Coventry
	Derby	Haringey
	Norwich	Lambeth
	Salford	Southwark
	Brent	Hartlepool
	Rochdale	Islington
	Tower Hamlets	Newham
	Lewisham	Bradford
	Hackney	Doncaster
	Middlesbrough	Sheffield
	Kingston upon Hull	Manchester
Newcastle upon Tyne		
Nottingham		
Knowsley		
Liverpool		

Figure 43 repeats the analyses for the income domain. Here the change in the absolute rate of income deprivation is shown against the change in the standard deviation of income deprivation rates for LSOAs in NDC and comparator areas. Again, the table below Figure 43 (Table 8) lists the NDC areas in each group.



As already seen, the majority of NDC and comparator areas see a fall in absolute rates of income deprivation between 1999 and 2005. In this case, however, LSOA income deprivation rates are converging in more than half of the NDC areas whilst the opposite trend occurs in relation to changes in absolute rates of employment deprivation. Tower Hamlets NDC area presents a particularly interesting case as rates of income deprivation increase *and* become more diverse over time. These trends are explored further in a case study in section 6.1.

Figure 43: Change in area deprivation vs. change in area homogeneity, NDC and Comparator areas, rate of income deprivation 1999–2005



³² Birmingham Aston is excluded – see Section 2.5.

Table 8: Classification of NDC areas according to change rate of income deprivation and change in standard deviation of income deprivation rate between 1999 and 2005

 Increasing reduction in rate of income deprivation 	Increasing deprivation, decreasing diversity	Increasing deprivation, increasing diversity
		Leicester
	Decreasing deprivation, decreasing diversity	Decreasing deprivation, increasing diversity
	Walsall Luton Wolverhampton Brighton Bristol Hartlepool Sandwell Sunderland Norwich Oldham Salford Rochdale Newham Sheffield Derby Southwark Bradford Middlesbrough Kingston upon Hull Doncaster	Plymouth Haringey Coventry Lambeth Birmingham KN Hackney Islington Southampton Lewisham Fulham Manchester Nottingham Newcastle upon Tyne Knowsley Liverpool

5.3 Summary – within-neighbourhood change

This section has highlighted that there are some interesting dynamics occurring within NDC areas (and other neighbourhood areas) that are not picked up at the aggregate level.

The EDI ranks of the LSOAs within NDC areas tends to be moving apart over time, whereas, in absolute terms there is no clear trend as to whether LSOAs in NDC areas are becoming more or less similar to one another. Although difficult to interpret, both these findings are of interest as the change in EDI ranks indicates how NDC LSOAs are changing in relation to LSOAs in the rest of England, and changes in the absolute levels of income and employment deprivation relate to observable changes occurring within NDC neighbourhoods.

³³ See Section 2.5.

There is a danger that the aggregate picture may be hiding the emergence or continuation of small pockets of deprivation within NDC areas that are, on average, improving over time. The final part of this report focuses on six NDC areas in detail in order to demonstrate the value of looking at change within areas as well as at the aggregate level. The NDC areas chosen for analysis in this final section are Tower Hamlets, Bradford, Nottingham, Newcastle, Walsall and Leicester. These areas are chosen because they each provide an example of the different trajectories of within-NDC change that have been identified in this section. Three of these areas (Bradford, Newcastle and Walsall) are also case study areas for the national evaluation.

6. Tracking economic deprivation in NDC areas – case studies

Six New Deal for Communities (NDC) areas have been selected as case studies in order to investigate the changes in economic deprivation occurring within smaller areas inside NDC areas. NDC data is normally presented at the NDC area level (as it is often not possible to obtain data for smaller areas). However, as the EDI is produced at LSOA level this allows trends within NDC areas to be analysed in more detail. As it is not possible to carry out an in-depth analysis for every NDC area, six case studies are chosen to illustrate some of the different trends occurring within NDC areas. The case studies have been chosen to include each type of area as classified in Table 6. The case study areas are: Tower Hamlets; Bradford; Nottingham; Newcastle; Walsall; and Leicester.

In this section each NDC case study area is presented with a map showing the change in rank on the EDI between 1999 and 2005 for the LSOAs in the NDC area and the surrounding locality. LSOAs have been grouped into national deciles according to their change in rank on the EDI. Decile 1 (in yellow) contains LSOAs which are in the top 10 per cent nationally in terms of improvement in relative levels of economic deprivation and decile 10 (in dark blue) contains LSOAs which are in the top 10 per cent nationally in terms of worsening relative levels of economic deprivation. The NDC boundary is shown by a red line and the local authority boundary by a thick black line. Data is only displayed for LSOAs in the same local authority as the NDC area. Viewing the NDC areas in the context of the surrounding locality helps to see how well the NDC trends fit with those in neighbouring areas.

Following each NDC map is a chart which shows the trajectories in rates of employment and income deprivation for each LSOA in the NDC area³⁴ as well as for the parent local authority. Thus, it is possible to compare the progress of each LSOA and the extent to which areas within NDC areas are moving in similar or different directions. These detailed analyses of within area change are able to pick up trends that are not visible at the aggregate level and help to contextualise change in the NDC area with change in the wider local area.

