



Exploring and explaining change in regeneration schemes: Evidence from the New Deal for Communities Programme

**The New Deal for Communities National Evaluation:
Final report – Volume 5**



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Final report – Volume 5**

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

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Executive summary

Chapter 1. The New Deal for Communities Programme: introducing the Programme and the evaluation

The New Deal for Communities (NDC) Programme is one of the most important Area Based Initiatives (ABIs) ever launched in England. Announced in 1998, the Programme's primary purpose is to 'reduce the gaps between some of the poorest neighbourhoods and the rest of the country'. In 39 areas, on average accommodating about 9,900 people, local NDC partnerships are implementing approved 10-year delivery plans, each of which has attracted approximately £50m of Government investment. Partnerships have worked to close the gaps between these areas and the rest of the country in relation to:

- three place-related outcomes designed to improve NDC areas: crime, community and housing and the physical environment (HPE)
- and three people-related outcomes intended to improve the lives of residents in the 39 areas: health, education and worklessness.

This is one of seven final reports undertaken as part of the national evaluation carried out between 2001-2010 by a consortium led by the Centre for Regional Economic and Social Research (CRESR) at Sheffield Hallam University. It is intended to identify, and to help explain, why some areas, and some individuals have seen more change than have others.

Two types of evidence are available to the evaluation team:

- cross-sectional area-based change data provide a snapshot of the circumstances and opinions of respondents in all 39 areas at four points in time: 2002, 2004, 2006 and 2008
- it is also possible to trace change for members of a longitudinal panel: those who stay in NDC areas for at least two years.

Chapter 2. Why do some New Deal for Communities areas see more change than others?

Measuring and comparing change across the 39 areas

A Composite Index of Relative Change (CIRC) standardises and combines change data for 36 core indicators, evenly spread across the Programme's six core outcomes. This Index provides a mechanism through which to measure how each of the NDC areas has changed relative to the other 38 neighbourhoods:

- the six areas seeing most change had above average performance on all six outcomes
- nine of the 10 NDC areas seeing least change had below average scores for both people and place-related outcomes
- NDC areas which showed good progress over the first two, or four, year period are not necessarily those seeing most change over the entire period
- those areas which were relatively deprived in 2002 still tended to be in that position in 2008, but there was a degree of convergence over time.

Partnership characteristics

Analyses identify associations between NDC partnership characteristics and change across the 39 areas between 2002 and 2008. Across all six outcomes as a whole there is a negative association between per capita spend on education and Programme-wide change.

Relationships emerge in relation to specific outcomes, including:

- NDC partnerships with greater numbers of resident board members and agencies on boards, and those with larger boards tend to see more positive change in the proportion of residents who think their local NDC has improved the area
- NDC partnerships which engage with larger numbers of agencies tend to see more change across the three place-related outcomes as a whole (crime, community, and HPE) when taken in combination
- NDC partnerships who have experienced greater turnover of chief executives tend to see less change in HPE
- expenditure in some outcome areas is associated with positive progress in others: NDC partnerships which have spent more on HPE tend to have more positive outcomes with regard to both worklessness and crime

- attaining improvements in one outcome helps achieve positive change in another; NDC areas seeing greater change in HPE are more likely to see greater improvements in crime and community.

New Deal for Communities area-level characteristics

Analyses identify associations (but not causality) between NDC area-level characteristics and NDC area-level change according to the CIRC, including:

- the 14 NDC areas included in a cluster defined as 'stable and homogenous'. and which consist largely of 'white', peripheral estates, in smaller non-core cities see less change in relation to people-related outcomes
- NDC areas which experienced less decline, or growth, in single person households, tended to see less change with regard to both place-related and also overall outcomes: single-person households tend to be associated with more static and aging populations
- areas with increasing owner-occupation tend to have seen greater improvement on worklessness outcomes over time
- areas with larger populations saw more positive change than would have been expected in people-related outcomes taken as a whole: worklessness, education and health
- areas with greater problems in relation to crime at the start of the Programme witnessed more change in this outcome.

Local Authority District (LAD) characteristics

Two associations emerge between change across these 39 areas and wider local authority district explanatory factors:

- positive change and a decline in social housing across local authority districts
- change across the three people-related outcomes is positively associated with the extent of deprivation across the local authority district: more deprived local authority districts may have more regeneration funding and are more geared-up to deal with area-based deprivation.

Cross-cutting models

Regression models identify the combined ability of different factors to explain outcome change.

In relation to change across all six outcomes as a whole, models suggest that areas where there has been a rise in single person households, higher per capita spend on education, and where the NDC areas are characterised as 'stable and homogenous' will tend to see less overall change.

For place-related outcomes there is a negative association with educational spend, and a positive association with numbers of agencies with which partnerships engage.

For people-related outcomes, there is a negative association with an NDC being 'stable and homogenous', and positive association with low population churn, growth in two person households with no dependent children, and NDC areas accommodating larger populations.

New Deal for Communities areas seeing greatest change

When compared with the other 29, change in the 10 areas seeing most positive transformation is associated with:

- a significantly greater increase in the percentage of residents involved in NDC activities
- less per-capita spend on education and management and administration, and more on health
- more ethnically diverse populations, and higher proportions of residents in social housing in 2002
- larger, growing populations
- more employee jobs per head of population in the LAD.

Policy implications

- evidence is largely supportive of 'the NDC model' of delivering regeneration: although NDC areas could perhaps have been somewhat larger
- there is support for holistic approaches towards regeneration: spend and change in some outcomes is associated with change in others
- more change has occurred, and there are more associations within, place, rather than people
- there are negative associations between higher levels of educational spend and outcome change
- peripheral, ex-public sector estates are seeing less change than other clusters of NDC areas
- an increase in owner-occupation is likely to help achieve positive change; but existing residents may not be able to afford prevailing house prices
- neighbourhood regeneration schemes have only a limited ability to influence change at the local level.

Chapter 3. Individual level change

What changes were experienced by those who stayed in NDC areas for six years?

For 22 of 33 indicators, there was a significantly greater movement of more NDC residents from a negative, to a positive, outcome than the reverse between 2002 and 2008. Indicators showing greatest change are generally perception-based and often reflect improvements in place

How are the benefits of regeneration spread across NDC residents?

Panel data allows for an analysis of change for each of the 3,554 individuals who stayed in an NDC area between 2002 and 2008.

Core indicators have been combined to produce a score of positive indicators in each of the four surveys. NDC residents reported an average 1.3 'indicator improvement' between wave 1 and wave 4. This is statistically greater than the 0.9 improvement reported by members of the comparator-areas' panel.

For each individual, a total number of 'net' positive transitions has been calculated by subtracting the number of negative, from positive, transitions:

- 59 per cent of the NDC panel made more positive, than negative transitions, compared with 55 per cent in the comparator-areas' panel
- for 31 per cent of NDC residents the net total was negative: they made more negative transitions between 2002 and 2008; the equivalent figure for the comparator-areas' panel was slightly higher at 33 per cent
- 6 per cent of NDC residents, and 4 per cent of those in the comparator-areas made eight or more net positive transitions.

Those making the largest number of net positive transitions were more likely to be:

- aged 25 to 49
- in the social rented sector, and not in employment
- more disadvantaged in 2002: they had more headroom to make positive change by 2008.

Which socio-demographic groups see greatest change?

When change data is controlled for individual-level socio-demographic characteristics, then:

- there were significant differences by ethnic group for a third of the 33 core indicators, with black residents seeing better outcomes than white residents in relation to satisfaction with the area, and a number of community based indicators; Asian residents enjoyed better outcome change than white people in relation to fear of crime and feeling safe after dark, but less well with regard to some others, including thinking the area has improved in the last two years
- with regard to age, residents aged under 25 did well on a range of crime indicators relative to other age groups, whilst those over 60 made less improvement than younger residents
- with regard to gender, women saw more improvements than men on five indicators including fear of crime, feeling unsafe after dark and mental health
- in relation to tenure, when compared with owner-occupiers, social renters saw more improvements in worklessness and private renters less improvement in health
- with regard to household composition, lone parent families and couples with dependent children tended to see fewer improvements than did couples without children.

Is being involved with a New Deal for Communities partnership associated with greater outcome change?

Those who had been involved in their local NDC partnership at any point of time, experienced significantly greater improvement between 2002 and 2008, when compared with respondents who had not been involved, in relation to a range of factors including experience of crime, feeling safe walking alone after dark, satisfaction with the state of repair of their accommodation, trust in local agencies, thinking the NDC partnership had improved their area, and thinking their area had improved over the past two years.

Evidence links NDC partnership interventions with individual-level change. People who saw themselves as having benefited from a range of specific NDC projects between 2002 and 2004 were more likely to have seen more positive changes than did those who had not benefited.

It is difficult to identify people-related changes at the area-level, because interventions benefit relatively small numbers of people. But the positive effects are real enough for the individuals concerned.

Have New Deal for Communities area residents seen greater positive change than their comparator counterparts?

After adjusting for underlying socio-demographic characteristics, NDC area residents were significantly more likely to see improvements than residents in comparator areas for:

- lawlessness and dereliction
- area improved in the past two years
- satisfaction with the area
- health not good
- health worse than one year ago.

Which factors relate to individual-level change?

It is possible to identify the degree to which change in one indicator is related to change in others.

For example, a positive increase in thinking the area has improved in the past two years, is strongly associated with improvements in other outcomes such as satisfaction with the area, and also with improvements in social relations, vertical trust¹, lawlessness and dereliction, and reductions in the experience of being a victim of crime.

This strength of association can be seen as a justification for holistic approaches to area-based regeneration: achieving change in place-related outcomes in particular, is associated with change across a wide range of other inter-related outcomes.

To what extent is change associated with area, as opposed to individual,-level factors?

Multi-level modelling identifies the degree to which change can be explained by which NDC areas residents live in, rather than by their individual-level characteristics.

Individual-level responses in relation to thinking the area improved in the last two years indicate that:

- change experienced in the comparator areas is, not only significantly below the average, but is lower than all 39 NDC areas
- however, only 2.2 per cent of the differences in variation can be attributed to area-level characteristics, and 97.8 per cent by the characteristics of the individuals included within the model.

¹ Vertical trust: an index combining responses to trust residents have in the police, local schools, hospitals and local council.

The views and perceptions of residents change largely because of who they are and how deprived they were in 2002, not by where they live.

Section 4. Concluding comments

Change for areas and for people

Understanding relationships between change for areas and for people requires an understanding of the dynamics of inter-related processes including:

- more deprived individuals experienced more positive change between 2002 and 2008: they had more headroom for change, and they benefited as a result of being prioritised by NDC partnerships wishing to target interventions on their most disadvantaged residents
- it is easier to identify change in relation to place rather than people: more individuals are affected by place-related interventions and it is relatively easier to achieve a positive transition
- NDC areas saw more change than did the comparator areas, especially with regard to place-related indicators, partly because there were more deprived individuals in NDC areas in 2002, than was the case for the, slightly less deprived, comparator areas
- as more deprived individuals in NDC areas experienced positive change over this six year period, so in turn cross-sectional area-level data shows NDC areas improving relative to other benchmark geographies
- individual-level factors, including levels of deprivation in 2002 and socio-demographic characteristics, represent key factors in explaining relative change, together with the fact that NDC area residents also benefited from interventions which were not available to those in the comparator areas
- area effects are limited: change is strongly associated with who people are, not where they live; one reason for this apparent lack of area effects is that most people do not have any direct engagement with their local partnership.

Change within New Deal for Communities areas; assessing impact

It is not always easy to identify, and explain, relative change across the 39 areas. But when the 39 areas as a whole are compared with what happened elsewhere between 2002 and 2008, then there are clear signs of an NDC Programme-wide impact for some indicators, as is developed in Volume 6 of these final reports.

Chapter 1

The New Deal for Communities Programme: introducing the Programme and the evaluation

The New Deal for Communities Programme

- 1.1 The New Deal for Communities (NDC) Programme is one of the most important Area Based Initiatives (ABIs) ever launched in England. Announced in 1998 as part of the government's National Strategy for Neighbourhood Renewal,² the Programme's primary purpose is to 'reduce the gaps between some of the poorest neighbourhoods and the rest of the country'.³ Seventeen Round 1 partnerships were announced in 1998 and a further 22 Round 2 partnerships a year later. In these 39 areas, which on average accommodate about 9,900 people, local NDC partnerships are implementing approved 10-year delivery plans, each of which has attracted approximately £50m of Government investment.
- 1.2 This Programme is based on a number of key underpinning principles:
- NDC partnerships are carrying out 10-year strategic programmes designed to transform these deprived neighbourhoods and to improve the lives of those living within them
 - decision making falls within the remit of 39 partnership Boards, consisting of agency and community representatives
 - communities are 'at the heart of the regeneration of their neighbourhoods'⁴
 - in order to achieve their outcomes, the 39 partnerships have worked closely with other delivery agencies such as the police and Primary Care Trusts: the notion of working collaboratively with other delivery agencies is central to the Programme

² SEU (1998) Bringing Britain Together: A National Strategy for Neighbourhood Renewal.

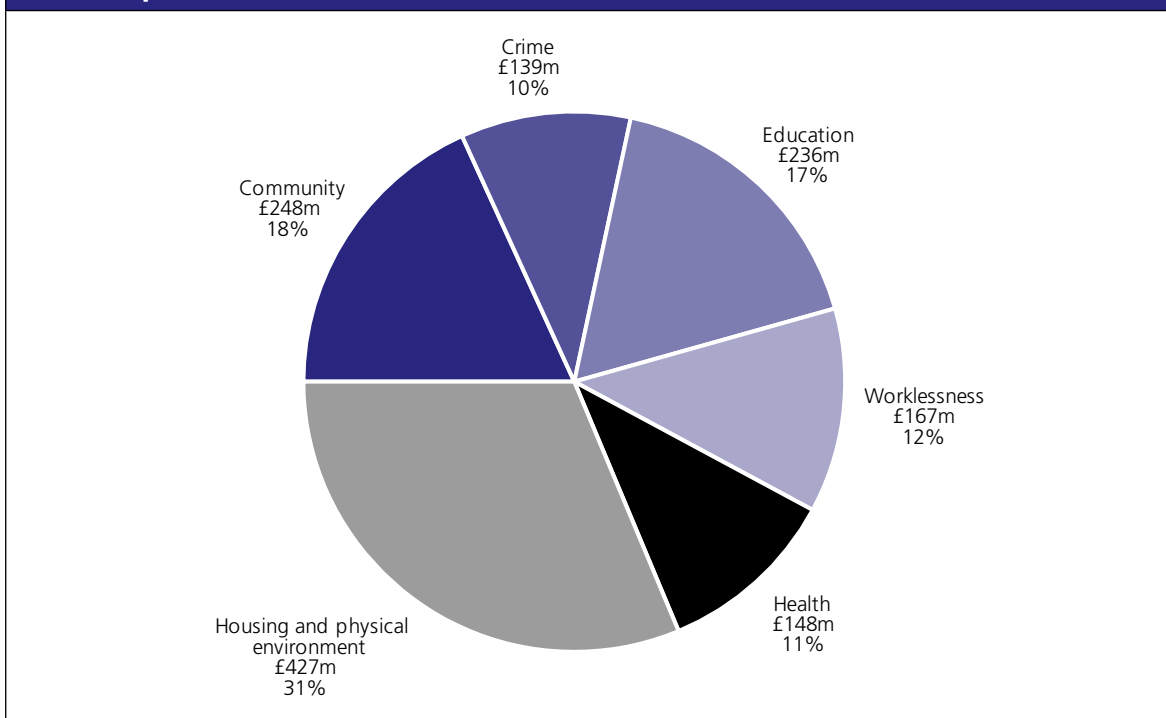
³ DETR (2001) New Deal for Communities: Financial Guidance.

⁴ ODPM (2004) Transformation and sustainability: future support, management and monitoring of the New Deal for Communities programme, 11.

- Partnerships are intended to close the gaps between these areas and the rest of the country in relation to:
 - three place-related outcomes designed to improve NDC areas: incidence and fear of crime, housing and the physical environment (HPE), and community
 - and three people-related outcomes intended to improve the lives of residents in the 39 areas: health, education and worklessness.

1.3 This is a well-funded ABI. Between 1999-00 and 2000-08 the 39 NDC partnerships spent a total of £1.56bn on some 6,900 projects or interventions. A further £730m was levered in from other public, private and voluntary sector sources. Of the six outcomes, housing and the physical environment accounted for the greatest proportion of spend: 31 per cent of all non-management and administration NDC expenditure, or £427m (Figure 1.1). In contrast, £139m was spent on measures to tackle crime, roughly one tenth of overall Programme spend.

Figure 1.1: New Deal for Communities spend by outcome: 1999-00 to 2007-08 (current prices)



Source: CEA, System K

Note: Management and administration spend is excluded

2001-2010 National Evaluation

- 1.4 In 2001 a consortium headed up by the Centre for Regional Economic and Social Research (CRESR) at Sheffield Hallam University was commissioned to undertake the 2001-2005 Phase 1 of a Programme-wide evaluation. In 2006 CRESR secured the 2006-2010 Phase 2 of the national evaluation working with a similar, albeit smaller, consortium.⁵
- 1.5 The first phase of the evaluation produced some 90 reports which can be accessed via the national evaluation team's website.⁶ In Phase 1, the evaluation team undertook work in all 39 NDC areas. However, in Phase 2 qualitative work was carried out in six or seven case study NDC areas,⁷ evidence from which has informed reports on each of the Programme's six outcomes, as well other themes such as population mobility. A full list of the outputs produced in Phase 2 is available as an Appendix to this report.
- 1.6 Phase 2 also differs from Phase 1 in relation to overarching, or final, reporting. The first phase of the evaluation culminated in a single 2005 Interim Evaluation.⁸ A different approach has been adopted for final reflections on 2001-2010 evaluation evidence as a whole, of which this report is part. In order to concentrate on the Programme's key characteristics and achievements, the decision has been made to publish a suite of seven final reports.
- 1.7 The rationale for these seven final reports is as follows:
- Volume 1, ***Achieving a neighbourhood focus for regeneration***, explores the institutional model underpinning the Programme based on the creation of semi-autonomous partnerships, designed to achieve 10 year transformational strategies working in co-operation with existing delivery agencies such as the police and PCTs.
 - Volume 2, ***Involving local people in regeneration***, examines the rationale, operation and consequences of the Programme's aim of placing the community 'at its heart'.

⁵ Consortium members are: Cambridge Economic Associates, European Institute for Urban Affairs at Liverpool John Moores University, Geoff Fordham Associates, Ipsos MORI, Local Government Centre at the University of Warwick, School of Health and Related Research at the University of Sheffield, Social Disadvantage Research Centre at the University of Oxford, Shared Intelligence, and SQW.

⁶ <http://extra.shu.ac.uk/ndc/>

⁷ The NDC areas from which most case study evidence has been drawn are Bradford, Knowsley, Lambeth, Newcastle, Newham, and Walsall. For an overview of regeneration activity in these six NDC areas see: CLG (2008) Challenges, Interventions and Change: An overview of Neighbourhood Renewal in Six New Deal for Communities areas.

⁸ NRU/ODPM (2005) New Deal for Communities 2001-2005 An Interim Evaluation: Research Report 17. www.neighbourhood.gov.uk/publications.asp?did=1625

- Volume 3, ***Making deprived areas better places to live***, considers the nature, operation and successes of NDC interventions designed to improve these 39 places.
- Volume 4, ***Improving outcomes for people: the NDC experience***, considers the nature, operation and successes of NDC interventions designed to improve outcomes for local residents living in the 39 NDC areas.
- Volume 5, this report, ***Exploring and explaining change in regeneration schemes***, identifies factors which help in understanding why some NDC areas, and some individuals, have seen better outcomes than have others.
- Volume 6, ***The New Deal for Communities Programme: assessing impact and VFM***, uses all of the evidence available to the evaluation in order to identify the impact of, and cost-benefits arising from, the NDC Programme.
- Volume 7, ***The New Deal for Communities experience: a final assessment***, considers the degree to which the Programme has achieved its original objectives and the implications of this evidence for policy.

The rationale for this report

1.8 The evaluation of the NDC Programme is ideally placed to identify, and to help explain, why some areas, and some individuals have seen more change than have others. It is not clear that any previous English ABI evaluation has been able to address this question in a rigorous, data driven, way.⁹ However, because of the depth and longitudinal nature of change data, discussed briefly below, this evaluation is able to provide an evidenced reflection on factors which help explain relative change for areas, and for people. This material has important implications for policy. Findings developed in this report are based on statistical analyses drawing on extensive databases and are thus more reliable and robust than evidence from qualitative case-study work. Analyses outlined in this report therefore provide a unique reflection on what drives change in regeneration areas.

⁹ Although analytical work has been undertaken to help understand change in relation to some US ABIs for example: Krupka, D.J. and Noonan, D.S. (2009) Empowerment Zones, neighbourhood change and owner-occupied housing. *Regional Science and Urban Economics*, 39, 386-396; Busso, M. and Kline, P. (2008) Do local economic development programs work? Evidence from the Federal Empowerment Zone Program, Cowles Foundation Discussion Paper no: 1638, Yale Economics Department Working Paper no 36.

- 1.9 The evaluation is based on the collation and analysis of an extensive array of change data¹⁰ of both a quantitative, but also a qualitative, nature. For this report two sources of data are especially important:
- the four household surveys carried out in all 39 areas and similarly deprived comparator areas by Ipsos MORI in 2002, 2004, 2006 and 2008; overviews of main findings for the periods 2002-2006¹¹ and 2002-2008¹² have previously been published
 - the collation of administrative data covering issues such as worklessness benefits and Key Stage educational attainment amongst school children by the Social Disadvantage Research Centre at Oxford University.
- 1.10 There are in essence two types of data available to the evaluation team. Cross-sectional area-based change data provides a snapshot of the circumstances and opinions of respondents in all 39 areas at four points in time: 2002, 2004, 2006 and 2008. However, because the household survey design involves returning to some of those interviewed two years previously, it is also possible to trace change for members of a longitudinal panel: those who stay in NDC areas for at least two years. This is an important constituency. It can reasonably be argued that change for individuals who stay in NDC areas is more likely to reflect the impact of the Programme than is the case for those who are interviewed as part of the cross-sectional survey and who could have entered an NDC area literally the day before the survey was carried out
- 1.11 The two types of change data allow us to develop complementary perspectives on change. First, as the NDC Programme is an area-based scheme: it is entirely appropriate that change should be measured at this area level. Cross-sectional data allows us to look at change across the 39 NDC areas (Chapter 2). Analyses developed in Chapter 3 use longitudinal panel data to focus on change experienced by the individuals in the sample of 3,554 NDC area residents and 297 comparator area residents who took part in all four waves of the survey: 2002, 2004, 2006 and 2008.
- 1.12 Although the evaluation team has access to a powerful database it is worth pointing out that this evidence covers just six years of a 10 year Programme. Household survey data is not available for the period before 2002, and the evaluation does not have access to any change data for the post-2008 period. There are debates as to the degree of change which occurred before 2002. Although some NDC partnerships have argued that considerable activity was

¹⁰ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report.

¹¹ CLG (2007) New Deal for Communities National Evaluation: An Overview of Change Data: 2006. <http://extra.shu.ac.uk/ndc/downloads/reports/NDC%20Nat%20Eval%20Change%20data%202006.pdf>

¹² CLG (2009) An Overview of Cross-sectional Change Data: 2002-2008: evidence from the New Deal for Communities Programme. www.communities.gov.uk/publications/communities/crosssectiondatandcp

undertaken before that date, there must be doubt as to whether this would have culminated in a great deal of measurable outcome change before 2002. However, it is likely that more change will occur in the post-2008 period, both during, but also after, Programme funding ceases in 2011.

The structure of this report

1.13 The remaining sections of this report are structured as follows:

- chapter 2 examines evidence pointing to factors which help explain why some of the 39 areas have seen more change than have others
- chapter 3 presents evidence in relation to factors associated with individual level change
- chapter 4 provides a concluding overview including an examination of the inter-relationships between change for area and change for individuals.

Chapter 2

Why do some New Deal for Communities areas see more change than others?

- 2.1 This chapter explores change across NDC areas through time using cross-sectional area-based data (see 1.10). In essence analyses presented here examine the extent to which three sets of explanatory factors associated with the partnerships as organisations, the local NDC areas, and wider area characteristics, help explain why some areas have seen more change than have others. Are areas which have more of any given characteristic or activity in turn more likely to achieve greater change than areas with less?
- 2.2 The remaining sections of this chapter are organised into seven themes:
- measuring and comparing change across the 39 areas: how is area-level change measured for the purposes of this analysis?
 - partnership-level characteristics: to what extent is change across the 39 areas associated with partnership-level characteristics such as size of boards, scale of partner engagement, and so on?
 - NDC area-level characteristics: are there associations between NDC area-level change and NDC area-level factors such as socio-demographic structure?
 - local authority district characteristics: to what extent is NDC area-level change associated with factors operating across wider local authority districts (LADs)?
 - cross-cutting models: when the interaction between all three sets of factors are considered together (partnership, NDC area, and local authority district characteristics) which factors emerge as the strongest predictors for areas achieving change?
 - exploring relationships within those NDC areas seeing greatest change
 - what are the key policy issues to emerge from these findings?

Measuring and comparing change across the 39 areas

- 2.3 The first step in trying to understand patterns of change across NDC areas is to devise a measure which systematically combines a range of outcome data. This is essential if areas are to be compared with each other on a like-for-like basis. It is important that this measure incorporates a basket of indicators which capture change across all six of the Programme's outcomes.
- 2.4 It is also helpful when comparing NDC areas against each other, to take into account the prevailing circumstances in the wider geographical area within which they operate. This benchmarking exercise is necessary in order to measure the extent to which change in any NDC area is on a par with, is less than, or exceeds, that occurring in other deprived areas located in the same geographic context. Ultimately, it may be easier to make progress on some outcomes in certain contexts, than is the case in others. For example, an area located in a more buoyant city-region economy may find it easier to get people back to work, than would be the case for an area within a weaker wider labour market.
- 2.5 This chapter therefore utilises an Index which allows patterns of change to be assessed across NDC areas on a like-for-like basis. The Composite Index of Relative Change (CIRC)¹³ standardises and combines change data for 36 core indicators¹⁴, evenly spread across the Programme's six core outcomes. Three of these six core outcomes focus on aspects of 'place': crime, community and housing and the physical environment, and three on 'people': worklessness, education and health. Each outcome contributes an equal weighting towards the final overall score on the Index. The 36 indicators reflect changes which might plausibly be achieved during a six year period (2002-2008). The biennial household survey is the primary source for most indicators included in CIRC (see 1.9). This provides consistent data for all NDC areas from 2002-2008. A smaller number of indicators are drawn from administrative data sources: DWP data on those claiming key worklessness benefits (1999 to 2008), and Key Stage education data from 2002 to 2007.
- 2.6 CIRC is based on benchmarked data, rather than absolute change in each of the 39 areas. These benchmarks consist of five groups of pooled comparator areas data.¹⁵ These groups were determined by a typology which created clusters of NDC areas on the basis of how similar they were to each other at

¹³ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 6 for a fuller description of methodology underpinning CIRC).

¹⁴ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 5 for a full list of all 36 core indicators).

¹⁵ Comparator survey sample sizes in each area mean that these are not large enough to provide individual Partnership-level comparator data. See CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 3 for details of the comparator areas data).

the beginning of the Programme.¹⁶ The Index measures the degree to which each of the 39 NDC areas achieved change over and above that for groups of similarly deprived comparator areas in the same geographic context. This benchmarking exercise thus identifies a 'net' NDC programme effect over and above change occurring as a consequence of the national, regional or local authority trends. The Index relates the 'net' change occurring in each NDC area to that occurring in the other 38. Interestingly a version of the Index based on the absolute change which occurred in each NDC area relative to the other 38 areas results in very similar findings (correlation 0.87).

- 2.7 CIRC provides a mechanism through which to measure how each of the NDC areas has changed overall (i.e. across all 36 indicators), by any one of the Programme's six core outcomes, and by either people (worklessness, education and health), or place (crime, community, and housing and the physical environment), related, deprivation.¹⁷
- 2.8 Indicators on health, education and worklessness are combined as people-related outcomes, and those for housing and the physical environment, crime and community make up the place-related element of the score. A number of points emerge from the CIRC analysis:
- areas which performed well on CIRC overall tended to do well on both people-, and place-, related elements to the Index
 - there is a tendency for the place-related element to contribute more to the overall CIRC score amongst the 10 NDC areas seeing most change
 - the six areas seeing most change had above average performance on all six outcome areas
 - conversely 9 of the 10 NDC areas seeing least change had below average scores for both people and place-related outcomes.

¹⁶ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 7 for details of the methodology used to devise the typology and a description of common characteristics across the resultant five clusters of NDC areas. The five clusters are: 'Entrenched Disadvantage' – Liverpool, Nottingham, Knowsley, Doncaster, Coventry; 'Stable and Homogenous' – Norwich, Middlesbrough, Leicester, Brighton, Bristol, Walsall, Southampton, Salford, Oldham, Rochdale, Hartlepool, Derby, Birmingham Kings Norton, Luton; 'London' – Hackney, Newham, Southwark, Lewisham, Brent, Islington, Haringey, Fulham, Lambeth, Tower Hamlets; 'Diverse and Relatively thriving' – Bradford, Sandwell, Wolverhampton, Birmingham Aston; 'Disadvantaged and Socialised' – Newcastle, Hull, Manchester, Sunderland, Sheffield, Plymouth).

¹⁷ Appendix A in CLG (forthcoming) New Deal for Communities Evaluation: Technical Report, for an in-depth analysis of CIRC across NDC areas.

2.9 An examination of CIRC scores over time¹⁸ indicates that:

- NDC areas which showed good progress over the first two, or four, year period are not necessarily those seeing most change over the entire period: some areas had a real 'spurt' in later years
- although progress was made across all NDC areas, those which were more deprived in 2002, still tended to be relatively worse off in 2008, but there was a degree of convergence across areas over time.

2.10 By using a basket of common indicators, the CIRC therefore provides a consistent way of summarising change across all NDC areas. The Index takes into account progress occurring in similarly deprived areas in the same local authorities and thus allows change in one NDC area to be compared with that occurring in others. The remaining sections of this chapter explore the degree to which possible explanatory variables are associated with the degree of change occurring in each area. Are NDC areas with particular attributes likely to have seen more change than areas without these characteristics? Three groups of potentially explanatory variables are considered:

- the attributes of the partnerships themselves
- characteristics of NDC areas
- aspects of the wider context within which these 39 neighbourhoods are located.

2.11 Two broad approaches have been adopted in order to identify associations between change and this range of possible explanatory factors. First, analysis has been carried out to highlight correlations, or the strength of association,¹⁹ between area-level change and potentially explanatory factors. As is developed in later sections of this chapter, it is worth commenting that, in many instances correlations, although significant, are relatively weak.²⁰ There is a degree of unexplained variation across these 39 NDC areas. Second, no single factor exists in isolation, and it may be the existence of a combination of a number of particular characteristics which is associated with positive outcomes. Therefore the strength of association between groups of explanatory variables and change is also explored using a series of multiple regression models.²¹

¹⁸ Appendix A in CLG (forthcoming) New Deal for Communities Evaluation: Technical Report, for an in-depth analysis of CIRC across NDC areas

¹⁹ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 8.1 for a fuller description of Pearson Correlation Coefficients. In brief, this statistical technique assesses whether a linear relationship exists between two variables and quantifies how strong the relationship is. Coefficients range from +1 to -1. A coefficient of +1 indicates a very strong positive relationship – i.e. for all observed cases as one factor increases so does the other. A coefficient of -1 indicates a very strong negative relationship – i.e. for all observed cases, as one factor increases the other factor decreases. A coefficient of zero indicates no consistent linear relationship exists across all the cases).

²⁰ The correlation coefficients presented in this chapter are based on data for 39 NDC areas. The coefficients need to be at least +/- 0.32 to be considered statistically significant at the 5% level of confidence; that is in 95 out of 100 cases this observed relationship is likely to be true. The closer the coefficient is to +/-0.32, although still significant, the weaker, or less consistent the relationship is across all observed cases. The closer the coefficient is to +/-1 the stronger and more consistent the observed relationship is across all cases.

²¹ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 8.2 for a fuller description of multiple regression modelling. In brief, this method quantifies the extent to which a number of explanatory factors are related to, and thus help explain, variation observed across NDC areas in any given outcome variable considered. These models help us understand and predict the degree to which an NDC area with given characteristics might be on average more likely to achieve greater change than another which does not have said characteristics).

2.12 Before outlining analytical findings, a number of caveats should be flagged up. In particular it is important to appreciate that:

- there are only 39 'cases' from which to observe patterns of association; caution is needed in interpreting relationships, and too much emphasis not placed on any one finding
- correlations which are statistically significant, but are relatively weak (i.e. closer to zero than to one), imply that the observed relationship might not be consistent across all 39 areas, and that a degree of variation exists across the 39 areas
- associations are based on change data covering that six year period 2002 to 2008; if earlier periods of change data, such as say 2002-2004, are considered separately then somewhat different patterns emerge;²² it should also be remembered that this is a 10-year Programme and analyses based on longer periods of change data might identify different relationships
- a large number of potential explanatory variables exist and have been tested; but only statistically significant²³ relationships are reported here
- there is not always an obvious, or plausible, explanation as to why certain relationships emerge
- this type of analysis does not identify causal relationships, only whether an association exists between NDC areas having certain attributes and change; we can say that NDC areas with a given set of characteristics are more likely to have achieved greater change than areas without, but we cannot say that having such characteristics has caused this change to occur.

2.13 Paragraphs from 2.40 onwards consider cross-cutting models which combine the three sets of explanatory variables and uses multiple regression techniques to identify which groups of variables provide the best explanation for change. In addition consideration is also given to exploring change in relation to those NDC areas seeing greatest change (2.47).

²² CLG (2008) New Deal for Communities: a synthesis of new Programme-wide evidence 2006-07; NDC National evaluation Phase 2 Research Report. http://extra.shu.ac.uk/ndc/downloads/general/NDC_synthesis_programme_wide_ev_06-07.pdf

²³ Statistically significant at least the 5% level. This means we can be relatively confident that the observed relationship is true and in general holds across NDC areas: there is only a 5 in 100 chance that the observed relationship is spurious.

Partnership characteristics

2.14 This section reviews the extent to which NDC partnership characteristics such as how they have organised themselves, how they related to other local agencies and initiatives, and their different patterns of spending help in understanding change across these 39 areas.²⁴ The 2008 Partnership Survey²⁵ collected data on a number of operational characteristics for all 39 NDC partnerships. Details of the range of potential explanatory variables considered, and a rationale for why they might impact on change, are set out in Table 2.1. It is important to stress here that these represent an especially important set of explanatory factors: they generally fall within the control, or at least influence, of NDC partnerships.

Table 2.1: Partnership Characteristics		
Characteristic	Explanatory variable	Rationale for inclusion
Board composition	Size of and membership of partnership boards	If boards become too unwieldy this may hamper decision making; conversely too narrow a constitution may reduce benefits flowing from delivery partner expertise, and also local knowledge and experience available to residents
	Number of agencies on the boards , extent of engagement with agencies, and whether this assists or constrains delivery	Being linked into mainstream agencies and partnership working may facilitate the successful delivery of projects and the integration of key professionals into local delivery programmes
	Number of residents on the board	More residents may improve communication with the community as a whole; too many may inhibit decision making

²⁴ The NDC 'model' as described in Volume 1 of this set of Final Reports describes the characteristics of the NDC approach to neighbourhood-level renewal and the institutional arrangements developed to deliver and sustain interventions aimed at tackling the complex problems in these 39 deprived areas.

²⁵ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 4.3 for details of Partnership Survey) and CLG (2009) The 2008 Partnership Survey: evidence from the New Deal for Communities Programme <http://extra.shu.ac.uk/ndc/downloads/reports/2008%20partnership%20survey.pdf>

Table 2.1: Partnership Characteristics (continued)		
Characteristic	Explanatory variable	Rationale for inclusion
Continuity of Staffing and Board Effectiveness	The number of times chief executives or chairs changed during the Programme	Indicative of stability of leadership in partnerships; this may assist in seeing through strategic decisions
	Effectiveness of board operations ²⁶	Assesses how well boards function, work together and are able to carry out roles and responsibilities effectively
Engagement with other Area Based Initiatives (ABIs)	The number of other ABIs in the area and extent of engagement with ABIs	Having overlapping ABIs may lead to additional resources and intensity of effort in NDC areas; too many ABIs may cause some confusion in relation to which ABI is responsible for which intervention
Phasing of the Programme	Round 1 or Round 2 partnerships	The Programme was rolled out in two phases; this may have implications for the phasing of delivery and change
Expenditure	NDC area-level expenditure both overall and by outcome area; by absolute amount of expenditure, expenditure per capita, and also as proportions of overall spend.	The more partnerships spend on particular outcomes, the more change may occur; spend in one outcome may have negative, or positive, implications for change in another

- 2.15 Analyses have sought to identify associations between each of these partnership characteristics and change across the 39 areas between 2002 and 2008. Correlations between individual factors and outcomes are presented. Where a combination of factors are significant, results from the corresponding multiple regression model are also included.
- 2.16 Only one significant relationship was found between change across the six outcomes as a whole (i.e. across all 36 core indicators) in these 39 areas and partnership-level characteristics. This is a negative association between per capita spend on education and Programme-wide change achieved. This relationship is not strong but does suggest that as per capita spend on

²⁶ A full list of the questions included in the board operation index is laid out in the CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 4.3).

education and learning increases, the overall CIRC score falls (correlation coefficient 0.34, significant at 5 per cent level). Partnerships which have spent around £600 per head on education over the lifetime of the Programme are more likely to be a mid-ranking NDC area on the Index. Partnerships which spent more than £1,000 per head on education are however, more likely to be in the 10 areas seeing least change. This issue of the apparently perverse effects of educational spend emerges in other analyses explored below, the policy implications of which are addressed towards the end of this chapter (2.60).

- 2.17 In addition a number of other relationships emerge in relation to specific outcomes, which are explored within six themes: the phasing of the Programme; board composition; engaging with other ABIs; continuity in staffing; expenditure; and achieving holistic change.
- 2.18 First, as is alluded to in Table 2.1, it could be hypothesised that the 17 Round 1 NDC partnerships, having been operational for one more year, may have seen more change than the later Round 2 partnerships. But, as by 2008 all partnerships had been active for at least seven years, it would seem unlikely that one year would by then make much difference. Analyses largely confirm this view, although there is one exception. Being a Round 1, as opposed to a Round 2, partnership is associated with less improvement in relation to community outcomes. This relationship is mainly driven by two indicators which relate to attitudes to, and involvement with, the NDC. It is not clear why this should be the case.²⁷ It may simply be that the Round 2 partnerships benefited from the early experiences of the Round 1 NDC partnerships.
- 2.19 Second, there is evidence of an association between board composition and change. This Programme has placed an emphasis on NDC partnership boards driving forward the 39 schemes and interestingly, there is evidence indicating that issues of governance are associated with area-level change. The numbers of resident members, agencies on boards, and sizes of boards are all found to be positively associated with whether residents think their local NDC has improved the area. This is true both at the end of the period, and in relation to whether this perception increases over time (the correlation coefficients range from 0.4 to 0.5 and the majority are significant at the 1 per cent level²⁸).²⁹

²⁷ Residents thinking the NDC has improved the area over the last two years and being involved in activities organised by the NDC was noticeably higher in Round 1 NDC partnerships in 2002 than in Round 2 NDC areas. At that early stage the 17 Round 1 partnerships which had been up and running for longer were already making an impact in their local area. By 2008 the Round 1 and Round 2 areas were more similar on this indicator. Therefore Round 1 NDC partnerships experienced less change between 2002 and 2008 because they were more advanced than Round 2 partnerships in 2002. A similar time-lag effect is also seen in the proportion of residents involved in NDC activities. However, that said, in each of the subsequent waves of the survey after the 2002 baseline, Round 2 partnerships were slightly ahead of Round 1 partnerships for both indicators at each point of time. This may indicate that Round 2 partnerships were slightly more effective at involving residents or making residents aware of the regeneration activities they had undertaken.

²⁸ We can be confident that the observed relationship is true and in general holds across NDC areas: there is only a 1 in 100 chance that the observed relationship is spurious.

²⁹ This association might reflect a number of factors. Larger boards may, for instance, be better placed to communicate the scale of change to residents, and to help make the community as a whole aware of the role their local NDC has played in achieving change.

- 2.20 In addition the number of agency representatives on boards is significant when looking at change for the basket of community indicators (correlation 0.34, significant at the 5 per cent level). Perhaps having more agency representatives on boards improves communication between delivery agencies and local residents and also helps agencies direct resources at interventions likely to reflect community priorities.
- 2.21 Third, the Programme has always placed an emphasis on partnerships working collaboratively with other overlapping ABIs. Previous analyses based on data covering four (2002-2006), not as here six, years of data, found positive associations between change and numbers of other overlapping ABIs.³⁰ There can be a considerable number of these. In 2008 on average each NDC area contained six other overlapping ABIs.³¹ However, this positive association disappears when the entire 2002-2008 period is considered.³² Indeed the only relationships to emerge is that numbers of ABIs with which partnerships engage significantly is associated with a lower increase over time in the number of residents thinking the NDC has improved the area (correlation coefficient -0.33, significant at the 5 per cent level). This may suggest local residents do not necessarily associate improvements to the local area with their local NDC partnership, but with other ABIs and regeneration schemes.³³
- 2.22 Fourth, a limited number of relationships emerge between continuity of senior staff and change.³⁴ Greater turnover in chief executives is negatively associated with change in HPE. However, this relationship should be treated with caution as it is only just significant (-0.33, significant at the 5 per cent level). Throughout the evaluation, relationships have emerged between stability in relation to NDC partnership 'chief executives' and positive trends in relation to spend and/or outcome change. It is intriguing to see continuing evidence for this relationship, a finding in line with qualitative evidence drawing on the views of key stakeholders in eight NDC areas seeing considerable positive change.³⁵ Perhaps the outcome most likely to be adversely affected by turnover of key staff is indeed HPE. Because of their scale and associated costs, new housing refurbishment schemes probably require greater senior staff input, and

³⁰ CLG (2008) New Deal for Communities: A Synthesis of New Programme Wide Evidence: 2006-07 NDC National Evaluation Phase 2 Research Report 39 http://extra.shu.ac.uk/ndc/downloads/general/NDC_synthesis_programme_wide_ev_06-07.pdf

³¹ CLG (2009) The 2008 Partnership Survey: evidence from the New Deal for Communities Programme. www.communities.gov.uk/publications/communities/partnershipsurvey2008

³² It may be that in the early days of the Programme the effect of other ABIs was more apparent because some of them pre-dated the NDC. Through time the cumulative effects of NDC spend in these areas has become more apparent when compared with the effects of other ABIs. This is likely to be the case because the resources available to NDC partnerships will usually be greater than those available to other ABIs.