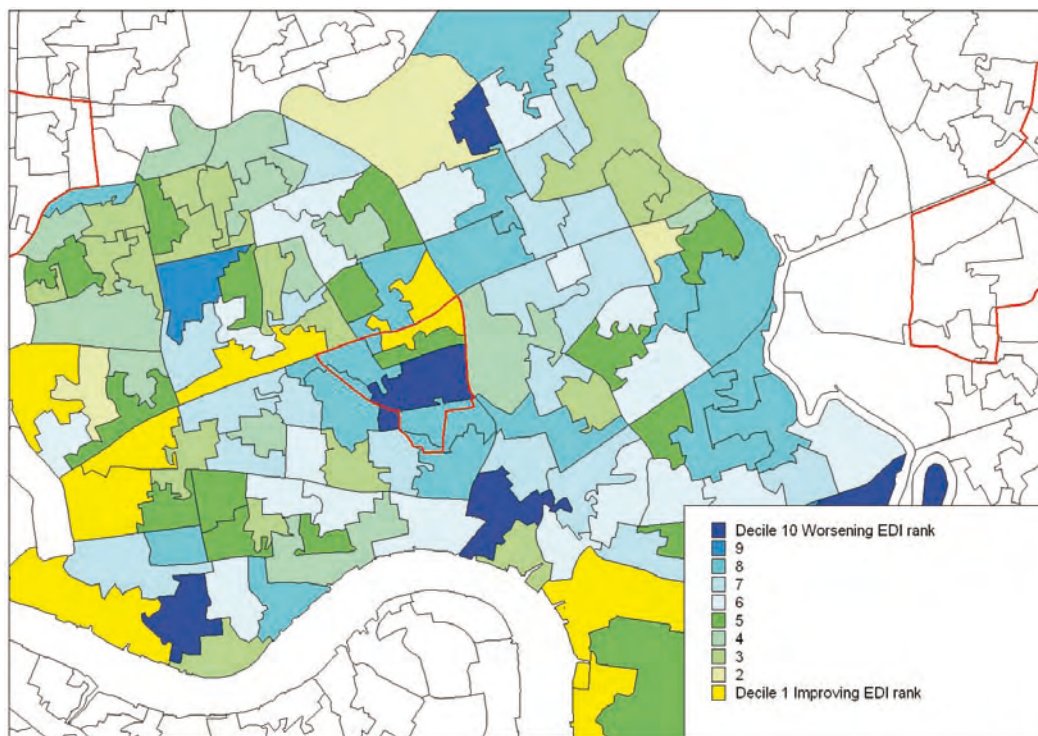
6.1 Case study 1 – Tower Hamlets

Tower Hamlets NDC area is a particularly interesting case as it contains an LSOA which is amongst the 10 per cent of LSOAs experiencing the largest increase in EDI rank (largest increase in relative deprivation) and an LSOA

³⁴ As before, only LSOAs in which more than 25 per cent of the population is resident in the NDC area are included.

which is amongst the 10 per cent 'most improved' LSOAs in England. On the Employment Domain, Tower Hamlets experiences the second largest improvement in rank (see Table 1); however, the area experiences a worsening in rank on the Income Domain. As can be seen in Figure 38, the majority of the LSOAs in Tower Hamlets became relatively more deprived between 1999 and 2005. However, one LSOA (in yellow in Figure 44) experienced a significant improvement. The size of the improvement in this single LSOA was sufficient to result in Tower Hamlets showing an overall improvement in relative deprivation between 1999 and 2005 (the EDI rank for Tower Hamlets decreased by 319 over the period).

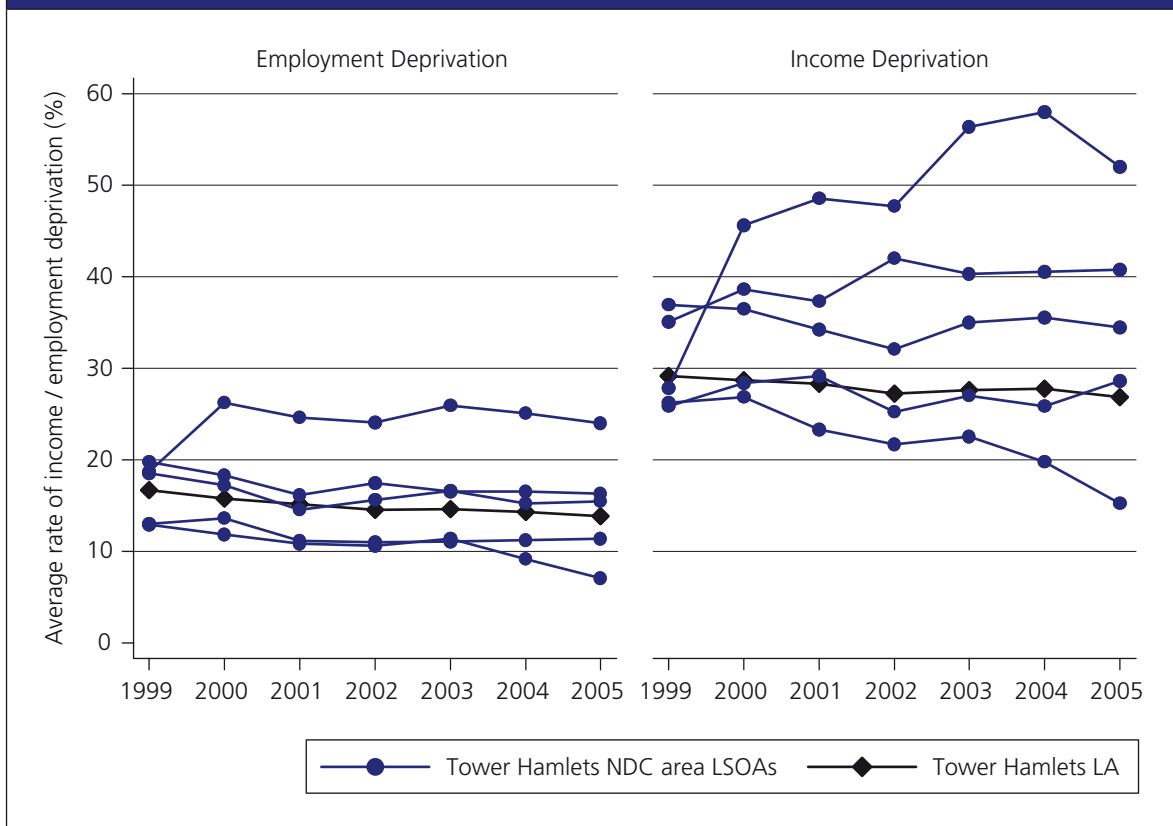
Figure 44: Tower Hamlets NDC area – decreasing deprivation, increasing diversity



In the case of Tower Hamlets, Figure 44 shows how the aggregate picture can be misleading as even though the NDC area appears to become relatively less deprived, the majority of the LSOAs within Tower Hamlets actually become relatively more deprived.

Figure 45 shows how absolute rates of income and employment deprivation change between 1999 and 2005 in each LSOA in the Tower Hamlets NDC area. Rates of employment deprivation do fall over the period in all but one LSOA; however, rates of income deprivation increase in three of the five LSOAs and in one of these income deprivation rates nearly double over the period. The overall improvement in EDI rank in the Tower Hamlets NDC area is hiding a potential issue of rapidly increasing rates of income deprivation.