³³ Despite this, the number of agencies with which NDC partnerships engage significantly in 2008 is one of two significant factors in a regression model which explains some (25 per cent) of the variation in the three place-related outcomes (crime, community, and housing and the physical environment) when taken in combination. There is an argument that engaging with agencies helps to deliver change, by increasing the scale of resources and expertise into the 39 areas.

³⁴ Most NDC partnerships have had 0-4 changes in Chief Executive; one has had 5 and another 6.

³⁵ CLG (2010) What works in neighbourhood-level regeneration? The views of key stakeholders in the New Deal for Communities Programme.

executive decision making, than is the case for other outcomes. And there is a further twist here. The number of times the chair of a board changes, the more likely it is that an NDC area sees positive change in relation to HPE.

- 2.23 Fifth, associations emerge in relation to spend and change. At the beginning of the Programme, partnerships had to face up to differing sets of problems. These in turn informed strategic priorities and hence spending allocations. System K data³⁶ allow partnership level expenditure to be broken down by type of project. This data can then be related to change for each of the Programme's six outcomes. When this is done, only one relatively weak direct relationship arises between progress made across the six broad themes and money spent:³⁷ a negative association between per capita spend on education and education outcomes (correlation coefficient -0.35, significant at 5 per cent level).³⁸
- 2.24 However, positive relationships do emerge between expenditure in some outcome areas and progress in others. Greater expenditure on HPE is associated with positive outcomes with regard to both worklessness and crime (correlation coefficients of 0.36 and 0.32 respectively, both significant at 5 per cent level). There are also examples of inverse relationships: more spend in one outcome being associated with less positive change in relation to another.³⁹
- 2.25 One other consistent finding in relation to expenditure is the extent of negative associations between greater educational spend and other outcomes. This is true for specific indicators such as areas experiencing a smaller rise in the proportion of residents who think the area improved between 2002 and 2008 (correlation coefficient -0.33, significant at 5 per cent level), and also with regard to residents thinking the NDC partnership had improved the area (correlation coefficients -0.45, significant at 1 per cent level). It is also true for one outcome, the community dimension: more spend on education is associated, albeit relatively weakly, with less change in relation to this outcome as a whole (correlation coefficient -0.36, significant at 5 per cent level).

³⁶ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 4.7).

³⁷ The Evaluation has, however, found associations between spend and specific outcomes, for example, CLG 2010 Ref to HPE report also includes associations between HPE spend and specific HPE outcomes, for example, there is a negative relationship between the proportion of NDC spend on HPE and change in the proportion of people wanting to move. There is no significant relationship with changes with satisfaction with the area or accommodation. The CLG worklessness report found an association between worklessness theme spend and greater improvements in employment rates for the 2002-2006 period.

³⁸ Perhaps local housing schemes funded by NDC partnerships have provided local jobs. In addition some larger housing schemes will increase the proportion of owner-occupied households in NDC areas, members of which tenure are likely to be in employment. And with regard to crime, HPE projects which, say, remove burnt out or abandoned cars and boarded up properties, enhance street lighting, improve local environments and introduce better designed housing schemes, may help 'design out' crime and anti-social behaviour.

³⁹ For instance, if change in senior staff is also included in the model, then there is a negative relationship between per capita spend on worklessness and lower rates of change in relation to housing and the physical environment. This expenditure variable accounts for a third of the 37 per cent of variation in change explained by the model. It may be that areas with more obvious people-based problems have prioritised issues such as worklessness, placing correspondingly less stress on intervening in HPE.

2.26 Sixth, one of the objectives of the Programme is to secure the holistic regeneration of these 39 areas by achieving change with regard both to people, but also place-related outcomes. One of the justifications for adopting this approach is that attaining improvements in one outcome might help achieve positive change in another. And there is evidence to suggest that, to a degree, this has occurred. For instance:

- NDC areas seeing greater change in HPE are also more likely to see greater improvements in crime (correlation coefficient 0.51, significant at 1 per cent level), and the community dimension (correlation coefficient 0.35, significant at 5 per cent level)
- greater improvements in worklessness outcomes are more likely to occur in areas with improved education outcomes (correlation coefficient 0.61, significant at 1 per cent level)
- and there is a weaker, but still significant, relationship between worklessness and health outcomes (correlation coefficient 0.35, significant at 5 per cent level).

New Deal for Communities area-level characteristics

2.27 The previous section explored associations between partnership characteristics and change. The focus of attention shifts now to exploring associations between NDC area-level characteristics and NDC area-level change. Key variables mainly reflect the socio-demographics of populations in NDC areas and the scale of problems existing in these 39 neighbourhoods. Given the wide range of circumstances apparent across NDC areas, it is helpful to explore the degree to which areas with certain characteristics, or problems, have achieved more or less change than have other areas. As well as considering the local characteristics at the beginning of the Programme, the extent to which these factors change over time is also included where relevant. Table 2.2 details groups of potentially explanatory variables considered in these analyses. Strategies adopted by NDC partnerships may influence these explanatory factors. New housing refurbishment schemes may, for instance, impact on tenure and mobility. But in general NDC partnerships have little direct control over these explanatory variables.

Table 2.2: New Deal for Communities area characteristics	
Explanatory variable	Rationale for inclusion
Demographic composition of the local population including age structure, ethnicity profile, household composition	The composition of the local population may impact on relative change
Tenure profile of the area	Is there any evidence to suggest that different tenurial patterns impact on change?
Population mobility	It may be that outcomes are affected by levels of mobility in local NDC area populations
Economic status of residents: the proportion of workless households, employment, unemployment and Incapacity Benefit rates, the types of jobs residents hold, or might usually do measured via the proportion of the working population within managerial or professional, as well as, elementary occupations.	Of all the characteristics of local populations perhaps economic status is most likely to impact on change; for instance, levels of unemployment may have implications for crime, health, attitudes to the community and the area, and so on.
Overall level of deprivation at the beginning of the Programme captured by the Index of Multiple Deprivation ³⁹ , and the initial levels of deprivation across each of the Programme's six outcomes as measured by the 36 core indicators	Absolute levels of deprivation at the beginning of the Programme may have impacted on change 2002-2008; this could work both ways: the most deprived areas may have the most ingrained problems, but they also have greatest scope for making positive change
NDC area residents involved in NDC partnership activities	The scale of involvement by residents in NDC activities may impact on outcomes by, for instance, influencing the nature and design of projects
Type of NDC area as indicated by a five-fold typology of NDC areas ⁴⁰	Different types of NDC areas may see different rates of change across different outcomes
Population size of NDC area	This could theoretically operate either way: larger populations may allow more positive synergies with delivery agencies, but per capita spend will, on average, be smaller.

⁴⁰ Noble, M. et al. (2004) The English Indices of Deprivation 2004. London: Office of Deputy Prime Minister.

⁴¹ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 9 for details of the typology).

- 2.28 Analyses identify five relationships which are considered in turn below: types of NDC areas; socio-demographic composition; tenure; population size; and levels of deprivation. Some factors such as the economic status of residents in the area and the extent to which NDC area residents have got involved in NDC partnership activities appear to have no direct relationship with change experienced in NDC areas when measured across the six main outcome groups.
- 2.29 First, there are associations between change and different types of NDC areas. This is especially true in relation to the scale of negative associations between people-based change and areas which an NDC area typology defines as 'stable and homogenous'. The 14 NDC areas included in this cluster consist of largely 'white', peripheral estates, in smaller non-core cities and include Norwich, Oldham, Derby and Luton NDC areas. In various regression models, being located in this type of area emerges as one of a number of significant predictors for achieving less change. This is the case when considering worklessness, and all three people-related outcomes taken together (worklessness, education, and health).⁴²
- 2.30 Being located in the cluster characterised as areas suffering from 'entrenched disadvantage', is also associated with achieving less change in relation to both HPE, and also education outcomes.⁴³ The five NDC areas concerned, Liverpool Nottingham, Knowsley, Doncaster and Coventry, constituted by far the most deprived group of NDC areas at the beginning of the Programme. Although these areas saw considerable absolute improvements across a range of measures in relation to HPE, the comparator areas within these local authorities also saw similar rates of improvement, over the same period. Hence, benchmarked change for these five NDC areas was limited. This may reflect the fact that most of these NDC areas are located in disadvantaged LADs, which may therefore have secured other regeneration funding to support schemes in non-NDC, but still deprived, neighbourhoods.
- 2.31 Second, there are associations between change and the socio-demographic composition of local populations. Between 2002 and 2008 there was a tendency to see a decline in the proportion of single person households in NDC areas. Those NDC areas which experienced less decline, or indeed growth, in single person households, also tended to see less change with regard to both place-related⁴⁴ and also overall outcomes (correlation coefficients -0.33 significant at the 5 per cent level and -0.43 significant at the 1 per cent level).

⁴² Analysis presented in the HPE report also found that being a 'stable and homogenous' NDC area was a factor that was significantly associated with change in area satisfaction as part of a composite model that also included the size of the NDC and change in the proportion of single-person households.

⁴³ Analysis presented in CLG (2010) *Interventions in Housing and the Physical Environment in deprived neighbourhoods: Evidence from the New Deal for Communities Programme* found that being a cluster 1 NDC was negatively associated with mean house price change 2001-2007.

⁴⁴ Noble, M. et al. (2004) *The English Indices of Deprivation 2004*. London: Office of Deputy Prime Minister.

This may reflect a tendency for areas with a growth in single-person households to be associated with local populations which are both more static and aging over time (significant correlations for both of 0.33 and 0.39). This finding is also backed up by a further association between NDC areas with greater concentrations of households made up of couples with no dependent children (a group also tending to consist of older, less mobile households) and less change on crime outcomes (correlation coefficients -0.51, significant at 1 per cent level).

- 2.32 The analysis above suggests there is a link between levels of mobility and some outcomes. However, relationships between change and mobility are not straightforward. Mobility on its own is not directly or consistently related to change. However, knowing whether an NDC area has low levels of mobility adds a significant amount towards having a better understanding of patterns of change across NDC areas in a model which looks at people-related outcomes.⁴⁵ However, in this instance, the relationship between people-related outcomes and low mobility is positive. Once account is taken of areas with low mobility and which are classified as 'stable and homogenous', and which on the whole tend not see a great deal of change in people-related outcomes, then remaining NDC areas with low mobility do quite well on people-related outcomes (Birmingham Aston, Knowsley, Sandwell, Wolverhampton and Southwark).
- 2.33 Third, there are associations between changing tenure profiles and outcome change.⁴⁶ Areas with increasing owner-occupation tend to have seen greater improvement on worklessness outcomes over time (correlation coefficient 0.36, significant at 5 per cent level).⁴⁷ This positive association is less likely to reflect changes for workless individuals already living in NDC areas, and be associated more with the effects of housing refurbishment schemes and resultant tenure diversification. Owner-occupiers are more likely to be in work than are social tenants. Hence, new housing in any area dilutes the concentrations, if not the actual numbers, of workless individuals in an area.⁴⁸

⁴⁵ This model also includes being in a 'stable and homogenous' NDC area (which also tend to have relatively static populations see 2.27), change in percentage of couples with no dependent children households and size of the NDC population. The model explains 69 per cent of the variation in people-based outcomes across NDC areas.

⁴⁶ Also see CLG (2010) *Tenure and change in deprived areas: Evidence from the New Deal for Communities*. This highlights there are no relationships between the level of social housing (or owner occupation) in NDC areas and overall change achieved over the 2002-2008 period.

⁴⁷ This relationship is only just significant, but it also comes through as a significant explanatory factor for worklessness outcomes in a regression model.

⁴⁸ This issue is explored in more depth in CLG (2009) *Tenure and change in deprived areas: evidence from the NDC areas*.

- 2.34 Fourth, there are positive associations between change and population size of NDC areas. Areas with larger populations saw more positive change than would have been expected with regard to the three people-related outcomes taken as a whole: worklessness, education and health.⁴⁹ The policy implications of this are explored in 2.54 below.
- 2.35 Fifth, the level of deprivation in an area at the beginning of the Programme helps explain change. Areas with greater problems in relation to crime at the start of the Programme witnessed more change in this outcome (correlation coefficients -0.38 significant at 5 per cent level). In addition, areas with lower scores across the community indicators at the beginning of the Programme tended to achieve more change on place-related outcomes over time (correlation coefficient -0.33, significant at the 5% level). This may reflect a tendency for NDC partnerships with particular types of place-related problems at the beginning of the Programme to focus their energies on tackling exactly those issues. And evidence from across the evaluation suggests it is simply easier to make measurable change in relation to place-, rather than people-, related outcomes (see section 7.7, Volume 6: New Deal for Communities Programme: Assessing impact and value for money).

Local authority district characteristics

- 2.36 Previous sections of this chapter explore associations between change at the NDC area level, on the one hand, with two sets of potential explanatory factors operating at either the partnership level, or the NDC-area, level, on the other. Here, a third set of factors is considered. This exercise is designed to explore the degree to which the wider LAD context within which each NDC area is located, may assist, or constrain, change.⁵⁰ Table 2.3 outlines variables included in models exploring characteristics across LADs. It should be stressed here that NDC partnerships have no direct control over these explanatory factors.

⁴⁹ Additional analysis presented in the CLG (2010) Interventions in Housing and the Physical Environment in deprived neighbourhoods: Evidence from the New Deal for Communities Programme found that the size of the NDC was a significant factor in a composite model for area satisfaction.

⁵⁰ Previous analysis of data in relation to worklessness outcomes found associations between progress made and the health of the wider labour market: CLG (2009) Understanding and Tackling Worklessness Volume 1: Worklessness, Employment and Enterprise: Patterns and Change.

Table 2.3: Wider area characteristics	
Explanatory variable	Rationale for inclusion
Buoyancy of the wider labour market based on a range of measures including the local authority employment, Incapacity Benefit and claimant unemployment rates, Annual Business Inquiry on total number of jobs in the local authority area, how many of these are in the manufacturing, VAT new registrations and VAT stock, an estimate of GVA at the relevant NUTS3 level ⁵⁰	The nature of the labour market with LADs as a whole may impact on NDC area outcomes especially with regard to worklessness, but also possibly in relation to other outcomes such as crime and health.
ONS classification of local authorities: classifies LADs on the basis of being in London, manufacturing towns, industrial hinterland, regional centres, etc	This classification reflects structural and regional aspects of the wider economy in terms of the number and types of jobs available; NDC areas located in different types of LADs may have seen contrasting rates of change.
Educational attainment: Key Stage 2, 3 and 4 results	Educational attainment within LADs could influence the nature of change in relation to NDC area educational outcomes; LAD educational attainment rates may also impact on other outcomes such as worklessness and crime.
The level, extent and concentration of deprivation across the local authority measured by IMD	Levels of deprivation may impact on NDC area outcomes; for example, large concentrations of deprived areas in a LAD may create additional disbenefits for residents of NDC areas such as greater demand on public services; on the other hand, larger concentrations of deprived areas may attract proportionately greater regeneration funding from national and regional sources.
The size of the local authority	It may be that larger LADs have more resources to support all regeneration areas including NDC areas; on the other hand, NDC areas in smaller LADs may have to 'compete' with fewer other ABIs.

⁵¹ GVA measures the contribution to the economy of each individual producer, industry or sector in the United Kingdom.

Table 2.3: Wider area characteristics (continued)	
Explanatory variable	Rationale for inclusion
Recorded local authority crime rate	Crime rates in LADs may impact on crime in NDC areas, and also on other outcomes; high rates of property crime may, for instance, impact on inward investment and hence worklessness.
Social housing as a proportion of all housing stock and the supply and demand of social housing measured from the housing register.	NDC area tenants located in LADs with excess demand for limited supply of social housing may find it more difficult to move if they need more space, and may have limited choice in relation to locations; this could lead to greater dissatisfaction with housing and possibly other indicators of change such as attitudes to the area.

2.37 However, only two associations emerge between change across these 39 areas and wider LAD explanatory factors: tenure and levels of deprivation.

2.38 First, associations emerged between positive change and a decline in social housing across LADs⁵² (correlation coefficient -0.37, significant at the 5 per cent level). Five of the 10 NDC areas seeing greatest overall change on CIRC are located within 10 of the 38 parent LADs⁵³ with the greatest decline in social housing between 2001 and 2008: Islington, Sheffield, Hackney, Lambeth and Nottingham. Conversely, five of the 10 NDC areas seeing least change are in LADs with less, or indeed negligible, change over this period: Luton, Norwich, Brent, Fulham, and Brighton. In addition, NDC areas in LADs with a larger decline in social housing tended to have greater change over time in relation to crime (correlation coefficient -0.38, significant at the 5 per cent level). In reality these relationships may reflect less of a change in the actual size of the social housing in these LADs, but more to do with growth in overall stock. Six of the top 10 LADs with the greatest decline in social housing also had the largest growth in overall stock. As little, if any, new accommodation will be social housing, then this tenure will fall as a proportion of total accommodation.

2.39 Second, there is an association between change and deprivation across LADs. Change across the three people-related outcomes is positively associated with the extent of deprivation across the LAD according to the 2007 IMD (correlation coefficient 0.38, significant at the 5 per cent level). NDC areas

⁵² Five of the 10 NDC areas seeing greatest **overall change on CIRC** were located within 10 of the 38 parent LADs with the greatest decline in social housing between 2001 and 2008: Islington, Sheffield, Hackney, Lambeth and Nottingham. Conversely five of the 10 NDC areas seeing least change were in LADs with less, or indeed negligible, change over this period: Luton, Norwich, Brent, Fulham, and Brighton.

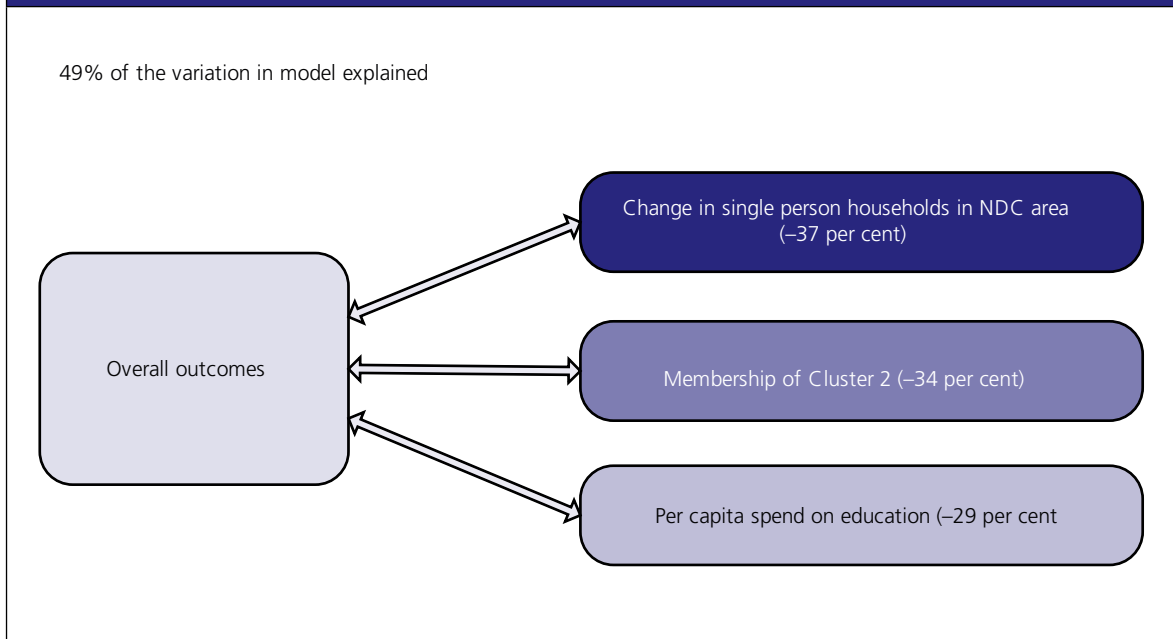
⁵³ There are two NDC areas in Birmingham.

located in LADs where high levels of deprivation are more widespread tend to see more change with regard to people-related outcomes. This may be because these types of LADs have more regeneration funding and are more geared-up to deal with area-based deprivation.

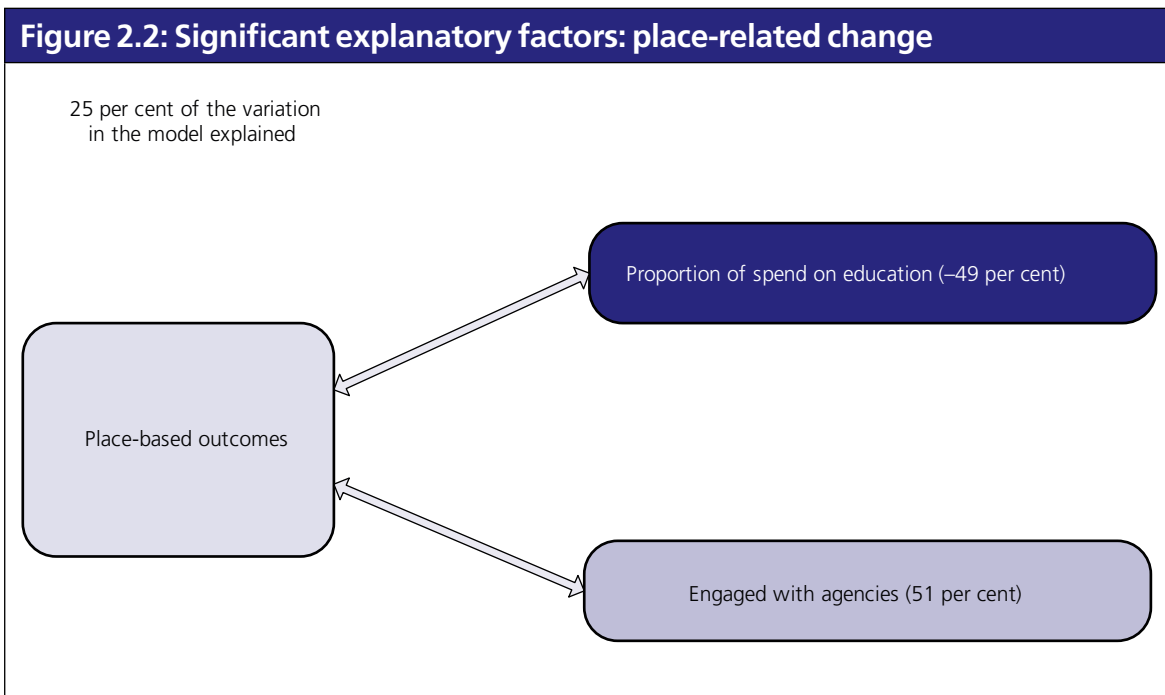
Cross-cutting models

- 2.40 Previous sections of this chapter have identified associations between change across the 39 areas and three sets of explanatory factors: those operating on partnerships, across NDC areas, and across LADs as a whole. However, these three arenas do not operate in isolation. This section therefore explores a fourth 'cut' on cross-sectional change data. Here regression models identify the combined impact of different factors drawn from all of the variables discussed in earlier sections of this chapter. Significant variables which emerged in the three sets of analyses explored above are used in a series of regression models. When this is done, it becomes apparent that some factors provide a greater explanation of change than do others.
- 2.41 Cross-cutting models are explored below at three levels: CIRC rankings across all six outcomes; by the three people-, and the three place-, related outcomes taken together; and with regard to two indicative outcomes: one in relation to people, worklessness, and one place, crime.
- 2.42 First, what emerges when interactions are explored across all explanatory factors in relation to all six outcomes as a whole? Five factors have been identified in previous sections as being associated with overall change: per capita expenditure on education, being located in NDC areas classified as being stable and homogenous (cluster 2), decline in single person households in the area, population size of NDC areas, and being located in a LADs where the social housing sector accounts for a decreasing amount of overall housing stock. Figure 2.1 indicates that when interactions across all of these factors are considered together, then only three emerge as being significant in contributing to an understanding of overall change achieved⁵⁴: change in single person households, per capita spend on education, and being an NDC area characterised as being stable and homogenous (Cluster 2: predominantly white, peripheral estates in non-core cities). All three are negatively associated with change. This is relatively strong model explaining 49 per cent of variance. However, it needs therefore to be stressed that half of the overall variation remains unexplained due to factors such as variables not being included in the model and wide variation in circumstances across the 39 areas.

⁵⁴ The three significant variables help us predict how much change on average an NDC area is likely to make. Once we have taken these three factors into account, then knowing the other two non-significant factors is not likely to increase our understanding any further, or our ability to predict, how well an area performs over time.

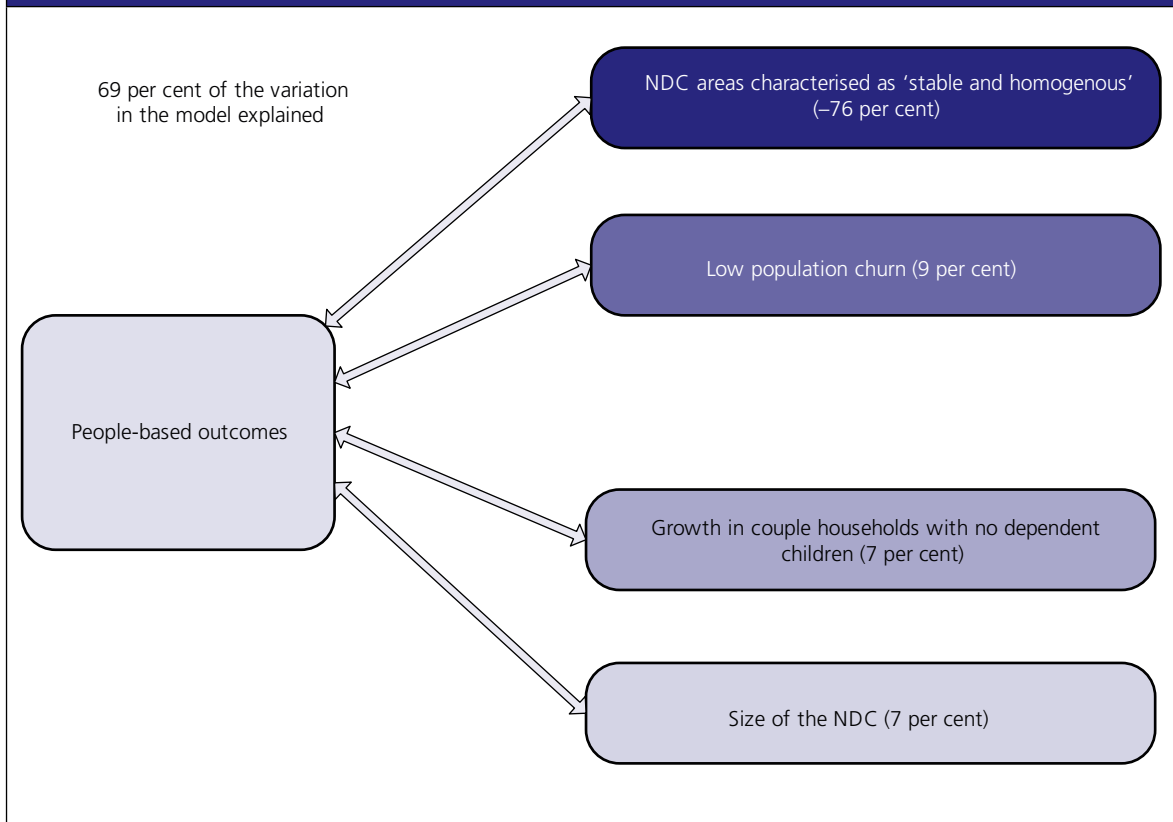
Figure 2.1: Significant explanatory factors: overall change

2.43 Second, it is also possible to explore interactions between explanatory factors and either place-, or people-, related outcomes. In relation to place-related outcomes, two partnership and two area-level characteristics have previously been identified as associated with place-related change: spend on education, number of agencies NDC partnerships engage with significantly, extent of problems in relation to community outcomes at the beginning of the Programme, and change in single person households in the area. However, this final cross-cutting model identifies only two partnership-level characteristics as being significant: there is a negative association with educational spend, and a positive association with numbers of agencies with which partnerships engage (Figure 2.2). These two factors account for just 25 per cent of overall variation in place-based outcomes. This indicates that three quarters of the variation in place-based outcomes is unexplained, perhaps reflecting the complexity of circumstances evident across the 39 areas in relation to place. The relative importance of these two explanatory factors is similar: 49 per cent in relation to educational spend, and 51 per cent with regard to engaged agencies.



2.44 For people-related outcomes, Figure 2.3 indicates that the dominant factor in the model, accounting for three-quarters of explained variance, is an NDC area being characterised as ‘stable and homogenous’. As is discussed in 2.29 above, these are predominantly white, peripheral housing estates, in non core cities. Two other explanatory factors in the model relate to local population structure and lack of mobility, issues over which NDC partnerships have little, if any, influence. The final factor, the size of NDC areas, is the only significant explanatory factor which might have been within the Programme’s control when the initiative was launched. Areas accommodating larger populations see, on average, greater change. This model accounts for 69 per cent of the overall observed variation across the 39 NDC areas.

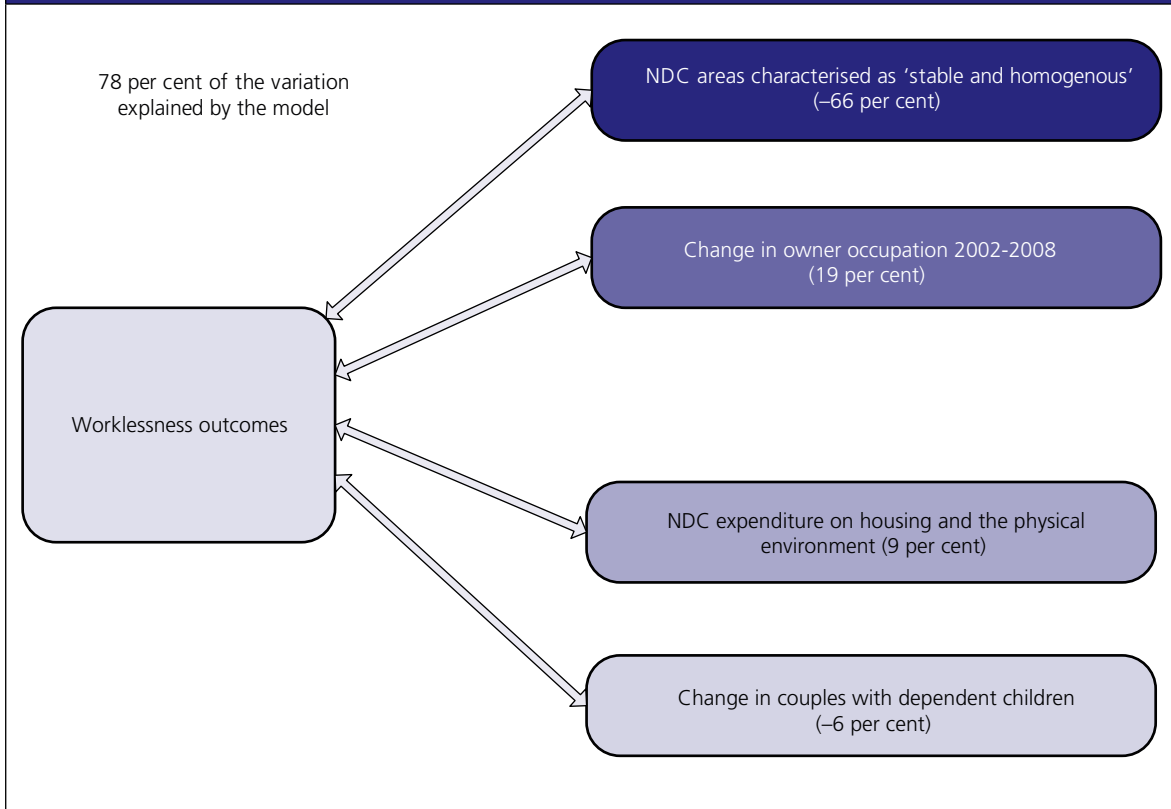
Figure 2.3: Significant explanatory factors: people-related change



- 2.45 Third, models have been created for two indicative outcomes: crime and worklessness. In relation to crime, only two factors emerge as significant in a cross-cutting model. Areas with fewer couples with no dependent children at the beginning of the Programme (which is strongly related to NDC areas with younger age profiles) tend to see more positive change in relation to crime. This factor alone accounts for 68 per cent of variation accounted for by the model. A second factor, accounting for 32 per cent of variation, is the extent of crime problems in the area at the beginning of the Programme. Areas where this was more of an issue to start with, were more likely to have seen change. Overall this model accounts for 37 per cent of the observed variation in crime outcomes across the 39 areas.
- 2.46 When explanatory factors relating to **worklessness** are examined in a cross-cutting model (Figure 2.4), 78 per cent of variation can be explained by a model containing four explanatory factors. As with people-related outcomes as a whole (2.44), being located in NDC areas characterised as 'stable and homogenous' is the dominant factor associated with explaining change achieved. Other area-level factors such as changing tenure mix and household composition also come though as significant. However, one partnership factor is retained in this model: overall spend on HPE. Although this only accounts for 6 per cent of overall variation, as discussed at 2.24 above, it

provides an indication of the potential for improvements to housing and the physical environment to contribute to wider objectives, be this through local job opportunities associated with this investment, or through new housing attracting people likely to be in employment.

Figure 2.4: Significant explanatory factors: worklessness outcomes



NDC areas seeing greatest change

2.47 Material developed in earlier sections of this chapter is based on all 39 areas. It is also possible to explore relationships for those 10 NDC areas seeing greatest change. As is apparent in discussions outlined above, it is not possible to explain all of the variation in change across the 39 areas. Inevitably this task becomes more complex when looking at just 10 areas against the other 29. But this evidence is useful in trying to unpick why some areas see more change than others.

2.48 The 10 NDC areas which achieved greatest overall change relative to the Programme-wide average as measured by the CIRC, are outlined in Table 2.4.

Table 2.4: New Deal for Communities areas seeing greatest change: 2002 to 2008

Rank	Typology of New Deal for Communities areas ⁵⁴	New Deal for Communities Area
1	Diverse and relatively thriving	Birmingham – Aston
2	London	Hackney
3	Disadvantaged and socialised	Sheffield
4	London	Islington
5	London	Haringey
6	Disadvantaged and socialised	Plymouth
7	Stable and homogenous	Walsall
8	London	Lambeth
9	Disadvantaged and socialised	Newcastle
10	Entrenched disadvantage	Nottingham

- 2.49 A number of relationships highlight differences between the characteristics of these 10 NDC areas, compared with the remaining 29, which are statistically significant at 1 per cent level. As is developed in earlier sections of this chapter, these occur at three levels.
- 2.50 First, two significant differences emerge with regard to the characteristics and interventions of the partnerships themselves. There was a significantly greater increase in the percentage of residents involved in NDC activities between 2002 and 2008 in the 10 areas seeing greatest change (eight percentage points) compared with other areas (four percentage points). These partnerships have engaged more people, and as is discussed in 3.26 below, there are positive associations between being involved with an NDC and positive outcomes for individuals. In addition notable differences⁵⁶ emerge in relation to patterns of spend. Because these areas contain more people than the average across the Programme, per capita spend is lower for these 10 than for others. But there are interesting differences in relation to the proportionate allocation of resources. These 10 areas spend less than 60 per cent of what the other 29 allocate to management and administration, and only two-thirds of what the others do on education. On the other hand, per capita spend on health is a third higher.

⁵⁵ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 7 for details of the typology).

⁵⁶ Statistical testing not possible in relation to spend.

2.51 Second, a number of significant differences emerge with regard to the characteristics of NDC areas. The 10 areas showing greatest change:

- were more ethnically diverse in 2002: 65 per cent of residents were white in 2002 (60 per cent 2008), compared with 79 per cent in remaining 29 areas (74 per cent in 2008)
- had more social housing in 2002, 62 per cent in 2002 and 58 per cent in 2008, compared with 56 per cent and 53 per cent respectively
- had larger populations which grew as the Programme unfolded from, on average, 10,900 in 1999 rising to 11,500 in 2007; the other 29 remained static at about 9,300.

2.52 Third, one characteristic of the wider LAD also emerged as significant. These 10 areas are located in LADs with more employee jobs per head of population in 2002, a figure which remained consistent over time. The other 29 areas had fewer jobs per head of population in 2002 and these declined through time. The 10 areas had 770 employee jobs per head in both 1999 and in 2007. The other 29 had 750 in 1999, falling to 740 in 2007.

2.53 What conclusions can be drawn from these patterns: how do NDC areas seeing most change differ from other neighbourhoods? Some of this change can be attributed to what partnerships have themselves done. In particular, partnerships in these 10 areas have been more efficient in conducting business and have involved more local residents. In addition they have invested less in the outcome seeing least positive, indeed sometimes negative, change, education, and more in health which has emerged as the people-related outcome seeing greatest net change across the Programme. It may be too that having a higher proportion of residents in social housing has helped. These residents are more likely to be disadvantaged and therefore have more headroom for change. In addition as they are more likely to be unemployed, they may have had more time to benefit from NDC partnership interventions. Contextual factors have also played a role. In particular having larger, more diverse populations has helped, as has having more jobs in the wider locality.

Policy implications

2.54 Caution is needed in teasing out policy implications from material explored in this chapter. Evidence is largely drawn from a population of only 39 areas. Many of the statistical relations, whilst significant, are also relatively weak. Nevertheless, having change data in relation to all 39 areas from a common baseline provides an opportunity to identify statistically significant associations between change and a range of explanatory factors. Reflecting on these

findings, seven policy considerations merit comment: implications for the NDC model of delivery; outcome change and spend; achieving change across both place and people; the role of education in regeneration programmes; location and change; tenure and change; and the limitations of neighbourhood regeneration programmes.

- 2.55 First, evidence developed in this chapter has implications for aspects of 'the NDC model' for delivering regeneration. The Programme has been based on a particular design. Critical components include driving change through partnership boards, establishing NDC staff teams under the direction of a chief executive, and working in partnership with other agencies to deliver change to areas of on average 9,900 people. Findings outlined in previous sections of this chapter are generally supportive of this model. For instance, establishing larger boards and having wide agency representation are associated with positive change, with regard to thinking the NDC has improved the local area and community outcomes. Having stability in relation to strategic leadership is similarly associated with positive change in relation to HPE outcomes. And working with more partner agencies is associated with areas achieving more change in place-based outcomes.
- 2.56 The one theme where the NDC model may be worth re-assessing is that of optimal size. There is anecdotal,⁵⁷ and now some statistical, evidence (see 2.34 above) to suggest that NDC areas accommodating larger populations achieve more change particularly in relation to people-related outcomes. It may be that agencies are more willing, and able, to improve delivery to larger groups of people: it is likely to be more cost-effective from their point of view. Perhaps too, having larger populations means there is more scope for capturing outcome change occurring to individuals in relation to worklessness, education and health: there are more people making more changes than is the case for areas with smaller populations.
- 2.57 Second, policy implications arise from complex inter-relationships across outcome change and spend. Some associations lend support for holistic approaches towards regeneration. Spend in HPE, is associated with positive change in crime and worklessness. Equally so, positive outcome change in HPE is also associated with positive change in relation to other outcomes, in this case crime and the community dimension. These findings support a key principle underpinning the holistic model of regeneration adopted in this Programme: interventions in one outcome are associated with positive change in others.

⁵⁷ CLG (2010) What works in neighbourhood-level regeneration? The views of key stakeholders in the New Deal for Communities Programme.

- 2.58 Third, one of the headline findings to emerge from evidence assembled through the national evaluation is that more change has occurred, and there are more associations across, place-, rather than people-related outcomes. There are more associations between spend and outcomes, and across outcomes, in relation to HPE, crime and community, than is the case with regard to worklessness, education and health.
- 2.59 In the light of these findings, any future ABIs adopting holistic approaches to neighbourhood renewal will need to consider carefully ways in which place-, and people-, related objectives are tackled. There are reasons why regeneration schemes might want to adopt people-based objectives, including the importance of improving the delivery of services to those in more disadvantaged areas. It is also the case that people-related projects will often bring genuine benefits to groups of individual participants, even if these effects are difficult to measure at the area level.⁵⁸ And it should also be said that when change in NDC areas is assessed against that occurring in comparator areas, then evidence emerges for a 'positive NDC programme net effect' in relation to some people-related outcomes notably mental health. Having said that, the overall conclusion to this debate is that there is greater scope for neighbourhood-level regeneration schemes to affect positive change with regard to place-, rather than people-, related outcomes.⁵⁹
- 2.60 Fourth, particular issues surround one people-related outcome: education. In brief, negative, albeit weak, associations can be identified between higher levels of educational spend and outcome change. What this association suggests is that, bearing in mind all partnerships have been allocated roughly the same resource, there is a negative association between spending proportionately more of this on education and lower rates of change in other outcomes, especially with regard to place (HPE, community and crime). In practice much of the effort in relation to education has focused on schools, rather than, say, more targeted support for pupils and families.⁶⁰ This type of investment appears to have negative implications for place-related outcomes. It may be that school-based spend is not especially visible and may therefore not affect attitudes of residents towards the neighbourhood and the community within which they live. Residents may also associate improvements to local schools with the school itself, the local authority, or national policy agendas,

⁵⁸ CLG (2009) *Four years of change? Understanding the experiences of the 2002-2006 New Deal for Communities panel Evidence from the New Deal for Communities Programme (Chapter 8)*. www.communities.gov.uk/publications/communities/fouryearschangendcp

⁵⁹ It is also worth pointing out here that there is an issue with regard to the implications of this finding for the Index of Multiple Deprivation (IMD). Nearly three-quarters of the final weighting of indicators used in the IMD 2007 are based on factors concerning with the human capital of individuals within areas: low income, lack of employment, health and disability, education, and so on. Only 27 per cent of the Index is weighted towards place-related deprivation including barriers to housing and services, crime, and aspects of the living environment. For NDC Partnerships which focus on, and improve, place-related deprivation these activities will not necessarily translate into an improvement in their IMD score.