Figure 45: Change in rates of income and employment deprivation in Tower Hamlets NDC LSOAs and Tower Hamlets local authority, 1999–2005



6.2 Case study 2 – Bradford

Bradford NDC area is one of only two NDC areas categorised as consistent improvers indicating that the Bradford NDC area is becoming relatively less deprived over time, on average, and that the LSOAs in the NDC area are becoming more alike over time. Bradford NDC experiences a fall in rank on both the Income and the Employment domains of the EDI but does better than its comparator area only in terms of reducing income deprivation.

Figure 46 shows that the changes occurring in the NDC area are perhaps more favourable than those in the surrounding area. The LSOAs in Bradford local authority show mixed performance with some showing relative improvement and others a relative decline. In Figure 47 there is a clear trend of reducing income and employment deprivation for almost all the LSOAs in the Bradford NDC area. LSOAs with higher initial rates of deprivation appear to be improving at a faster rate than those with lower rates of deprivation. This has led to a narrowing of the range of economic deprivation rates in 2005 compared to 1999.

The trends in the NDC area are broadly in line with the trends in the local authority as a whole, although, as we might expect, the magnitude of the reduction in economic deprivation in the local authority is smaller.

Figure 46: Bradford NDC area – decreasing deprivation, decreasing diversity

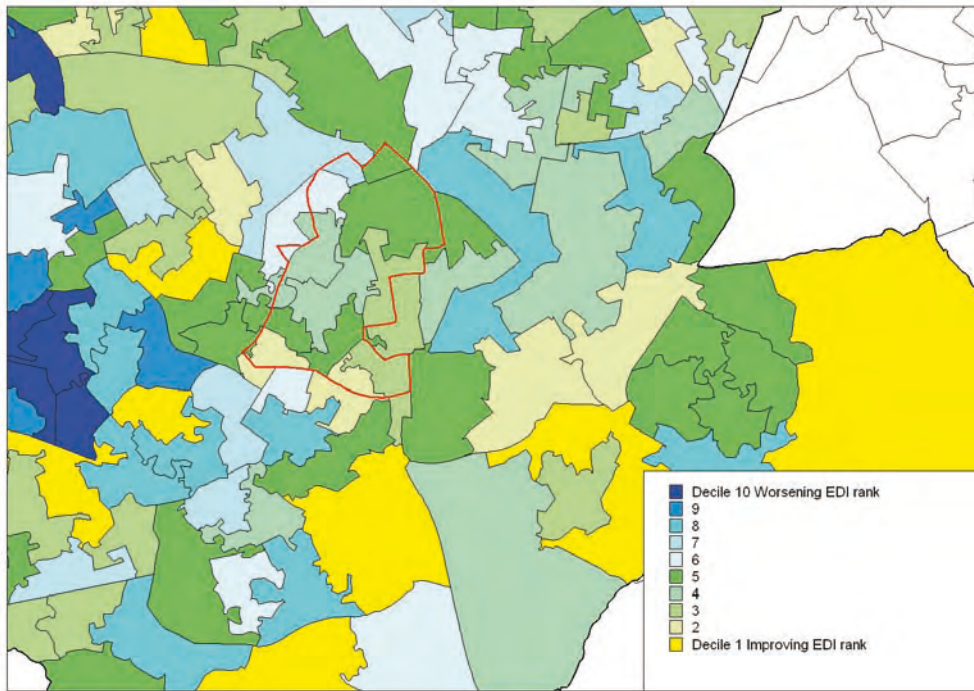
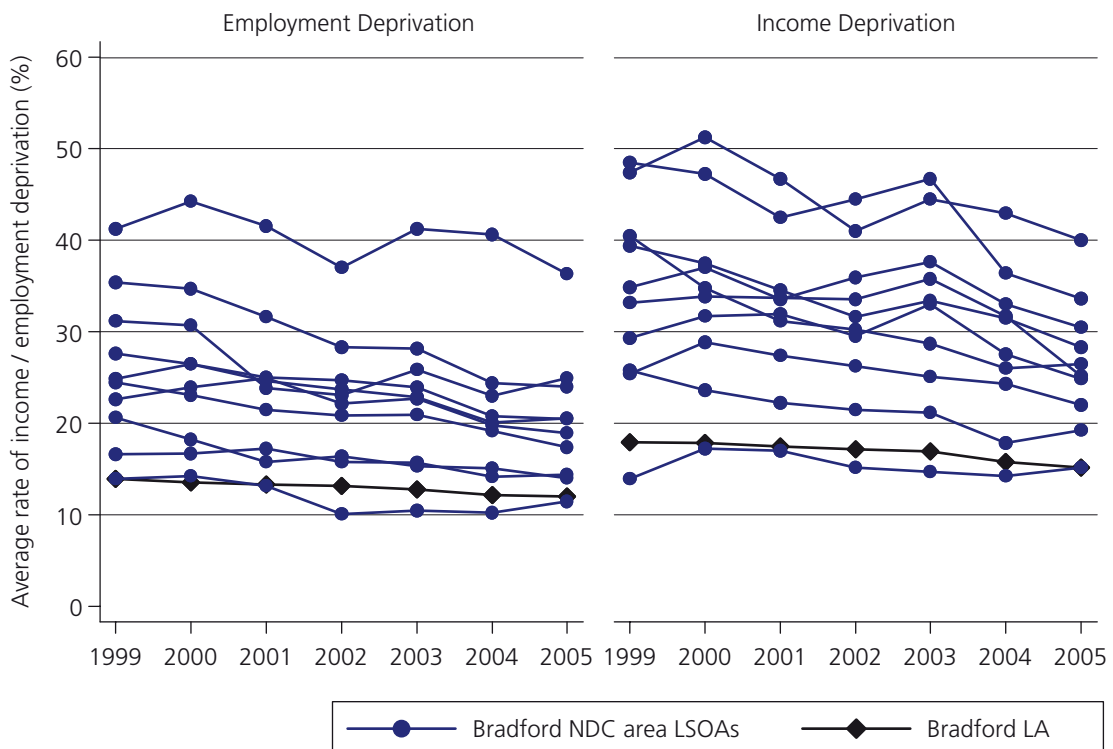


Figure 47: Change in rates of income and employment deprivation in Bradford NDC LSOAs and Bradford local authority, 1999–2005



6.3 Case study 3 – Nottingham

The Nottingham NDC area is classified as a variable improver. Nottingham has the largest reduction in rank on both the Income and Employment Domains (although other NDC areas see larger absolute reductions in income and employment deprivation) and does better than its comparator area on both domains. The majority of the LSOAs in Nottingham are in the top 10 per cent nationally in terms of improvement in EDI rank, as are many of the LSOAs in the surrounding area.