⁶⁰ CLG (2010) *Improving attainment? Interventions in Education by the New Deal for Communities Programme*.

not realising the role played by their local NDC partnership. This conclusion strikes a chord with the views of some key stakeholders.⁶¹ There is a sense locally that certain schools are difficult to work with, not least because they primarily focus on national, not local, agendas. It may be too, that some NDC partnerships have spent more on education than they would ideally have liked. Local schools can prove to be a useful valve to switch on, if there are dangers of under-spending annual financial allocations. If regeneration agencies do pursue educational outcomes they may be better advised to focus on pupils, and not so much directly on schools.⁶² If future regeneration schemes intend to pursue educational outcomes, it will be important that due consideration is given to identifying the most effective interventions to be delivered through neighbourhood renewal.

- 2.61 Fifth, one of the associations to emerge from analyses explored in this chapter is that between lower rates of change and NDC areas being located in peripheral, 'white' estates on the edge of non-core cities. It seems that peripheral housing estates, often originally built as single-tenure public-sector schemes, are less well placed to achieve positive change than are NDC areas located in more 'inner-city' locations. This is especially true for people-related outcomes, where this cluster of 14 NDC areas sees worse outcomes than do NDC areas within the four other groupings. There may be fewer job opportunities locally, public services may be poor, mobility limited, and prevailing 'cultures' less welcoming of change. These are areas that may be prioritised given their relatively low rates of change when compared with other clusters of NDC areas. However, if the emphasis is placed on achieving outcomes central to the government's regeneration agenda as laid out in 'Transforming places, changing lives',⁶³ and which stresses economic development, enterprise and jobs, these areas may well see less change than other deprived localities.
- 2.62 Sixth, issues surround change and tenure. In particular several findings point to positive associations between outcome change and, either a decline in social housing, and/or an increase in the proportion of households in owner-occupation. The policy implication arising from this is one which ABIs have always had to grapple: introducing more owner-occupation into a deprived area is likely to help achieve positive change. It is not hard to see why this should be so. Households in owner-occupation will tend to 'help' regeneration schemes achieve people-related outcomes more than will those in social housing: they

⁶¹ CLG (2010) What works in neighbourhood-level regeneration? The views of key stakeholders in the New Deal for Communities Programme.

⁶² CLG (2010) Improving attainment? Interventions in Education by the New Deal for Communities Programme.

⁶³ CLG (2009) Transforming places, changing lives: taking forward the regeneration framework. www.communities.gov.uk/publications/citiesandregions/transformingplacesframework

are more likely to be employed, be healthier, and be better qualified.⁶⁴ But many existing residents will be unable to afford prevailing house prices. New owner-occupied developments may thus ultimately lead to a displacement of those living in regeneration areas, as they seek out social or private sector, rented, or cheaper owner-occupied, accommodation elsewhere. An expansion of owner-occupation may therefore have little, or no, impact on the life chances of existing residents in the area. But, the expansion of owner-occupied housing, and a commensurate increase in relatively better-off incomers, will act to dilute concentrations of deprivation within regeneration areas.

- 2.63 Finally, evidence developed in this chapter re-emphasises a lesson central to this evaluation. Neighbourhood-level regeneration schemes have only a limited ability to influence change. Much of what happens at the neighbourhood level is beyond the control of any ABI. This finding should not be seen in any way to reflect a failure of this Programme. Rather it points to the reality that ABIs are only able to effect relatively marginal change. Many of the forces impacting on deprived areas reflect societal changes, policies operating at wider spatial scales, and market trends, processes over which ABIs have little control. And, although this is a relatively well funded ABI, NDC programme spend is no more than 10 per cent of mainstream investment which will anyway be allocated to these neighbourhoods.⁶⁵ As new ABIs are launched by central and/or local government, it is important that they are given realistic objectives which reflect limitations intrinsic to all forms of area-based regeneration.
- 2.64 This chapter has explored associations between a wide range of explanatory factors and change at the NDC-area level between 2002 and 2008. The next chapter moves the focus of attention away from areas towards individuals: what happened to people who stayed in NDC areas for this six year period?

⁶⁴ CLG (2010) Tenure and change in deprived areas: evidence from the NDC areas.

⁶⁵ CLG (2010) Assessing neighbourhood level regeneration and public expenditure. Findings from the Bradford New Deal for Communities Area. www.communities.gov.uk/publications/communities/assessingneighbourhoodlevel

Chapter 3

Individual level change

Introducing longitudinal data

- 3.1 As is pointed out in 1.10, the design of the household survey means that the evaluation has access to two types of change data. Using cross-sectional area-level evidence, the previous chapter explored associations between a range of possible explanatory factors and area-level change. Analyses developed in this section use longitudinal panel data based on a sample of individuals who took part in all four waves of the survey: 2002, 2004, 2006 and 2008.⁶⁶
- 3.2 It is worth pointing out at the outset why this is such an important group of respondents. The previous chapter looks at changes to the 39 NDC areas through time by exploring all of the responses to each of the four surveys. However, measurement of the impact of the Programme can be diluted or distorted by the incorporation into cross-sectional surveys of responses from people who have only recently moved into an NDC area, for whom positive outcome change cannot be attributed to the Programme.
- 3.3 Individual-level panel data helps overcome this kind of problem, as it tracks the same individuals living in NDC areas over time. It should be emphasised that panel data does not come without its own problems. For instance, a sample of respondents who stayed in these areas for that six year period 2002-2008 will become less representative of NDC area populations as a whole. By definition panel members will have become older over time.⁶⁷ The panel is also more likely to consist of women, partly because they are more likely than men to continue to participate in long-term surveys.⁶⁸ Having said that, the cross-sectional sample and longitudinal panel show similar rates of change in relation to many attitudinal questions.⁶⁹

⁶⁶ This sample consists of 3,554 NDC area residents, and 297 comparator area residents.

⁶⁷ Residents aged 55 and over accounted for 27 per cent of the cross-sectional sample in 2002 and 25 per cent on the 2008 sample. Residents who remained in the panel over the full 4 waves of the survey were likely to have been older in 2002 and aged over time (37 per cent of the panel were aged 55 plus in 2002 and by 2008 47 per cent were 55 or over). In 2008 27 per cent of the cross-sectional sample had lived in the area less than five years whereas all panel residents have lived in the area for at least five years.

⁶⁸ In 2002 and 2008 61 per cent of the panel are women compared with 51 per cent of the cross-sectional sample.

⁶⁹ In both samples between 2002 and 2008: satisfaction with the area increased by 14 percentage points, thinking the NDC improved the area improved by 28 percentage points and feeling unsafe after dark decreased by between 11 and 12 percentage points.

3.4 Nevertheless, the longitudinal panel data is of considerable value. To give just three examples of why this is the case:

- as members of the panel have lived in these areas for six years, it is more likely that changes they experience will reflect what NDC partnerships have done than is the case with cross-sectional area-based evidence
- because there is detailed information on each member of this panel, it is possible to adjust data to take into account individual-level socio-demographic factors that may relate to change, in order to be more robust in identifying underlying patterns of change, a theme developed in 3.22 below
- by using panel data it is possible to compare changes occurring to individuals who stayed in NDC areas for that six year period 2002 to 2008, with change for those individuals staying in the comparator areas for a similar period of time.

3.5 The panel data thus provides a rich source of evidence which complements area-based evidence explored in the previous chapter. It is not possible to say that one source of evidence is 'better' than the other: one looks at area-level, the other individual-level, change. Collectively they provide an unprecedented opportunity to explore change for both NDC areas, and also for individuals who stayed within them for that period 2002 to 2008.

3.6 This chapter addresses the following questions:

- what changes were experienced by those who stayed in NDC areas for six years?
- how are the benefits of regeneration spread across NDC area residents?
- which socio-demographic groups see greatest change?
- is being involved with an NDC partnership associated with greater outcome change?
- have NDC area residents seen greater positive change than their comparator counterparts?
- which factors are related to individual-level change?
- to what extent is change due to area, as opposed to individual, level factors?

What changes were experienced by those who stayed in New Deal for Communities areas for six years?

3.7 The first task here is to identify change between 2002 and 2008 for NDC panel members. This tells us how individuals' circumstances or attitudes may have altered over time. In this initial cut on the data responses are not adjusted to take into account individual-level socio-demographic factors.

- 3.8 For any given indicator it is possible to assess the proportion of individuals whose situation stayed the same, improved or worsened over time. This individual transitions data captures how much outcome change NDC longitudinal panel members experienced between wave 1 (2002) and wave 4 (2008) across 33 core indicators drawn from household survey evidence. These 33 consist of six indicators for five of the Programme's six outcomes. For education, there are only 3 survey core indicators; the three others, Key Stage attainment results, are only available as administrative data.⁷⁰
- 3.9 Longitudinal data reveal the dynamics of individual transitions underpinning change. An exploration of how this occurs in relation to a selection of indicators (Figure 3.1) demonstrates the different dimensions of these dynamics. Looking first at transitions in satisfaction with area, a perception-based or subjective, indicator. In total 76 per cent of residents in the panel were satisfied with the area in 2008. This consists of 54 per cent of the panel who remained satisfied in both 2002 and 2008 and a further 21⁷¹ per cent who moved from previously being not satisfied, to satisfied, during this six year period. A further nine per cent made a negative transition. The net difference between those who made a positive, and those who made a negative, transition leads to an improvement of 12 percentage points in satisfaction with the area compared with 2002.
- 3.10 Figure 3.1 also illustrates the dynamics in relation to 'wanting to move' and in transitions in employment. NDC areas have traditionally seen high levels of people wanting to move, including those who are unable to do so. It can be argued that seeing a reduction in the number of people wanting to move is a positive reflection on how areas have changed. Nearly a third (32 per cent) of the 2002-2008 panel members wanted to move in 2008. This was made up of 17 per cent of respondents who continued to want to move right through the six year period, together with an extra 15 per cent who changed their mind from not wanting, to wanting, to move. A further 11 per cent of residents wanted to move in 2002, but no longer did so by 2008.⁷² The net difference between those who made a transition from wanting to move, to not wanting to move, and those making a transition in the opposite direction leads to an increase in four percentage points in those wanting to move compared with 2002.
- 3.11 Transitions in employment, a more 'objective' indicator, shows a positive net difference of 6 percentage points. Over this six year period more than a fifth (22 per cent) of residents experienced a change in their employment status with

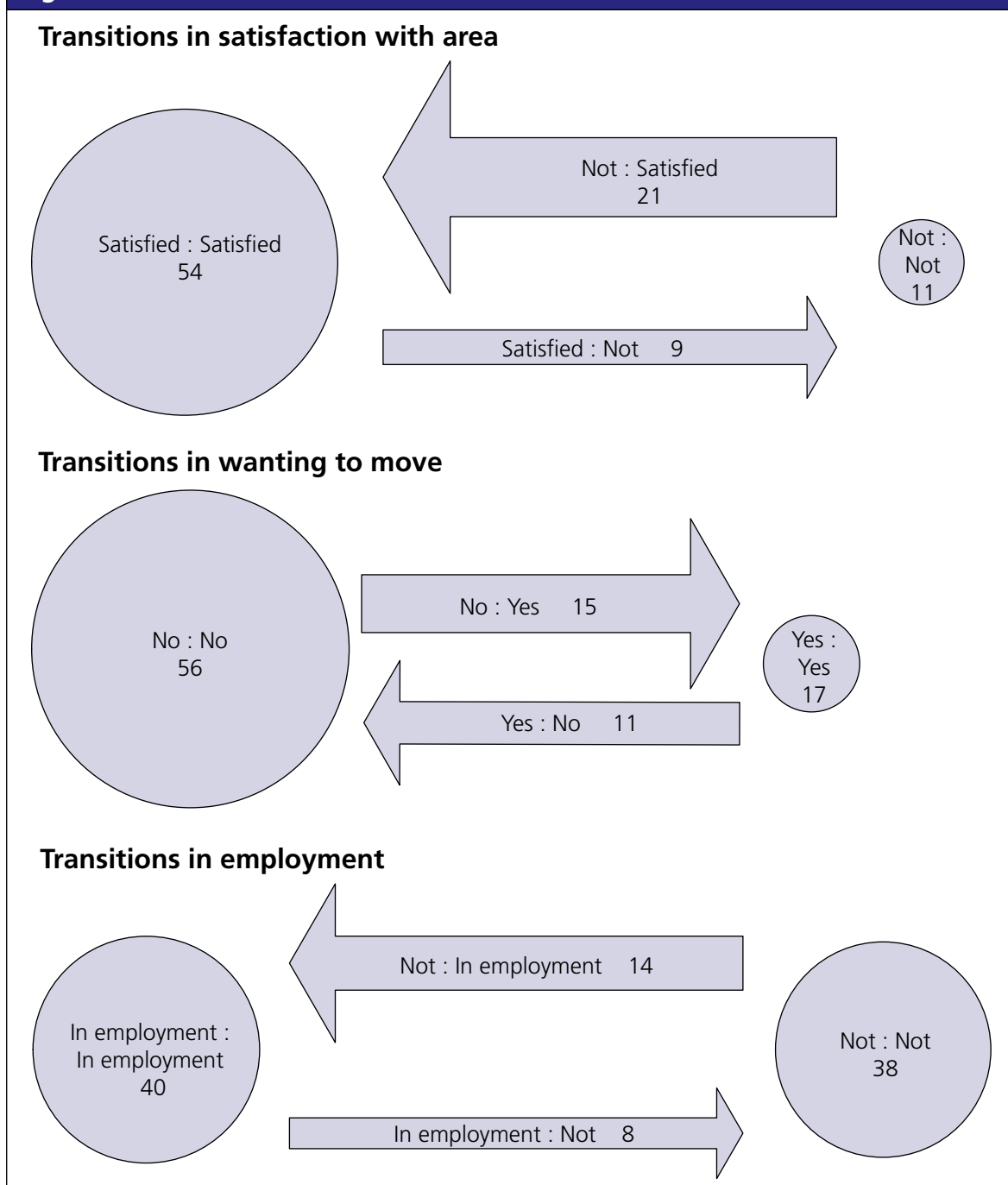
⁷⁰ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 5 for a full list of the 33 indicators considered).

⁷¹ 21+54=75; the difference with 76 per cent who were satisfied with the area is due to rounding.

⁷² It should be noted that the small size of the longitudinal sample representing those contactable across all four waves of the survey reflects the reality that many people in the original 2002 sample have in fact moved out of their NDC area.

14 per cent gaining employment, and 8 per cent moving out of employment. A sixth of those in employment in 2002 were no longer in employment six years later in 2008.

Figure 3.1: Individual transitions 2002 to 2008: selection of indicators



Source: Ipsos-MORI NDC household survey

Note: Based on longitudinal sample for residents included in all 4 waves of the survey 2002-2008. Transitions in employment are based on working age respondents only. Figures represent percentage of wave 1 to wave 4 respondents that have made the transition.

3.12 For 22 of these 33 indicators,⁷³ there was a significantly greater movement of more NDC residents from a negative, to a positive, outcome than the reverse.⁷⁴ The difference between these two groups, those making a positive transition, less those making a negative one, represents the net change across the panel as a whole. Indicators with the greatest, and the least, level of positive transitions are given in Table 3.1. Those indicators showing greatest net change are presented in Table 3.2. As is reflected in a wide range of evidence from the evaluation, including that outlined in the previous chapter (2.58), indicators showing both greatest absolute, and also net, change are usually perception-based and generally reflect improvements in place.

Table 3.1: Longitudinal Panel: Positive transitions: 2002-2008

	percentage of panel making a positive transition
Indicators with most positive transitions	
NDC improved area	37
Area improved in the past 2 years	27
Lawlessness and dereliction ⁷⁴ – high	23
Feel part of the local community	23
HH Income less than £200	22
Fear of crime index – High	22
Indicators with least positive transitions	
Smoke	9
Satisfied with accommodation	9
Unemployed (working age)	9
Burgled in the last 12 months	6
Do no exercise for at least 20 minutes at a time	4
Long-term sick or disabled (working age)	4

Source: Ipsos-MORI NDC household survey

⁷³ All six for crime, four for both community and worklessness, three for HPE and health, and two of the three education indicators.

⁷⁴ On four indicators significantly more NDC residents made a negative than a positive transition; for seven there was no significant difference between positive and negative transitions.

⁷⁵ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 4.1.2 for full list of the 10 questions compiled in this index. They include problems in the area to do with abandoned cars, drug dealing etc).

Table 3.2: Longitudinal Panel: Net transitions: 2002-2008

Indicator	Percentage point difference Net change
NDC improved area	29
Lawlessness and dereliction (High)	19
Area improved in the past 2 years	16
Fear of crime index (High)	16
Income less than £200	13
Satisfied with area	12
Environment (High)	10
Feel unsafe walking alone after dark	10
Feel part of the local community	10

Source: Ipsos-MORI NDC household survey

3.13 This group of NDC 'stayers' also reported a significant deterioration in four of the 33 core indicators: more moved from a positive to a negative position. These four are:

- want to move
- health worse than a year ago
- do no exercise for at least 20 minutes at a time
- work status: long term sick or disabled.

3.14 However, it should be remembered that, by definition, the panel consists of an aging population, which may help explain three of these four. For instance, a change in work status to long-term sick or disabled may prove to be permanent for older residents. The fourth, wanting to move, needs equally to be treated with caution. It may in part reflect negative attitudes towards the area. But it may also arise from 'non-NDC-area' factors, such as the life-cycle events, a widening choice in the housing market within the wider area, or an improvement in material circumstances.

How are the benefits of regeneration spread across New Deal for Communities area residents?

3.15 Panel data allows for an analysis of change for each of the 3,554 individuals who stayed in an NDC area between 2002 and 2008. This evidence sheds light on a question inherent to all forms of area-based intervention: are the benefits of regeneration spread across local residents, or concentrated on particular groups? As this evidence is available for the comparator-areas panel too, it

seems sensible to explore here too what happened to the 297 members of that panel. A more comprehensive assessment of change for the two panels, that for the NDC area, and for the comparator areas is developed from 3.31 onwards.

- 3.16 To provide an overarching measure covering all six Programme-wide outcomes, it is possible to combine the 33 core indicators to produce a score of positive indicators in each survey wave: 33 all positive, to 0 all non-positive (negative, neutral or no response). The average number of positive indicators for NDC residents increased wave on wave from 19.8 in 2002 to 21.6 in 2008. This represents an average increase of 1.8 positive indicators for each 'wave 1 to wave 4' NDC respondent⁷⁶. Since two of the community indicators are NDC-area specific, benchmarking this overarching measure against what happened to the comparator-areas' panel is based on a comparison of 31 indicators. If this is done, then NDC area residents reported an average 1.3 'indicator improvement' between wave 1 and wave 4. This is statistically greater than the 0.9 improvement reported by members of the comparator-areas' panel over the same time frame.
- 3.17 It is also possible to explore in detail numbers of positive transitions made by members of these two panels across the 31 indicators:
- 97 per cent of those in the NDC panel made a positive transition on at least one indicator between 2002 and 2008, compared with 94 per cent in comparator areas
 - conversely, 3 per cent of NDC panel members, and 6 per cent of comparator area residents, made no positive transitions in this period
 - 12 per cent of NDC area residents made positive transitions on eight or more indicators, compared with 9 per cent of comparator area residents.
- 3.18 However, most residents (92 per cent of both panels) also made at least one negative transition. Subtracting these for each individual from the number of positive transitions made allows the calculation of the total number of 'net' positive transitions. In broad terms most of the NDC panel made net gains, with a small group making considerable positive progress:
- 59 per cent of the NDC panel made more positive, than negative transitions, compared with 55 per cent in the comparator-areas' panel
 - for 31 per cent of NDC area residents the net total was negative: they made more negative transitions between 2002 and 2008; the equivalent figure for the comparator-areas' panel was slightly higher at 33 per cent

⁷⁶ This is statistically significant at the 0.01 level.

- 6 per cent of NDC area residents, and 4 per cent of those in the comparator-areas made eight or more net positive transitions.

3.19 So in broad terms most of those in both the NDC area and in the comparator areas' panels made more positive than negative change, and NDC panel members saw slightly greater positive change than for those remaining in the comparator areas for that 2002 to 2008 period.