Figure 49 shows that rates of income and employment deprivation are falling in every LSOA in the Nottingham NDC area. However, there is one LSOA which has much higher rates of economic deprivation than its neighbours. Even though absolute levels of economic deprivation fall in this area, most other areas with similarly high deprivation rates experience even larger reductions in economic deprivation, hence, this LSOA actually sees an increase in relative deprivation (this LSOA is coloured light blue in Figure 48). Thus, although the overall picture is very positive for Nottingham it perhaps raises concerns that this particularly deprived LSOA is failing to 'catch-up' with its neighbours.

Figure 48: Nottingham NDC area – decreasing deprivation, increasing diversity

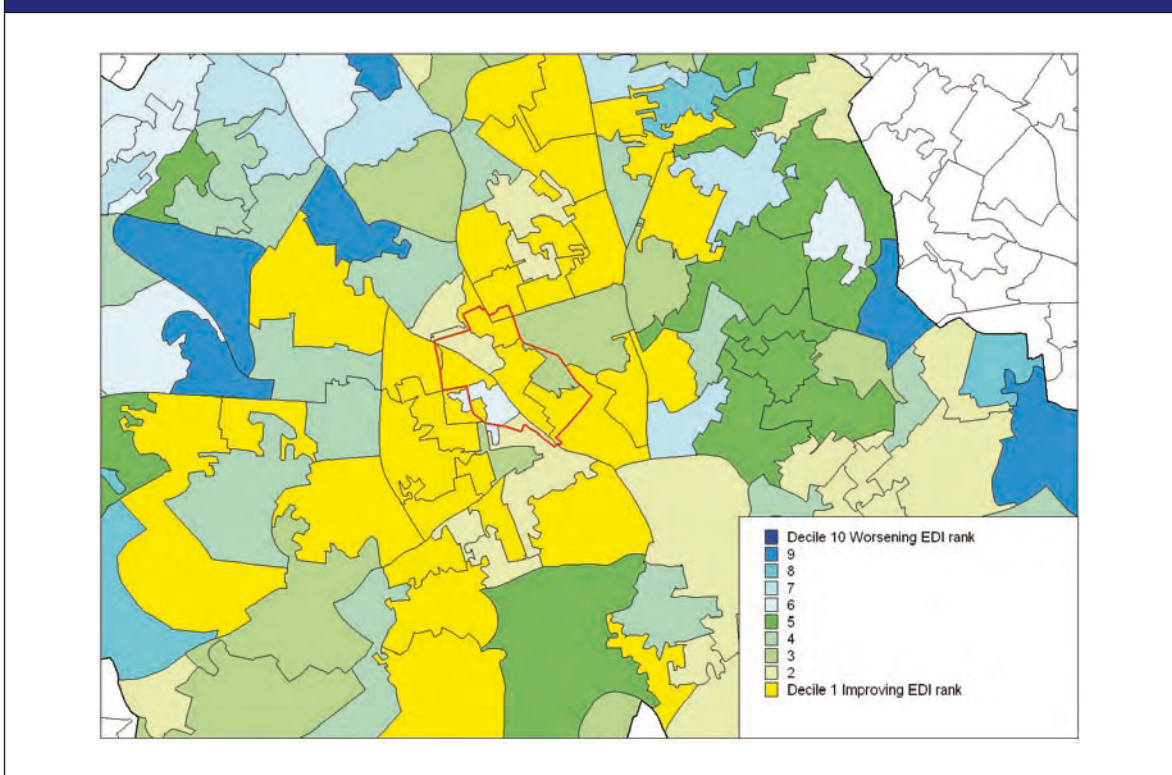
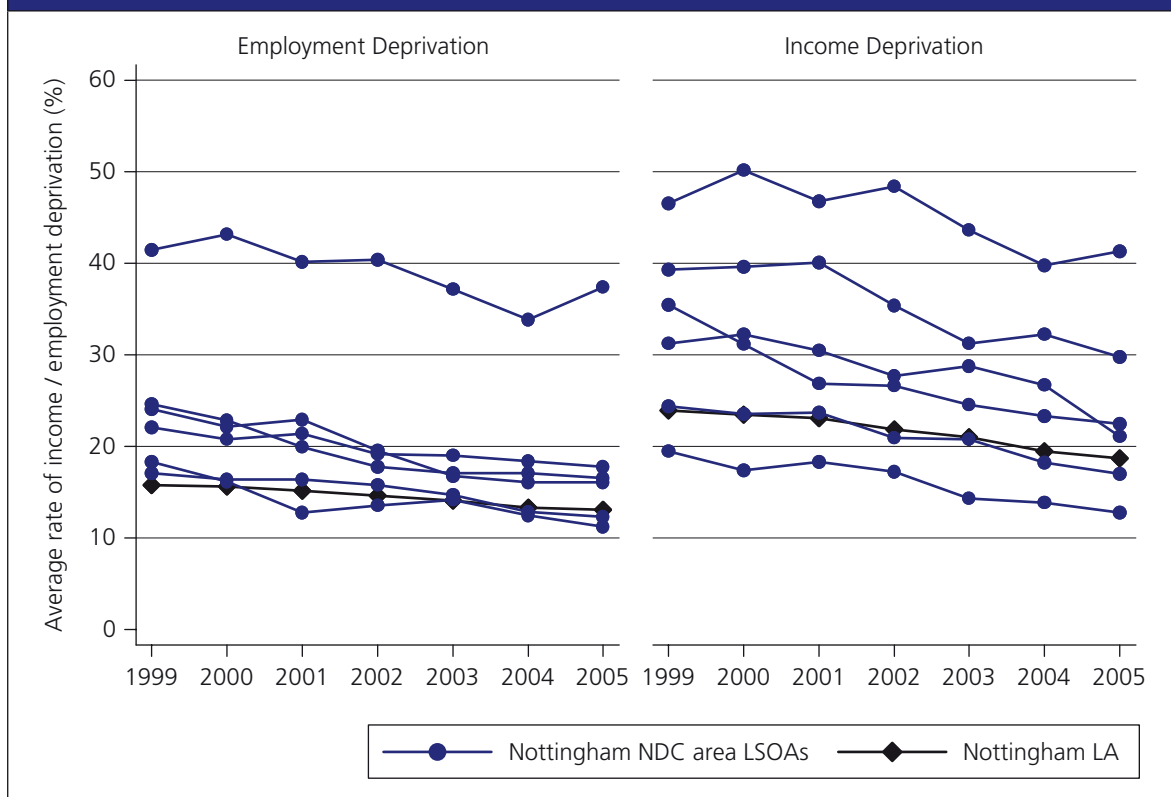


Figure 49: Change in rates of income and employment deprivation in Nottingham NDC LSOAs and Nottingham local authority, 1999–2005



6.4 Case study 4 – Newcastle

Newcastle NDC area is also categorised as a variable improver although the patterns of changing economic deprivation within the NDC area are quite different to those in Nottingham. The average rank of the Newcastle NDC area on the Employment and Income Domains of the EDI falls by around the same magnitude as for the Nottingham NDC area. In Newcastle, however, all LSOAs see a reduction in their rank. The LSOAs in Newcastle appear to be forming two distinct groups: three LSOAs (coloured yellow in Figure 50) are in the top 10 per cent nationally for improvement in their EDI rank whilst the remaining 5 LSOAs are in the 5th decile indicating a marginal improvement in EDI rank. In Figure 51 it is possible to see how two distinct groups are forming. The trajectories of the LSOAs in these groups is contrary to the trends normally seen in that the LSOAs with the highest initial deprivation rates are improving at a slower rate than the LSOAs with the lowest initial deprivation rates. The two groups are therefore moving apart over time.

The LSOA trajectories in the NDC are similar to those occurring in the wider locality; however, in relation to the NDC programme it would be helpful to explore whether these trends have any relation to potential differential impacts of the NDC programme. It may be the case, for example, that residents in the more affluent LSOAs have had better access to the NDC programme or been in a better position to take advantage of it than residents in the more deprived LSOAs.

Figure 50: Newcastle NDC area – decreasing deprivation, increasing diversity

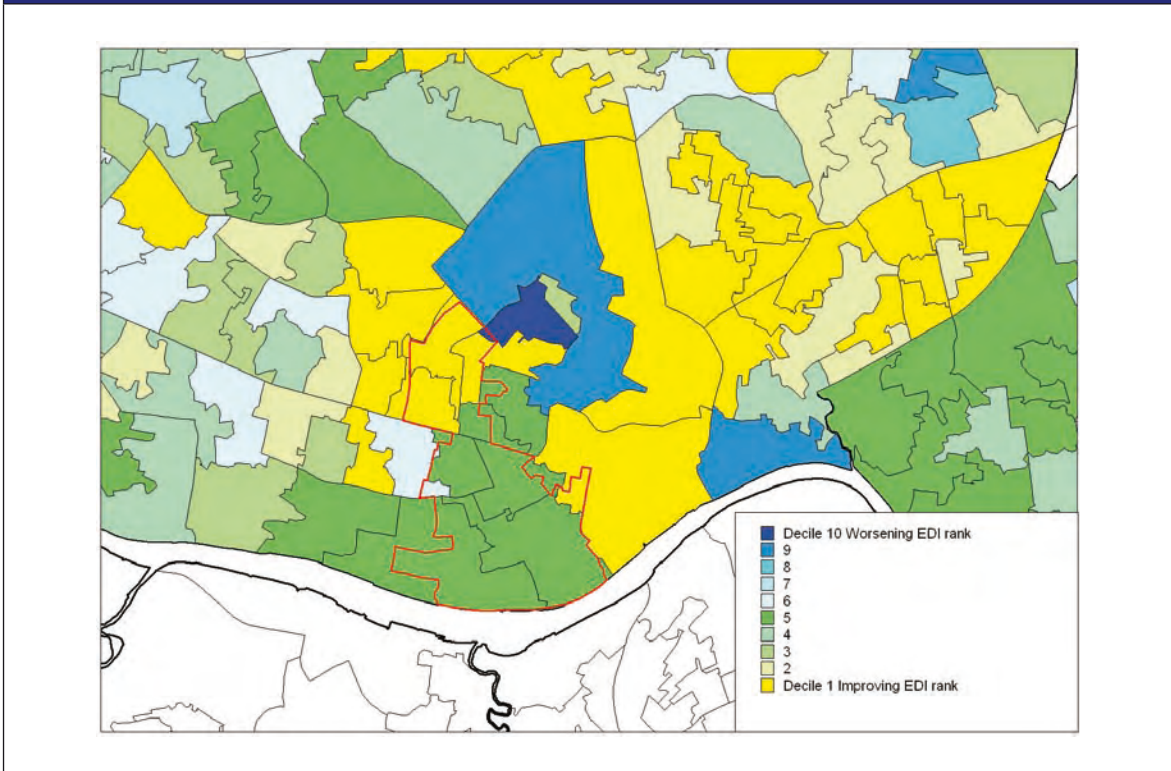
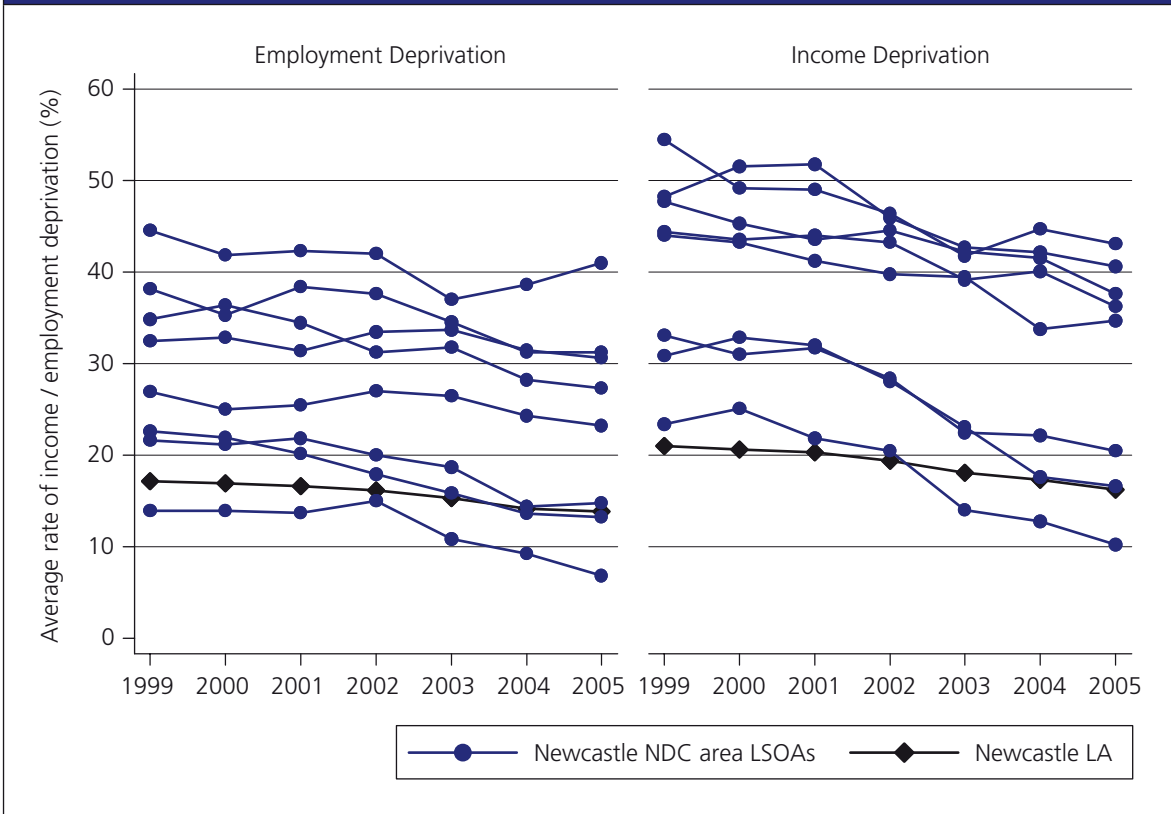