3.20 It is possible to examine the make-up of that especially interesting group: those making most change. Table 3.3 provides details of those making at least eight positive transitions and those making at least eight positive 'net' transitions. A panel wide benchmark is included to indicate how these groups would be distributed, if evenly spread across the panel. In some respects, such as for gender and ethnicity, patterns are broadly what would have been expected bearing in mind the composition of the overall panel. But three differences are worthy of comment:

- those aged between 25 and 49 made more, and those over 60, fewer transitions than might have been expected
- households with dependent children, and particularly lone parent families made more transitions than might have been expected
- compared with what would have been expected, those in owner-occupation made fewer, and those in the social rented sector, and those not in employment, made more positive transitions than would have been expected⁷⁷
- those with at least 21 positive indicators in 2002 made far less positive change; this pattern reflects evidence emerging from across the evaluation: those who were most disadvantaged in relation to any indicator in 2002 had more headroom to make positive change by 2008.

3.21 This exercise of unravelling the nature of those seeing most change has also been carried out for members of the comparator-areas panel. One interesting distinction to draw is that, whereas there was an over representation of social renters amongst those seeing most change in the NDC panel, the opposite was the case for the comparator-areas panel. This may well reflect efforts by NDC partnerships to target interventions on more deprived socio-demographic groups.

⁷⁷ There are considerable overlaps between tenure and employment; so it may well be that those in owner-occupation, who tend also to be in employment, simply spent less time, and were less aware of positive changes to, the local area than was the case for other tenurial/employment status groups.

Table 3.3: Members of New Deal for Communities area panel making eight or more positive transitions: 2002 to 2008: socio-demographic characteristics

	Percentage in each socio-demographic category		
	Eight or more positive transitions	Eight or more 'net' positive transitions	All in panel
Sex			
Male	40	43	39
Female	60	57	61
	100	100	100
Age (2002)			
16 – 24	11	6	7
25 – 49	53	61	46
50 – 59	18	15	19
60+	17	18	28
	100	100	100
Ethnicity			
White	77	79	79
Asian	13	12	11
Black	8	8	9
Other	2	2	1
	100	100	100
Tenure (2002)			
Owner occupier	38	37	44
Social renter	59	60	54
Private renter	3	4	2
	100	100	100
Household composition (2002)			
Couple, no dependent children	29	29	31
Couple, with dependent children	26	27	24
Lone parent family	18	18	11
Single person household	13	13	18
Large adult	13	13	15
	100	100	100
Employment status (2002)			
In employment	32	32	50
Not in employment	68	68	50
	100	100	100
Number of positive indicators in 2002			
10 or fewer	9	14	2
11 – 20	88	85	53
21 – 31	3	1	44
	100	100	100

Source: Ipsos-MORI NDC household survey

Which socio-demographic groups see greatest change?

- 3.22 Earlier sections of this chapter use descriptive statistics to explore the transitions experienced by individuals over time. The following section reports on findings from a series of modelling exercises,⁷⁸ which help to identify which types of individuals experience change. These methods identify relationships between an individual's underlying characteristics and how much change they achieve. These models take into account (adjust for) these underlying differences and examine how much any given outcome varies, if all other factors in the model are held equal.
- 3.23 To give just two examples of benefits which flow from these types of modelling exercises. It is known that those in black or minority ethnic, and especially Asian, communities tend to be younger than those in other ethnic groups. Assessments of change in relation to ethnicity, which did not take this into account, might therefore reflect on change for different age groups, as much as for contrasting ethnic communities. It is also known that women tend to report greater fear of crime than men. Consequently women may have more capacity to achieve a greater reduction in fear of crime than is the case for men: there is more headroom for change. Therefore, in both of these examples the degree to which change occurs for an individual is likely to be explained in part by the underlying characteristics of who they are. The ability to control for these individual-level socio-demographic factors helps highlight underlying trends in relation to change.
- 3.24 Figure 3.2 details the five key socio-demographic characteristics which have been controlled for in these models:⁷⁹ age, sex, ethnicity, household composition and tenure Key findings include:
- there were significant differences by ethnic group for a third of the 33 core indicators, with black residents seeing better outcomes than white residents in relation to satisfaction with the area, and for a number of community based indicators; Asian residents enjoyed better outcome change than white people in relation to indicators such as fear of crime and feeling safe after dark, but less well with regard to others, including thinking the area has improved in the last two years
 - with regard to age, residents aged under 25 did well on a range of crime

⁷⁸ Further details of modelling methods used are included in CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 8).

⁷⁹ Significant socio-demographic factors have been identified from 33 separate core indicator models. In addition, a 34th model identifies socio-demographic characteristics related to achieving change across all 33 indicators.

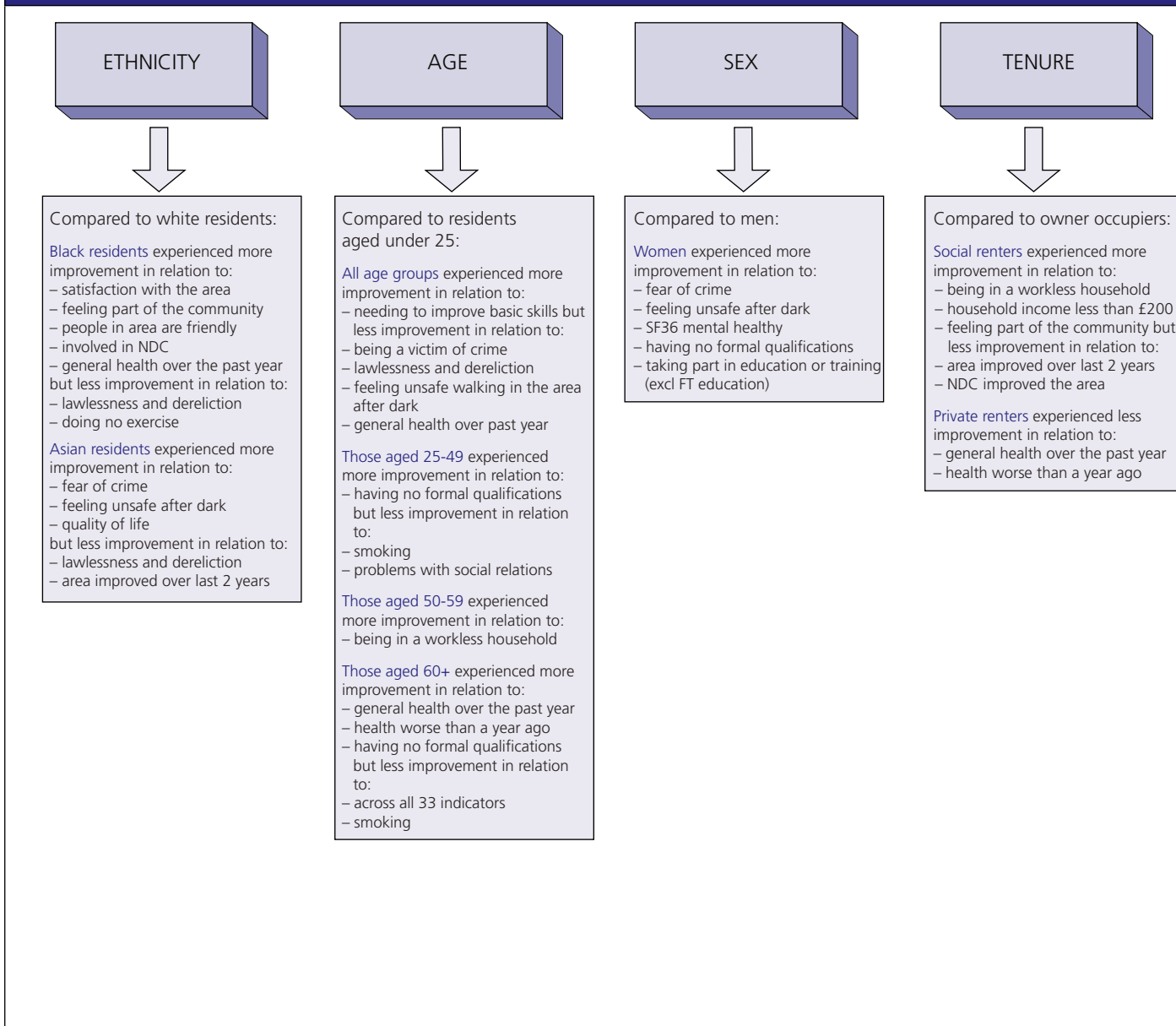
indicators relative to other age groups, whilst those over 60 made less improvement across all 33 indicators than younger residents

- with regard to gender, women saw more improvements than men on five indicators including fear of crime, feeling unsafe after dark and mental health
- in relation to tenure, when compared with owner-occupiers, social renters saw more improvements in worklessness, and private renters less improvement in health
- reflecting evidence developed in Chapter 2 (2.31), with regard to household composition, lone parent families and couples with dependent children tended to see fewer improvements than did couples without children, across a range of measures including a number of health and crime indicators.

3.25 These findings are important in the context of equalities within the Programme. One of the commitments made by the government in the National Strategy for Neighbourhood Renewal Action Plan,⁸⁰ was that the then Neighbourhood Renewal Unit would have 'clear responsibility for ensuring that neighbourhood renewal benefits ethnic minorities' and that '...there will be measurement... of the impact of the National Strategy on different ethnic groups'. Evidence emerging from this exercise suggests black, and to a lesser degree Asian, residents have seen as much, if not more, positive change than have white people. It is interesting too, to see positive change for women, social renters and people from different age groups.

⁸⁰ SEU (2001) A New Commitment to Neighbourhood Renewal: National Strategy Action Plan.

Figure 3.2: Significant change by socio-demographic groups: adjusted data



Is being involved with a New Deal for Communities partnership associated with greater outcome change?

3.26 Change for individuals in NDC areas may, in part, be a function of interaction or involvement with the local NDC partnership, or participation in projects it funds. Using adjusted data (see 3.22), it is possible to identify associations between outcome change for any individual and their relationship with their local NDC partnership. This can be done in two ways.

3.27 First, it is possible to look at associations between individuals being involved

HOUSEHOLD COMPOSITION



- Compared to couples with no dependent children:
- Lone parent families** experienced more improvement in relation to:
 - being in a workless household but less improvement in relation to:
 - having no formal qualifications
 - satisfaction with the area
 - lawlessness and dereliction
 - being involved in local organisations
 - SF36 mental health
 - doing no exercise
 - general health over the last year
- Single person households** experienced more improvement in relation to:
 - SF36 mental health
 - feeling unsafe after dark
 - being a victim of criminal damage but less improvement in relation to:
 - NDC improved area
 - having no formal qualifications
 - general health over last year
- Couples with dependent children** experienced less improvement in relation to:
 - quality of life
 - being a victim of crime
 - doing no exercise
 - having no formal qualifications
 - general health over last year
- Those living in **large adult households** experienced more improvement in relation to:
 - being a victim of criminal damage but less improvement in relation to:
 - income less than £200
 - SF36 mental health
 - general health over the last year

local NDC partnership,⁸¹ and individual-level outcomes. Here there is evidence pointing to positive associations. On average, those who had been involved in their local NDC partnership at any point of time, experienced significantly greater improvement between 2002 and 2008, when compared with respondents who had not been involved, in relation to:

- number of crimes experienced
- lawlessness and dereliction
- feeling safe walking alone after dark
- problems with the environment
- satisfaction with the state of repair of their accommodation
- trust in local agencies
- being involved in local organisations on a voluntary basis
- thinking the NDC had improved their area
- thinking their area had improved over the past two years
- achieving a greater number of positive scores across all 33 core indicators.

This evidence points to strong associations between becoming involved with an NDC partnership and positive outcomes. It needs reiterating that this evidence is to association and not causation. It may well be that becoming involved in an NDC partnership does indeed help achieve outcomes. In addition, it may also be that those who do become involved are anyway more likely to see some change.

And, there is other evidence which links NDC partnership interventions with individual-level change. For the 2004 household survey, the evaluation team worked with all 39 partnerships to draw up a shortlist of a maximum of four named, well known, local projects. All respondents to the 2004 household survey were asked whether or not they, or anyone in their household, had 'directly benefited from, used or attended' any of these specific projects. In total 145 projects were included in the analysis more than 80 of which had received funding of at least £500,000 by 2006. Full details of the analytical methods and results can be found elsewhere.⁸² But the key headline is that: fourteen significant differences emerged between change for those benefiting, as opposed to not benefiting, from these projects in that two year period 2002-2004. In all but one instance, those benefiting from projects saw more positive changes than did those who had not benefited. To give one example. When

⁸¹ All respondents who had heard of their NDC were asked "have you been involved in any activities organised by the NDC in the last 2 years?"

⁸² CLG (2009) Four years of change? Understanding the experiences of the 2002-2006 New Deal for Communities Panel (Chapter 8). www.communities.gov.uk/publications/communities/fouryearschangendcp

compared with those that had not benefited, respondents benefiting from an employment project were statistically significantly more likely to make a transition from not being in employment at 2002, to being in employment at 2004.

3.30 Taken together, these two strands of evidence do indeed suggest positive associations between, on the one hand, NDC partnership activities and interventions and, on the other, individual-level change. Evidence of change experienced by project beneficiaries points to the way that both place-, and people-, related interventions are associated with improved outcomes. However, because more people see, and benefit from, place-, as opposed to people-, related projects, it is easier for top-down surveys to identify change in relation to place. It is difficult to pick up the effect of these people-related changes at the area-level, because interventions benefit relatively small numbers of people. But the positive effects are real enough for the individuals concerned.

Have New Deal for Communities area residents seen greater positive change than their comparator counterparts?

3.31 Material outlined immediately above analyses changes experienced by members of the NDC area panel. It is also possible to benchmark change reported by the NDC area panel against an equivalent sample of 297 comparator-area residents who were also surveyed at each of the four waves of the survey. Change reported by NDC area, and comparator area, panel respondents is available for 31 of 33 core indicators as two questions are asked solely of NDC area residents. As a first stage of analysis, net transitions data are considered which do not take into account individual socio-demographic considerations. Table 3.4 lists the 10 core indicators for which NDC area panel respondents report significantly⁸³ greater improvement (or significantly lower deterioration) than members of the comparator-areas panel. For two of these indicators (health worse than a year ago and do no exercise) both NDC area and comparator area residents actually reported significant deterioration. However, this was significantly lower for NDC area panel residents.

Table 3.4: New Deal for Communities area and comparator areas longitudinal panels: Net transitions significantly greater in New Deal for Communities areas: 2002-2008

⁸³ For further details see CLG (forthcoming) NDC Evaluation Technical Report (Chapter 6.1.4).

	Percentage point difference NDC and comparators areas net change
Health worse than a year ago	11
Area improved in the past 2 years	10
High lawlessness and dereliction score	6
Been a victim of at least one crime in the past 12 months	5
Satisfied with the area	4
High fear of crime score	4
Do no exercise for at least 20 minutes at a time	3
Quality of life good	3
Been burgled in the past 12 months	2
High SF 36 mental health score	2

3.32 NDC panel respondents reported significantly less improvement when compared with their comparator-area equivalents for two indicators:

- feel part of the local community
- want to move.

3.33 Thus this initial cut at analysing panel data points to members of the NDC panel seeing more positive change than members of the comparator-areas' panel.

3.34 The next stage of the analysis uses modelling techniques to reveal the extent of the differences between NDC areas and comparator areas after taking account of, or adjusting for, underlying socio-demographic characteristics, a process discussed in 3.22 above.⁸⁴ The modelling has been used to compare individual-level changes for NDC area and comparator-area residents for 31 core indicators. When this is done, evidence of a statistically significant 'NDC effect' for change between 2002 and 2008 was found for five indicators. On average, NDC area residents were significantly more likely to see improvements⁸⁵ than residents in comparator areas for:

- lawlessness and dereliction
- area improved in the past two years
- satisfaction with the area
- health not good

⁸⁴ The five factors controlled for are age, sex, ethnicity, tenure and household composition. This is a relatively limited list of individual-level socio-demographic factors. Factors such as worklessness and qualifications are excluded from these analyses because they are also potential outcomes to the Programme.

⁸⁵ Or in relation to the health indicators, significantly less deterioration.

- health worse than one year ago.

3.35 What this evidence shows is that once panel-data is adjusted to take into account individual-level socio-demographic factors, then it is possible to identify relatively limited statistically significant positive changes for the NDC area panel, around attitudes to the area, lawlessness and dereliction, and perceptions of personal health.

Which factors relate to individual-level change?

3.36 Panel data allow for a consideration of factors associated with individual-level change. To assist in this process General Linear Models (GLM) and logistic regression models⁸⁶ have been used to identify associations between individual characteristics and outcome change reported by members of the 2002 to 2008 NDC area panel. Once again individual-level change data have been adjusted to take into account of the key socio-demographic characteristics (see 3.22). Two further methodological issues should briefly be mentioned.

3.37 First, starting position has been included in GLM models to adjust for the amount of change possible from different starting positions. The more deprived an individual in 2002, the more they were, on average, likely to see greater positive change by 2008. This can in part be explained by mathematical possibilities: there is simply more headroom for change. For example, on any given Likert scale-based indicator, an individual can make a transition from being 'very dissatisfied' to 'very satisfied' over time and hence move four points up a five point scale. However, for someone who started off as 'satisfied', it is possible to improve by a maximum of only one point to 'very satisfied' or potentially see a decrease of three points if satisfaction declines over time. Therefore, those who were worst off at the beginning will tend to see most change by the end. This effect might be compounded if regeneration efforts are targeted on the most deprived. Ultimately, starting position is a determinant of how much improvement an individual has the capacity to make and is therefore included in models. Starting position is not discussed in analyses outlined below. However, it has in each case been controlled for, and found to be a significant explanatory factor.

3.38 Second, analysis here focuses on eight selected indicators. Six of these can be seen as 'emblematic' indicators for one of the Programme's core outcomes. Of these six, two, lawlessness and dereliction, and SF 36 mental health scores, are actually 'indices' pulling together a number of 'subsidiary' indicators. In addition, two overarching indicators are also used because they capture a

⁸⁶ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 10).

broader measure of holistic change across the 39 areas. The selection of a smaller group of indicators reflects:

- the need to focus on important outcomes in order to get a sense of change in relation to the Programme's core outcomes
- the complexities of modelling such large data bases means that analysis has to be selective and enquiry based: it is not possible to carry out a comprehensive modelling exercise on all 33 core indicators at every stage of analysis.

3.39 The eight indicators are:

- crime: change in lawlessness and dereliction
- housing and the physical environment: change in satisfaction with area
- community: change in feeling part of the local community
- health: change in SF 36 mental health score
- worklessness: transitions into, and out of, employment for respondents of working age
- education: transitions into, and out of, education and training
- overall performance:
 - change in feeling that the area has improved over the past two years
 - change in thinking the local NDC has improved the area.

3.40 Modelling panel data helps identify individual-level associations between, and across, different outcome areas. Using this data it is possible to identify the degree to which change in each of these selected indicators is related to change in others. To assist in this process a set of socio-demographic factors, which previous modelling exercises⁸⁷ have shown are related to change made by individuals, has also been controlled for. These include individual qualifications, whether living in a workless household, being out of work for at least two years, or having a limiting long term illness. Material developed in the previous chapter looking at change across all 39 NDC areas, points to associations between improvements in one outcome and positive change in others (2.26). This finding is confirmed when looking at individual-level data.

3.41 Figures 3.3 to 3.10 provide visual representation of the relative strength of statistically significant associations between the selected indicators and a range

⁸⁷ CLG (2009) Four years of change? Understanding the experiences of the 2002-2006 New Deal for Communities Panel (Chapter 5). www.communities.gov.uk/publications/communities/fouryearschangendcp
CLG (2010) Tenure and change in deprived areas: evidence from the NDC areas.

of explanatory factors.⁸⁸ To give an example of how one of these operates in practice. A positive change with regard to thinking the area has improved in the past two years (Figure 3.3) is strongly associated with improvements in satisfaction with the area. There are also links with improvements in social relations,⁸⁹ vertical trust,⁹⁰ lawlessness and dereliction, and reductions in the experience of being a victim of crime. Improvements in feeling part of the local community, satisfaction with accommodation and fear of crime are relevant, but the relationships are not so strong. In general, looking at these eight indicators as a group (Figures 3.3 to 3.10), there are consistent relationships across that nexus of place-related issues surrounding fear of, and actual crime, environmental perceptions, feeling part of the community, attitudes to the area, and so on. This strength of association can be seen as a justification for holistic approaches to area-based regeneration: achieving change in place-related outcomes in particular is associated with change across a wide range of other inter-related outcomes. There are fewer positive relationships which have emerged with regard to people-related outcomes notably transitions into employment, and into education and training. However, mental health does show positive associations with a range of other outcomes. It is interesting here to see here that when change across all NDC areas is benchmarked against that occurring in the comparator areas, there are clear signs of a positive net NDC Programme-wide impact in relation to mental health (Volume 6 xx).

⁸⁸ Explanatory factors included in the models: with the exception of the variable to be predicted by the model, the remaining seven of the eight indicators listed at 3.39; satisfaction with accommodation; social relations; vertical trust; fear of crime; number of crimes a victim of; general health; and problems with the local environment (which includes problems in the area with dogs causing nuisance or mess, litter and rubbish in the streets, the speed and volume of road traffic, poor quality or lack of parks or open spaces, poor public transport – see CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 4. 1.2 for full list of all composite indices used by the Evaluation).