Figure 51: Change in rates of income and employment deprivation in Newcastle NDC LSOAs and Newcastle local authority, 1999–2005



6.5 Case Study 5 – Walsall

The Walsall NDC area is the first of two case studies of areas which have experienced increasing levels of relative economic deprivation. The average rank on both the Income and Employment Domains increases marginally between 1999 and 2005 although absolute rates of employment and income deprivation actually decrease marginally over the same period.

Figure 52 shows how a few LSOAs on the boundaries of the NDC area see an improvement in EDI rank but the majority of LSOAs experience a marginal worsening.

The changes occurring in the NDC area follow the same trends as in the wider locality; in fact the vast majority of LSOAs in Walsall local authority experience a worsening in relative levels of economic deprivation. In Figure 53 there is little change in average absolute rates of income and employment deprivation in the local authority. The same trend is mirrored in the majority of the LSOAs in Walsall, although there is slightly more variation in rates for these smaller areas. Two LSOAs in the Walsall NDC have seen significant increase in income deprivation rates (dark blue areas in Figure 52) which raises concerns over the long term trajectories of these LSOAs and the effectiveness of the NDC programme in these areas.

Figure 52: Walsall NDC area – increasing deprivation, increasing diversity

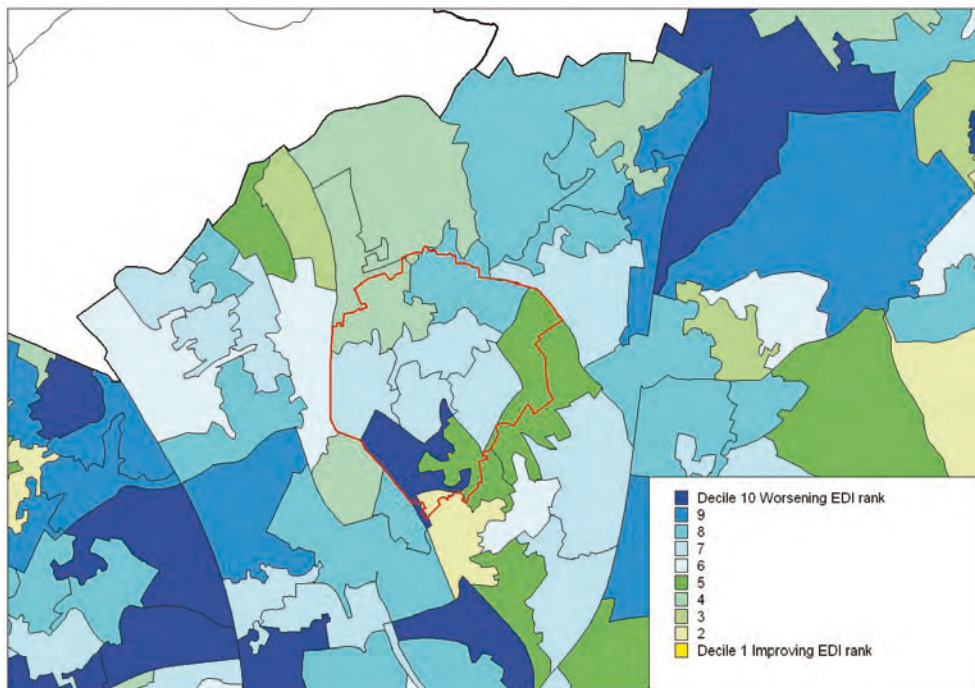
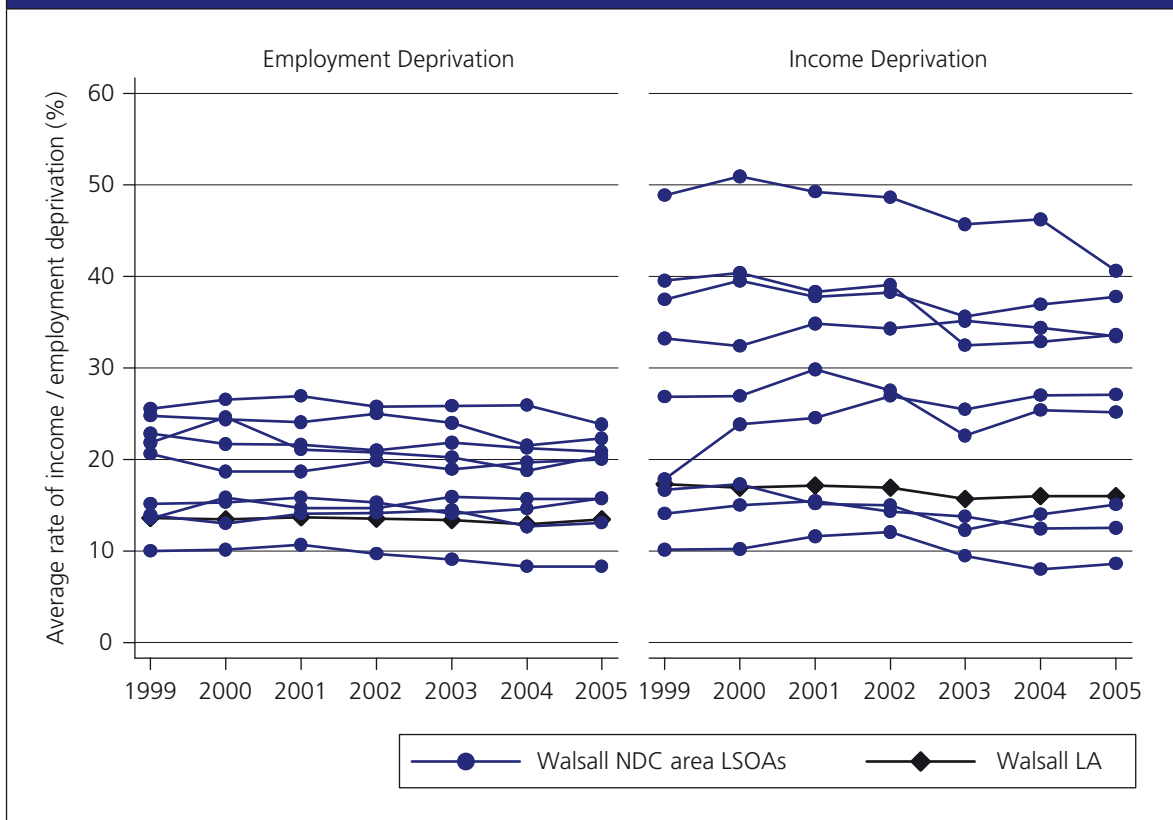