⁸⁹ Social relations: combines responses to two questions about problems in the area concerning racial harassment and problems with neighbours.

⁹⁰ Vertical Trust: an index combining responses to trust residents have in the police, local schools, hospitals and local council.

Figure 3.3: Area improved over past two years: significant interactions with other outcomes

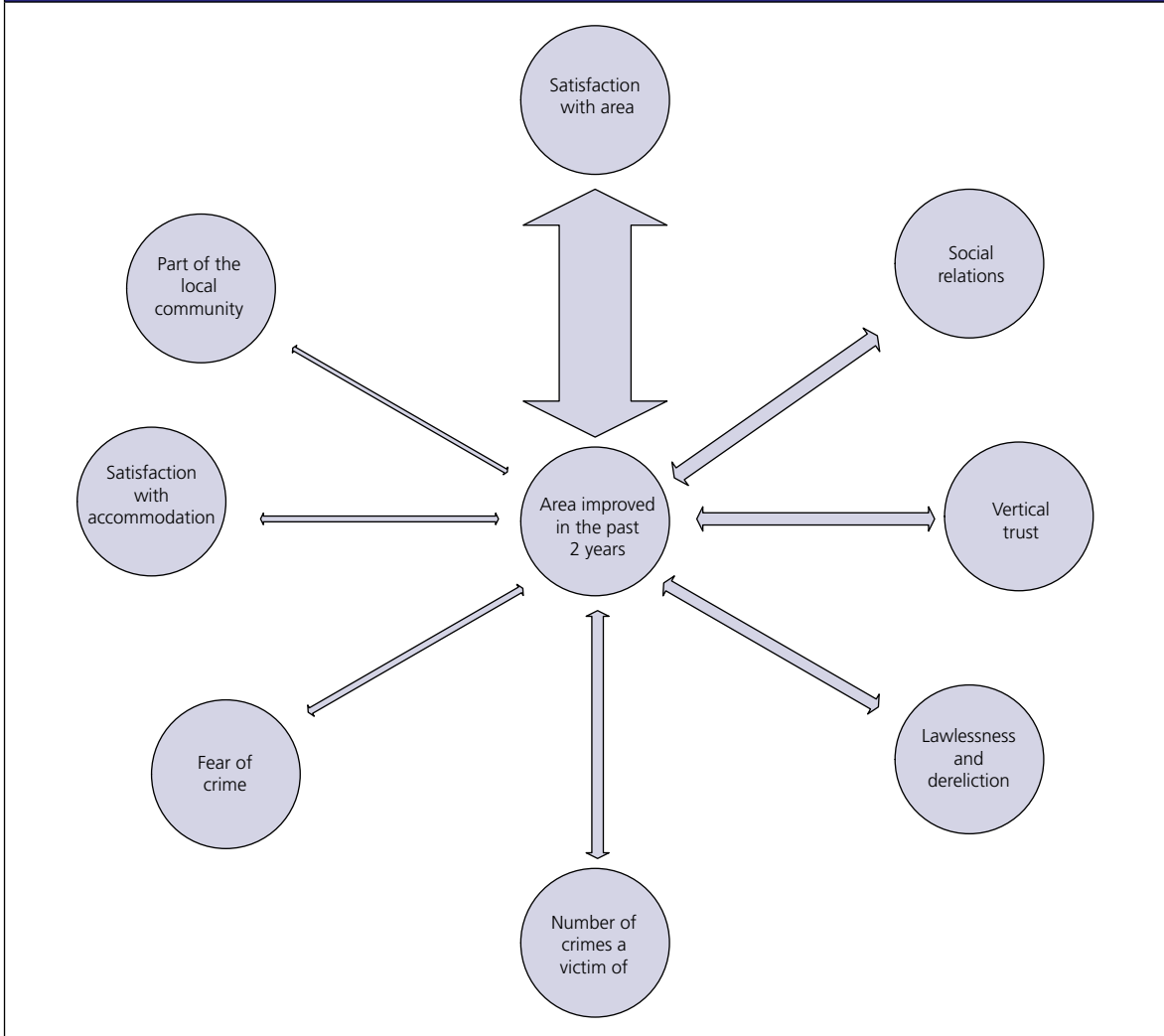


Figure 3.4: New Deal for Communities partnership improved the area: significant interactions with other outcomes

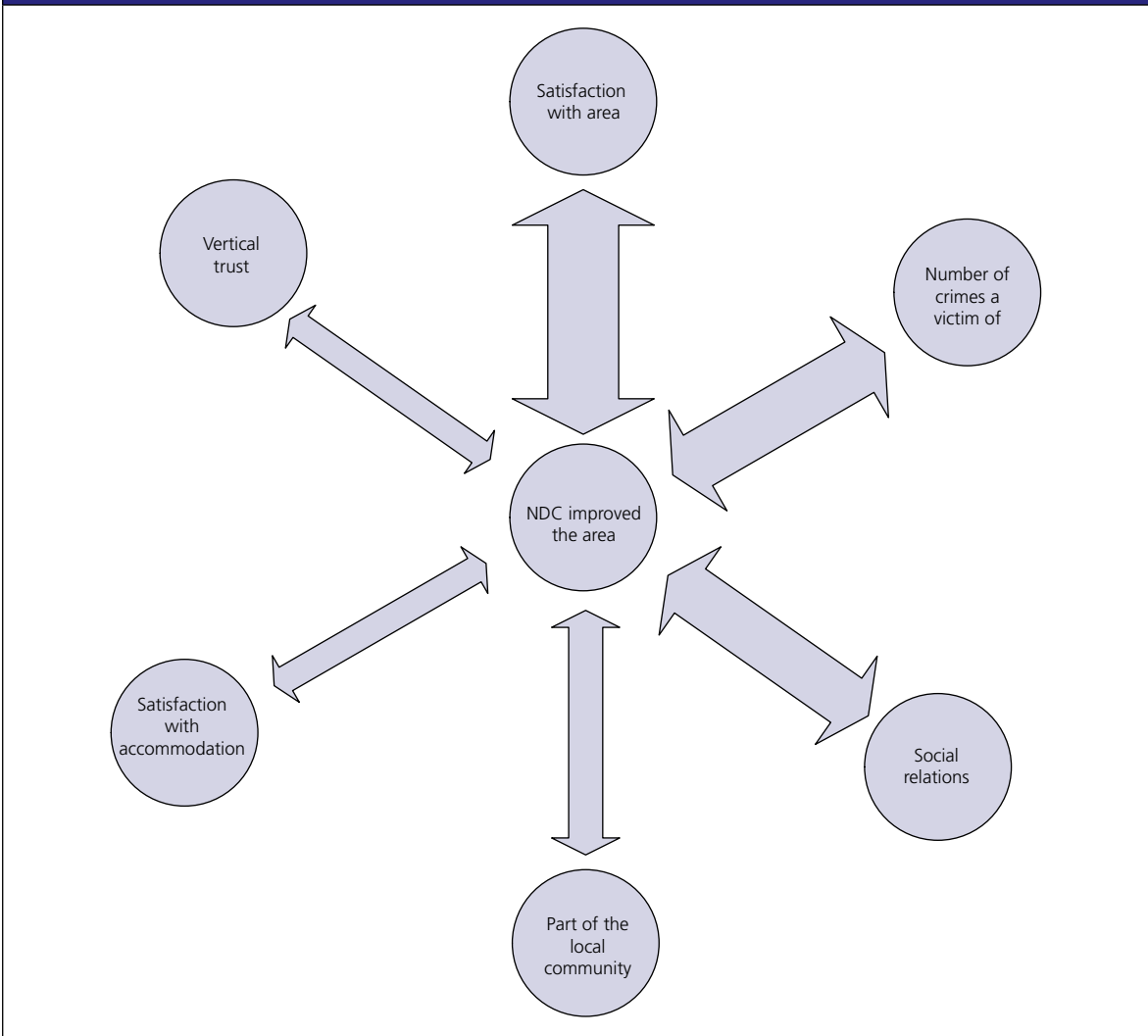


Figure 3.5: Satisfaction with area: significant interactions with other outcomes

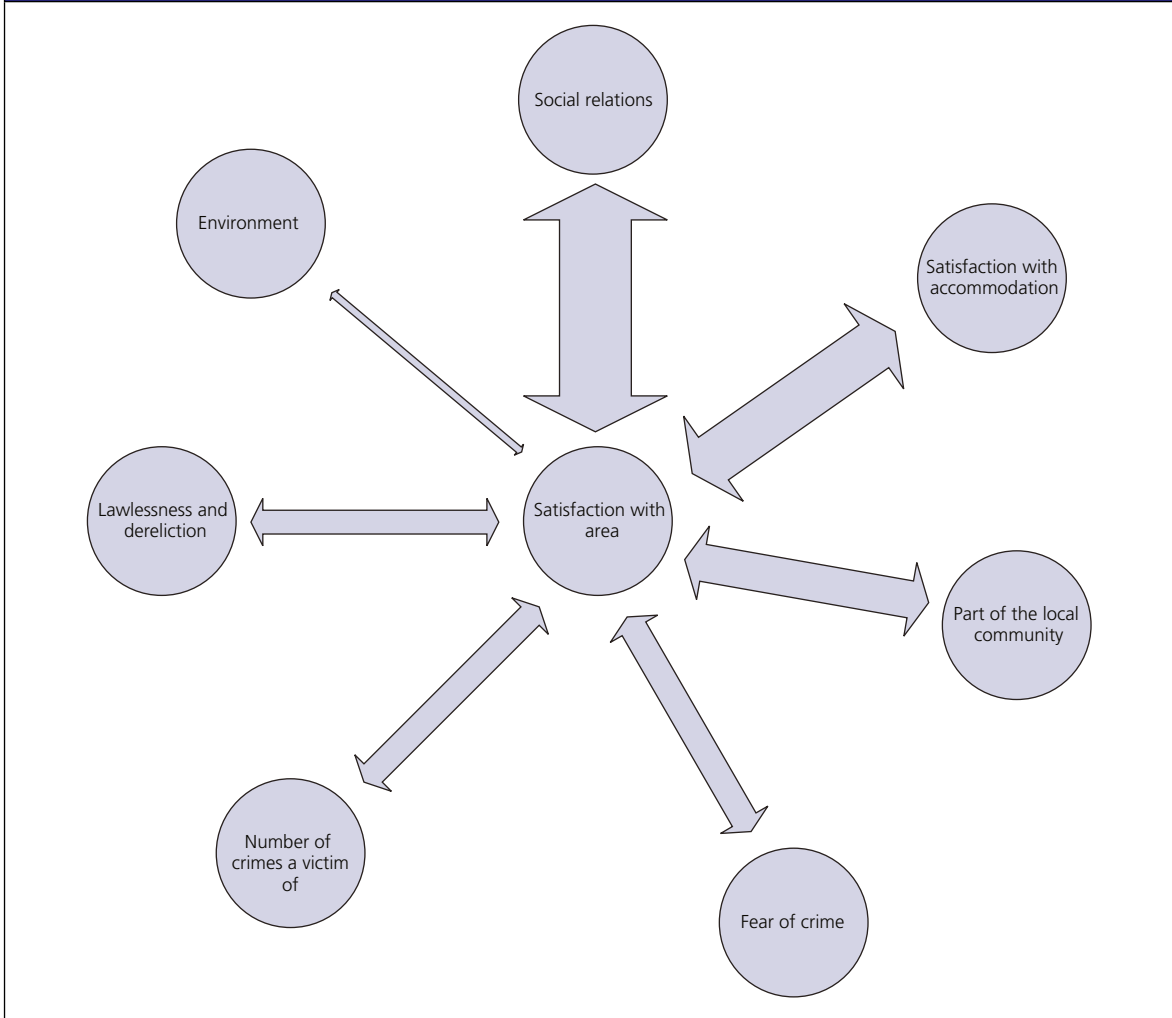


Figure 3.6: Lawlessness and dereliction: significant interactions with other outcomes

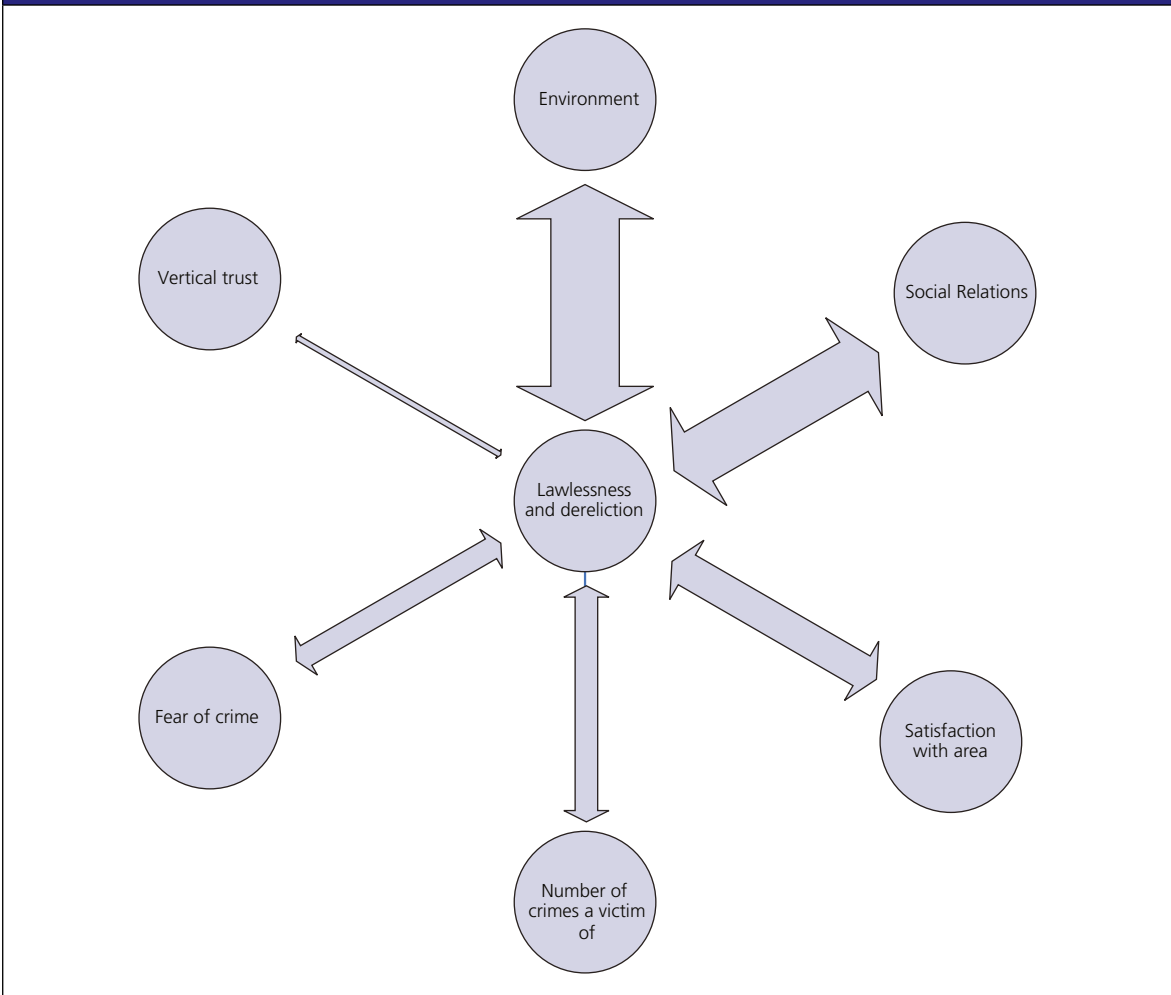


Figure 3.7: Feel Part of the Community: significant interactions with other outcomes

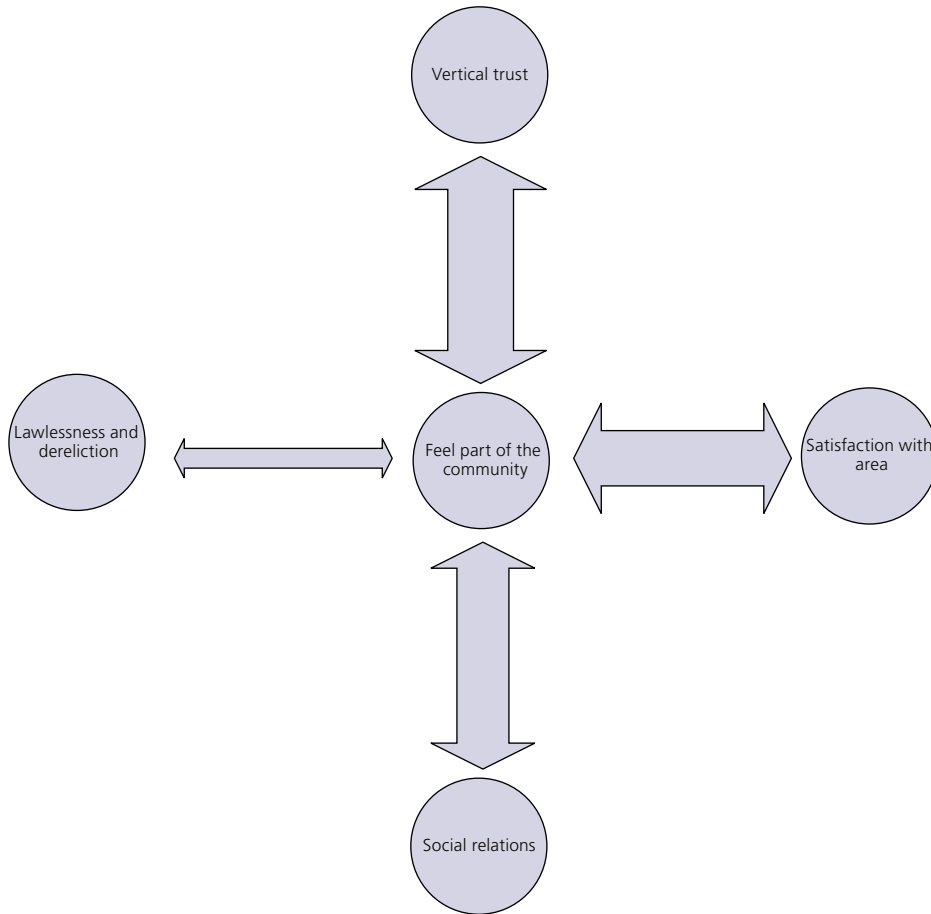


Figure 3.8: SF36 Mental Health: significant interactions with other outcomes

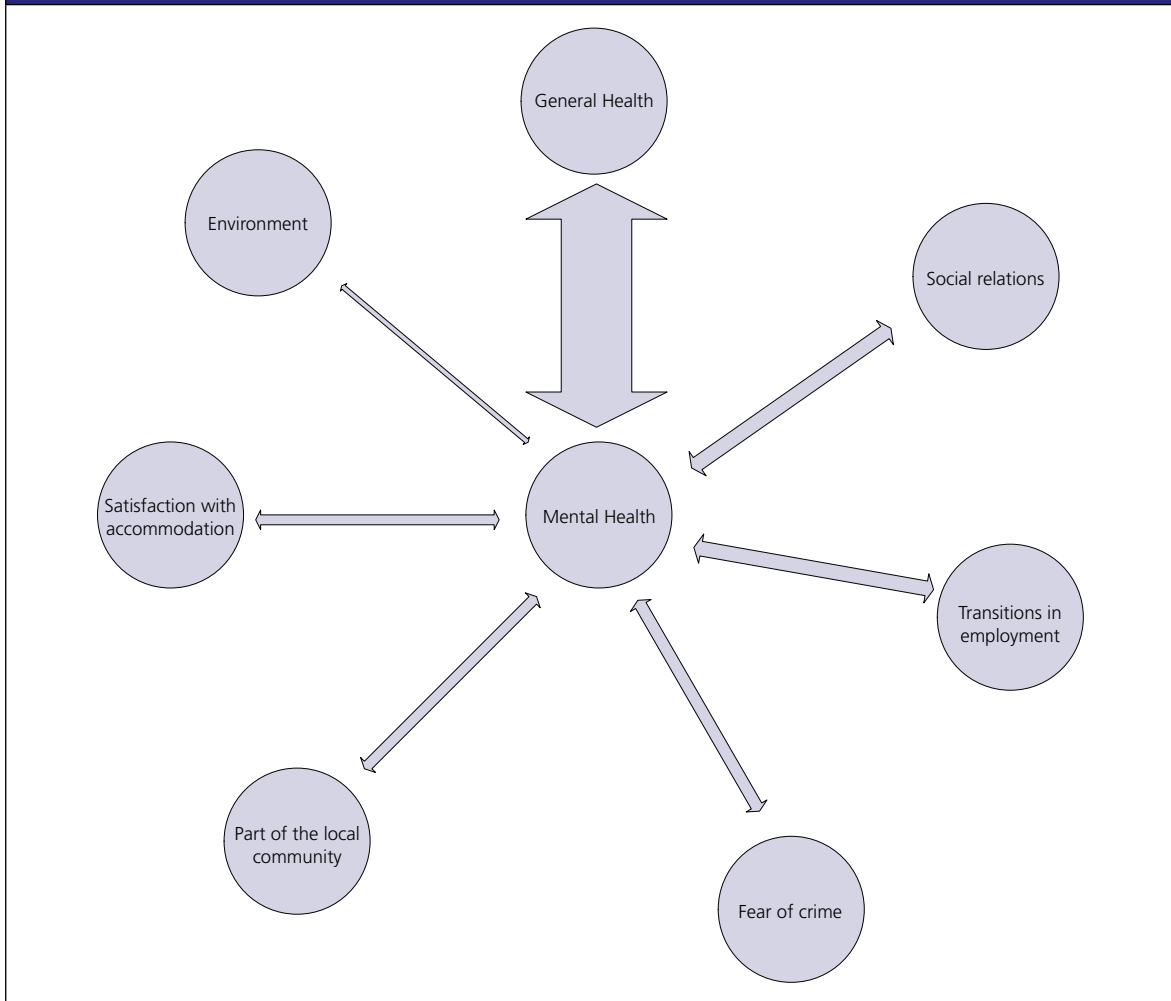


Figure 3.9: Transition into employment: significant interactions with other outcomes