Figure 53: Change in rates of income and employment deprivation in Walsall NDC LSOAs and Walsall local authority, 1999–2005

6.6 Case Study 6 – Leicester

Leicester NDC area was one of 11 NDC areas falling into the “increasing deprivation, decreasing diversity” category in Table 6. In other words relative levels of economic deprivation in LSOAs in the Leicester NDC area are converging over time and the overall level of relative economic deprivation is increasing. The change in relative levels of economic deprivation in the Leicester NDC area is similar to those in the rest of the local authority as illustrated in Figure 54. There is little change in the absolute rates of income and employment deprivation in the Leicester NDC area and local authority shown in Figure 55. More variation is seen in absolute levels of income deprivation. Three groups of LSOAs seem to be emerging: one LSOA has low and stable rates of income deprivation, five LSOAs have moderate and converging rates of income deprivation and three LSOAs have persistently high (or increasing) rates of income deprivation. Again further analysis of the reasons for the different trajectories of the LSOAs within the Leicester NDC area may help to explain whether programme impacts or other factors are responsible for the trends seen.

Figure 54: Leicester NDC area – increasing deprivation, decreasing diversity

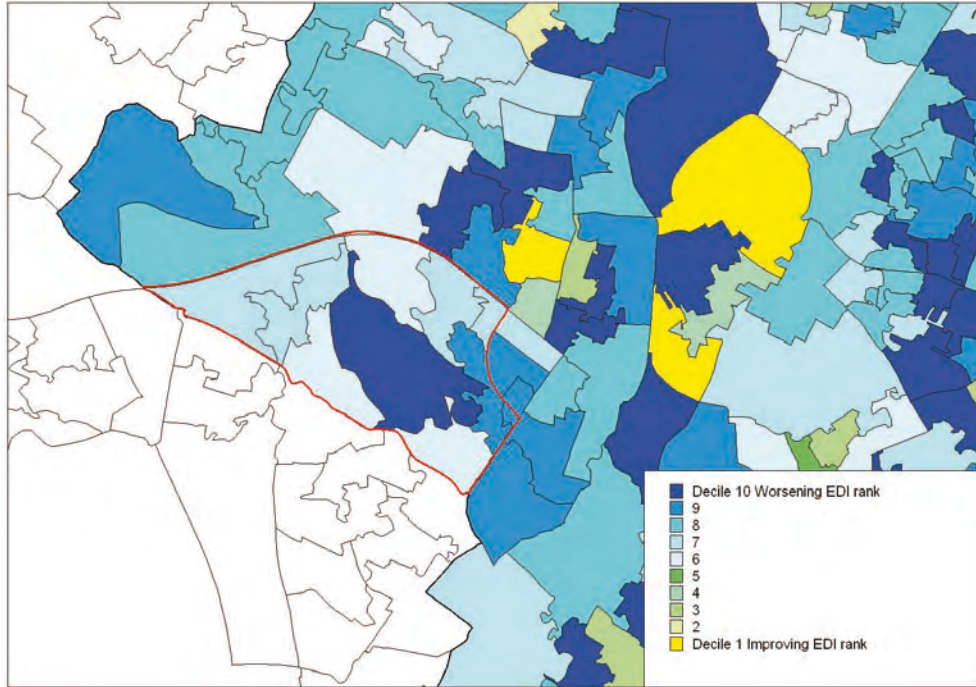
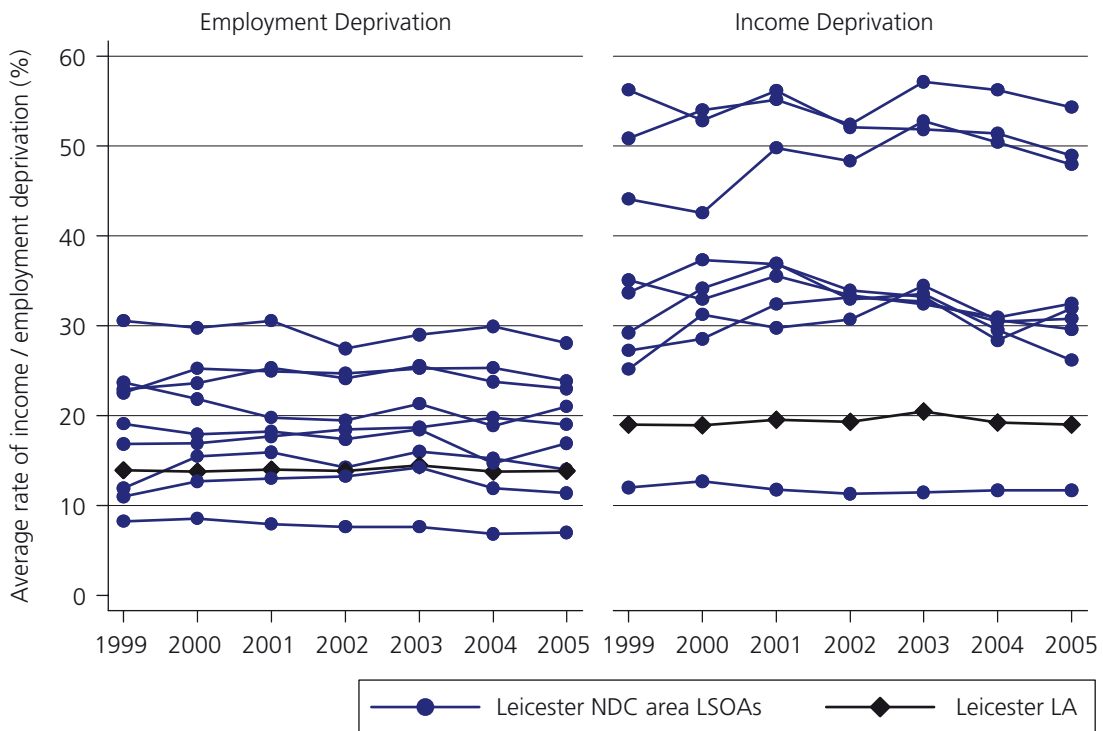


Figure 55: Change in rates of income and employment deprivation in Leicester NDC LSOAs and Leicester local authority, 1999–2005



6.7 Case studies – summary

This section has taken six NDC areas as case studies to illustrate the within-neighbourhood changes that can be hidden by looking only at change on the aggregate level. The case study areas were chosen to represent some of the patterns of change occurring within the NDC areas. However, each NDC area is unique and it is not possible to give a detailed account of each NDC area in this report so this should not be regarded as a comprehensive account of economic deprivation within each NDC area. It is possible, though, to draw some general conclusions from the case studies.

First, it is clear from the maps of the case study areas that the NDC areas cannot be said to be distinctly different from areas in the surrounding locality. There is no clear evidence that the NDC areas are improving (in relative terms) compared to other areas in the local authority. The LSOAs in most of the case study local authorities appear to be following differing trajectories with some LSOAs experiencing relative improvement and others a relative decline. The exception is Leicester where the majority of LSOAs are experiencing a relative decline. The same is true for the LSOAs in the NDC areas with a mixture of relative improvement and relative decline observed in all areas with the exception of the Newcastle NDC area, where all LSOAs experience a relative improvement, and the Leicester NDC area, where all LSOAs experience a relative decline.

The case study maps indicate that the changes in relative levels of economic deprivation in the NDC areas generally mirror those in the local authority (or at least the area immediately surrounding the NDC area). This finding highlights the importance of local context when evaluating programme impact and suggests that there is a strong link between what happens in the NDC and what happens in the surrounding area. Other recent research on the functional roles of deprived neighbourhoods has also recognised the importance of considering the wider locality and its impact on deprived neighbourhoods³⁵. It is suggested that deprived areas which are surrounded by other deprived areas face more challenges than deprived areas which are surrounded by more affluent areas. This factor has not been taken into consideration in analysing the progress of NDC areas. However, the analyses here suggest that it may be an important determinant of the capacity of an area-based initiative to affect and sustain positive change.

Secondly, the case study analysis (as well as the analysis of within-NDC EDI ranks in section 5.1) has shown that NDC areas are far from uniform. There is a great deal of variation in the levels of economic deprivation within some NDC areas. In addition, there is also variation in the trajectories of these smaller areas over time. Analyses at the aggregate level can mask the fact that certain parts of an NDC area may be steadily falling behind whilst other parts are making rapid progress. Identification of the different trends within NDC areas (as has been undertaken in these analyses) aligned with local knowledge of the area may help to identify the reasons behind the different rates of progress.

³⁵ See Robson, B. (2009), *A typology of the functional roles of deprived neighbourhoods*, Communities and Local Government.

7. Tracking economic deprivation in NDC areas – implications for area-based initiatives

This report has undertaken an in-depth analysis of the trends in economic deprivation in the New Deal for Communities (NDC) areas, comparator areas and other neighbourhoods in England between 1999 and 2005. The analyses draw on data from the recently constructed Economic Deprivation Index (EDI) which provides a consistent measure of overall economic deprivation and income and employment deprivation that can be used to compare different areas and track change over time. The analyses have also made use of specially constructed 'neighbourhoods' in order to compare the NDC areas with other geographically contingent areas of similar size.

The analyses contained within this report have examined change in relative and absolute levels of economic deprivation. Relative economic deprivation was measured by the neighbourhood's population weighted average rank on the EDI, or its component income and employment domains. Absolute levels of economic deprivation were measured in terms of the population weighted average rate of income and employment deprivation within a neighbourhood.

At the Programme-wide level there is little change in relative levels of economic deprivation in the NDC areas or comparator areas. This means that the relative position of the areas changes little over time. However, this is in a context where absolute rates of income and employment deprivation are falling across the majority of neighbourhoods in England. Although there is little relative change in the NDC areas, on aggregate, absolute rates of deprivation do fall quite significantly in most NDC and comparator areas.

Although, absolute levels of income and employment deprivation do fall in NDC areas, rates of income deprivation do not fall as much as in similarly deprived areas. However, comparing the progress of the NDC areas with their parent local authorities, the majority of NDC areas do narrow the gap with these larger areas in terms of income and employment deprivation.

The findings of the analyses have implications for the evaluation of area-based initiatives. First, the ability to compare NDC areas with comparator areas and other neighbourhoods in England provides a more coherent picture of the position of the NDC areas in relation to other neighbourhoods with differing levels of deprivation. Constructing a neighbourhood geography which facilitates this type of analysis can be very beneficial.

Second, regardless of the size of the intervention area, it is important to undertake analyses at the smallest geographical unit possible as aggregate area-level data can hide within-area trends. Furthermore, the case study work

has shown the extent to which neighbourhoods may be affected by changes in the wider locality. It is important that interventions are analysed whilst taking into account changes occurring around the area of intervention as this may impact upon the potential of the intervention to affect and sustain positive change.

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