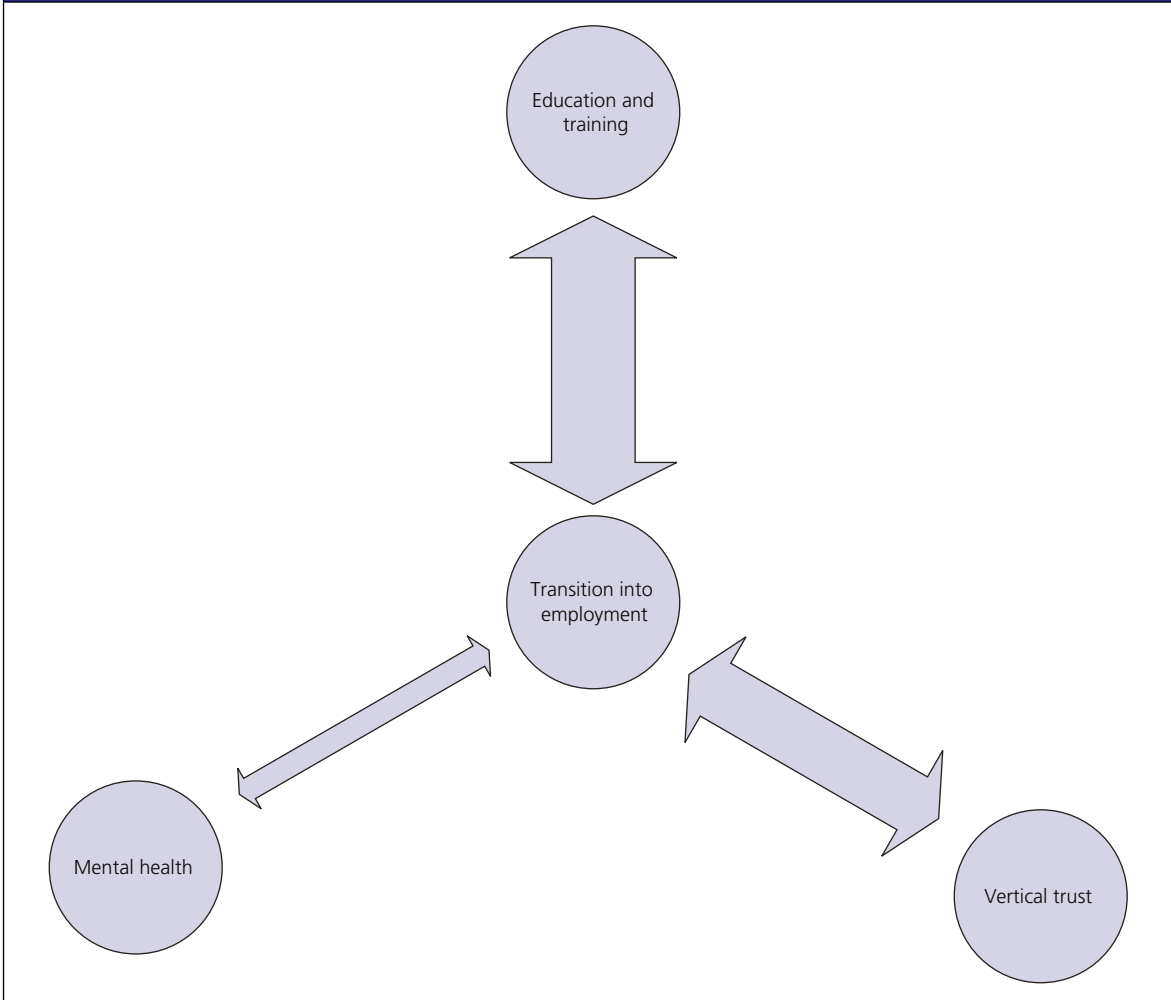
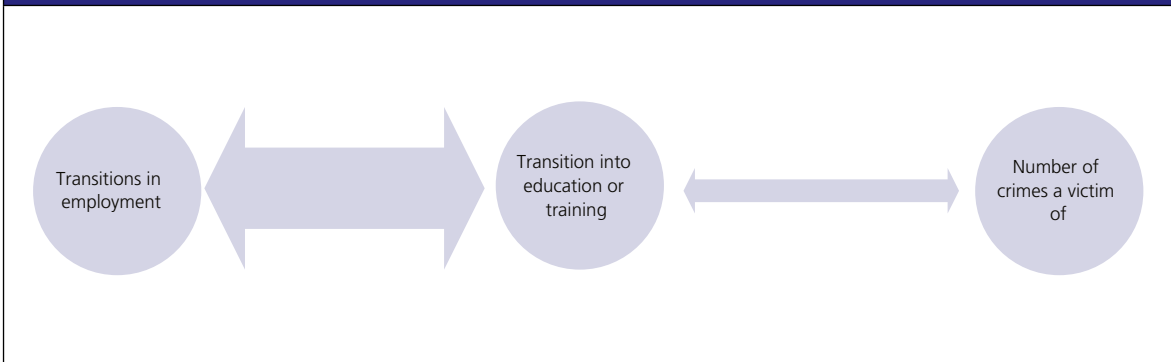


Figure 3.10: Transitions into education or training: significant interactions with other outcomes



To what extent is change associated with area, as opposed to individual-level factors?

3.42 The final analytical section of this chapter uses multilevel modelling (MLM)⁹¹ techniques to investigate how much of change is explained by which NDC areas residents live in (area characteristics), rather than by their individual-level characteristics. In principle, there are a number of reasons for thinking the NDC area within which an individual lives, may be associated with different rates of change:

- the 39 partnerships have supported different portfolios of projects
- different partnerships may be more, or less, efficient in delivering local regeneration schemes
- NDC partnerships might be located in areas which provide a more favourable environment within which to achieve change.

3.43 MLM takes into account factors relating to individuals living within each NDC area. This helps in understanding how much of change achieved can be explained by the characteristics of the individuals themselves, and how much is specifically something to do with the NDC area within which they live. The model in effect estimates, or predicts, how much change each individual is likely to make given the patterns of change seen by different age groups, by sex, ethnicity, and so on. Details of methods adopted and results for two indicators, 'NDC improved the area', and 'area improved in the last two years', are set out in Appendix 1. Evidence developed there points to individual-level characteristics being much more important in explaining change than area-level characteristics or effects. Even for 'NDC improving the area', which shows relatively large area-effects,⁹² almost 96 per cent of the variation in the amount of change experienced is explained by individual-level factors (such as age, sex and levels of deprivation in 2002). Having said that, it is interesting to note that MLM exercises nevertheless indicate NDC areas seeing a statistically significant positive change when compared with the comparator areas for some indicators. For instance, although almost 98 per cent of the variation in relation to thinking the area has improved in the last two years, can be attributed to the

⁹¹ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 8.5 for a detailed explanation of this method). In brief multilevel modelling takes the concept of regression modelling one step further by taking into account that data is available for 39 groups of residents in 39 different NDC areas. Instead of fitting a single regression model to identify factors associated with achieving change for all of the data as a whole, this method fits a series of linear regression models for each of the areas based on the individuals within each. The analysis presented here either considers the 39 clusters of individuals across the 39 areas or for 40 clusters of data which also includes data across all comparator-areas.

⁹² CLG (2010) Interventions in Housing and the Physical Environment in deprived neighbourhoods: Evidence from the New Deal for Communities Programme, includes a multilevel modelling exercise based on a wider composite index of the six housing and physical environment core indicators, two of which are themselves indices based on a number of 'subsidiary indicators'. This found a larger area effect of 16 per cent compared to an individual effect of 84 per cent.

characteristics of the individuals included within the model, all 39 NDC areas saw a statistically significant greater change between 2002 and 2008 than did a pooled sample of residents from the comparator areas.

- 3.44 It should be stressed that relatively limited impact of area-level characteristics is not in any way a 'weakness' of the Programme. Many other similar studies tend to the view that area effects are limited.⁹³ Other factors, notably individual or household characteristics, are more important in explaining patterns of deprivation. One observer has indeed suggested that 'measurable characteristics of the neighbourhood add little to our ability to explain variation in outcomes, once a full range of individual and family-type variables have been included'.⁹⁴ The views and perceptions of residents change largely because of who they are and how deprived they were in 2002, not because of where they live.

Individual-level change: concluding comments and policy implications

- 3.45 This chapter has examined aspects of change for NDC area residents who stayed in one of the 39 NDC areas for that six year period 2002 to 2008. This final brief section provides an overview of key findings arising from this work and outlines emerging policy implications.
- 3.46 With regard to **key findings** the following points merit particular emphasis:
- for all indicators, some individuals moved from a negative position in 2002 to a positive one six years later, some moved in the opposite direction, and some did not change at all; when these transitions are 'netted-off', there is a consistent pattern across core indicators of more NDC area panel members making more positive, rather than negative, movements
 - the benefits of regeneration are spread widely, with more than half of the members of the NDC area panel seeing more positive, than negative, transitions; a small group of people showed eight or more positive transitions, amongst whom there was an overrepresentation of workless people and those in social rented accommodation; these members of the panel may have had more opportunities to become aware of positive changes occurring in NDC areas, and they may also have benefited from any targeting of interventions on the most disadvantaged

⁹³ For instance McCulloch, A. (2001) Ward level deprivation and individual social and economic outcomes in the British Household Panel Survey. *Environment and Planning A*, 33, 667-684; Dietz, R.D. (2002) Social Science Research 31, 539-575; Oreopoulos, P. (2003) The long run consequences of living in a poor neighbourhood. *The Quarterly Journal of Economics*, 118, 1533-1575.

⁹⁴ McCulloch, A. (2001) Ward level deprivation and individual social and economic outcomes in the British Household Panel Survey. *Environment and Planning A*, 33, 667-684, 681.

- different socio-economic groups showed contrasting rates of change for different indicators; in relation to ethnicity, black people in particular saw more evidence of positive change than did white residents
- there are strong and consistent relationships across place-related indicators of change: this depth of association is generally less true for people-related indicators
- there are consistent signs that those in the NDC area panel saw more positive change than those in the comparator-areas' panel; however, when data are adjusted to take into account of individual-level socio-demographic factors, then only a few indicators show members of the NDC area panel making statistically significant positive change when assessed against members of the comparator-areas panel
- and one reason for this is that area-effects, or where an individual lives (as demonstrated in Appendix 1), is of minor importance when compared with who they are: in line with findings from other studies, evidence developed in this evaluation point to the limited impact of area-characteristics on rates of change experienced by individuals.

3.47 For two reasons, the policy implications arising from these findings are not as clear cut, or as extensive, as for area-level change discussed in the previous chapter. The cross-sectional area-level data developed in Chapter Two simply talks more to the nature of this area-based scheme. And as individual-level data explored in this chapter is adjusted to take into account personal socio-demographic factors, so in turn the scale of statistically significant relationships diminishes: the more sophisticated the modelling adopted, the fewer associations emerge. It should be stressed that this is not a problem for the Programme. Rather it reflects the intrinsically more powerful nature of the individual-level, as opposed to area-level data. One is based on a sample of over 3,500 responses, each of which can be adjusted to take into account individual-level socio-demographics, the other depends on a 'population' of just 39 areas.

3.48 Three policy considerations merit comment here:

- as with other findings uncovered by the evaluation, evidence points to the Programme securing rather more in the way of place-, as opposed to people-, related change
- where individuals do see change, there is evidence pointing to close inter-relationships across different, largely place-related, outcomes; this finding supports one of the key principles underpinning the notion of holistic regeneration: improvements in one outcome are associated with improvements in another

- there is also evidence pointing to positive associations between both place-, but also people-, related projects and positive outcomes for beneficiaries of such schemes; this is important because it establishes direct relationships between NDC partnership interventions and outcomes for individuals; one problem in relation to people-related interventions in particular, is that these projects do not generate enough positive outcomes to counteract more insistent, and possibly contrary, trends occurring at the scale of the LAD or even nationally; for instance, job training or mentoring projects may lead to a small number of identifiable individual-level outcomes, but these gains will be insignificant when compared with processes operating in local, regional, and national, labour markets.

Section 4

A concluding comment

4.1 This report has explored two themes: what helps explain why some NDC areas, and some individuals within these areas, saw more change than did others in that period 2002 to 2008? The conclusions to each of these questions are outlined at the end of Chapters Two and Three respectively and no purpose is served in repeating them in any detail here. Suffice to say that synthesising across evidence in relation to area-level change (Chapter Two), perhaps the key conclusion to stress is that associations emerge between change and, for instance, the model of delivery adopted by partnerships, and the location of NDC areas, but that it is not possible to explain all of the variation in rates of change across these 39 areas. And with regard to individual-level change (Chapter Three), perhaps the key conclusion to emphasise is that area characteristics are of minor significance in explaining change for individuals when compared with individual-level characteristics.

Two questions are considered in the remaining sections of this chapter:

- what are the inter-relationships between change for areas and for people?
- how do findings here relate to the generally more positive conclusions outlined in Volume 6 of these final reports which considers impact and value for money?

Change for areas and for people

4.2 Unravelling the dynamism of relationships between people and place is fundamental to an understanding of why, and how, change occurs in regeneration schemes. This debate is explored within six themes:

- the nature of areas
- the most disadvantaged see most change
- especially in relation to place-based outcomes
- rather than people-based outcomes
- disadvantaged people in areas
- area effects are anyway limited.

The nature of areas

- 4.3 It is important to emphasise at the outset that the very notion of 'areas' is a difficult concept. The 39 NDC areas, and this would be true for all regeneration programmes, represent artificial constructs. They are delimited territories containing varied physical structures and characteristics. They are home to diverse bodies of residents, endowed with a range of different health, educational and social attributes, who themselves link into wider economic and social networks in various ways.
- 4.4 Of course, defined regeneration areas can provide a useful framework through which to channel a wide range of interventions designed to improve the environment, enhance the quality of services for residents, and so on. Defining areas can also help focus, and make more cost-effective, activity carried out by existing delivery agencies: a theme explored in Volumes 1 to 4 of this final suite of reports. Nevertheless, ultimately 'areas' are not independent entities: they are made up of their residents.

The most disadvantaged see most change...

- 4.5 One constant theme to emerge from analyses of NDC area change data is that, in general, more deprived individuals experienced more positive change between 2002 and 2008. This is to be expected: they had more headroom for change, and they may have benefited as a result of being prioritised by NDC partnerships wishing to target interventions on their most disadvantaged residents. This accords with other findings from the evaluation that the most deprived areas also tended to experience more change than less deprived neighbourhoods (see for example 2.35).

...especially in relation to place-related outcomes...

- 4.6 Deprived people experienced most change in relation to place. Many place-related indicators ask respondents to indicate relative satisfaction with a particular aspect of local services, the environment, fear of particular crimes, trust in local institutions, and so on. As is discussed in 3.37 above, it may not be too hard to get someone to move from an initially (2002) disadvantaged position of being 'very-dissatisfied' with a service or a problem, to being 'satisfied' by 2008. Compare that with the difficulties of moving those who were already 'satisfied', and therefore less disadvantaged on the relevant indicator in 2002, to being 'very satisfied' by 2008. It is easier for more deprived individuals to make positive change.

...rather than people-related outcomes

4.7 It has generally proved more difficult to achieve positive change with regard to people-related indicators for those who were most disadvantaged in 2002. A number of factors are at work here. Making a positive people-related transition for the most disadvantaged in 2002, represents a greater challenge than for many place-related indicators. Changing personal attitudes in relation, say, to the local environment or the community is one thing. Making a transition from being, to not being, in worklessness, is an altogether more complex and difficult task both for the individuals concerned and also for partnerships. It may take a great deal of time, and personal attention, to achieve one people-related outcome. It may well be that NDC funded projects have sent individuals on a trajectory which will ultimately lead them to find a job, improve their educational attainment, adopt a healthier life-style, and so on. But those changes are difficult, if not impossible, to identify through 'top-down' household surveys. And whereas place-related schemes such as neighbourhood wardens or environmental projects will impact on relatively large numbers of people, this is not the case for many people-related schemes which generally target specific client groups. Many residents in NDC areas will be unaware of even the existence of some people-related projects. It is true, as is developed in 3.29, that positive benefits do accrue to participants of these interventions, but the scale of such changes will tend to be swamped by wider processes operating on NDC areas.⁹⁵

Disadvantaged people in areas

4.8 As is developed throughout this report, and is explored further in Volume 6 of this final suite of reports, NDC areas saw more change than did the comparator areas, especially with regard to place-related indicators. One key factor in explaining this is that there were more deprived individuals in NDC areas in 2002, than was the case for the, slightly less deprived, comparator areas.⁹⁶ And, as is alluded to above, more deprived individuals were more likely to see positive change. This concentration of deprived individuals in NDC areas in 2002, helps in part to explain their relatively better performance than was the case for the comparator-areas over the following six year period.

⁹⁵ To see how this operates in relation to one people-based outcome see contrasting perspectives from bottom-up and top-down evidence with regard to worklessness: CLG (2009) Understanding and Tackling Worklessness Volume 1: Worklessness, Employment and Enterprise: Patterns and Change: Evidence from the New Deal for Communities Programme. www.communities.gov.uk/publications/communities/worklessnessvol1

CLG (2009) Understanding and Tackling Worklessness Volume 2: Neighbourhood Level Problems, Interventions, and Outcomes: Evidence from the New Deal for Communities Programme. www.communities.gov.uk/publications/communities/worklessnessvol2

⁹⁶ CLG (forthcoming) New Deal for Communities Evaluation: Technical Report (Chapter 3 for details of the comparator areas).

- 4.9 It should be remembered that this Programme was designed to close gaps between these especially deprived neighbourhoods and the rest of the country and it is reasonable to argue that in two respects at least this has indeed been achieved. The 39 areas selected for this Programme were indeed amongst the most deprived areas in England. And exactly because there were more deprived individuals in these 39 NDC areas, it was relatively easier to achieve change than was true for the comparator areas. The latter whilst disadvantaged localities, did not accommodate the same proportion of very deprived people in 2002.
- 4.10 As more deprived individuals in NDC areas experienced positive change over this six year period, so in turn cross-sectional area-level data shows NDC areas improving relative to other benchmark geographies. As is outlined in 3.42 when discussing MLMs, it is these individual-level factors, including levels of deprivation and socio-demographic characteristics, which represent key factors in explaining change. And of course, residents in these 39 areas also benefited from NDC partnership interventions not available to those in the comparator areas.

Importance of individual-level factors in explaining change

- 4.11 Evidence from this Programme points to the importance of individual-level socio-demographic factors in explaining change. Change is strongly associated with who people are, and in particular how deprived they were in 2002.
- 4.12 One factor which helps explain the relatively limited role which area-characteristics play in explaining individual-level change is that even in this most intensive of ABIs, most people do not have any direct engagement with their local partnership. In 2008 only 22 per cent of residents stated they had been involved in an activity organised by their NDC partnership. In reality, of those people who were involved in 2008, only 21 per cent actually attended training schemes or courses run by their NDC partnership, and 24 per cent made use of services supported by NDC partnership, and these are not mutually exclusive groups. Although this figure of 22 per cent is higher than the equivalent 2002 statistic of 16 per cent, it still means that more than three quarters of these residents had no active interaction with their local Partnership at that time.⁹⁷
- 4.13 Of course, more people will have benefited in a passive way from place-based projects, such as environmental improvement schemes. But even then, for the NDC partnerships' larger-scale interventions to culminate in substantial area-effects identifiable through multilevel modelling would require each of the 39 NDC schemes to have had a positive impact on virtually every individual

⁹⁷ This figure relates to responses to the 2008 household survey. A higher figure of 44 per cent applies to all of those who have at some time been part of the NDC panel responding to: "have been involved in any activities organised by the NDC in the last 2 years".

within the area. This is simply not going to happen. It is very likely therefore that in any regeneration scheme, area-effects will always be far less important than individual-level factors in explaining change: it is just not possible to change outcomes for enough individuals. Hence the overarching conclusion to be drawn from this debate is that neighbourhood-based regeneration schemes are likely to have only a relatively limited impact on residents within the defined neighbourhood. Many residents will only be marginally affected by interventions, and in any event, individual-level socio-demographic factors play a more important role in explaining change, than does where an individual lives.

Change within New Deal for Communities areas; assessing impact

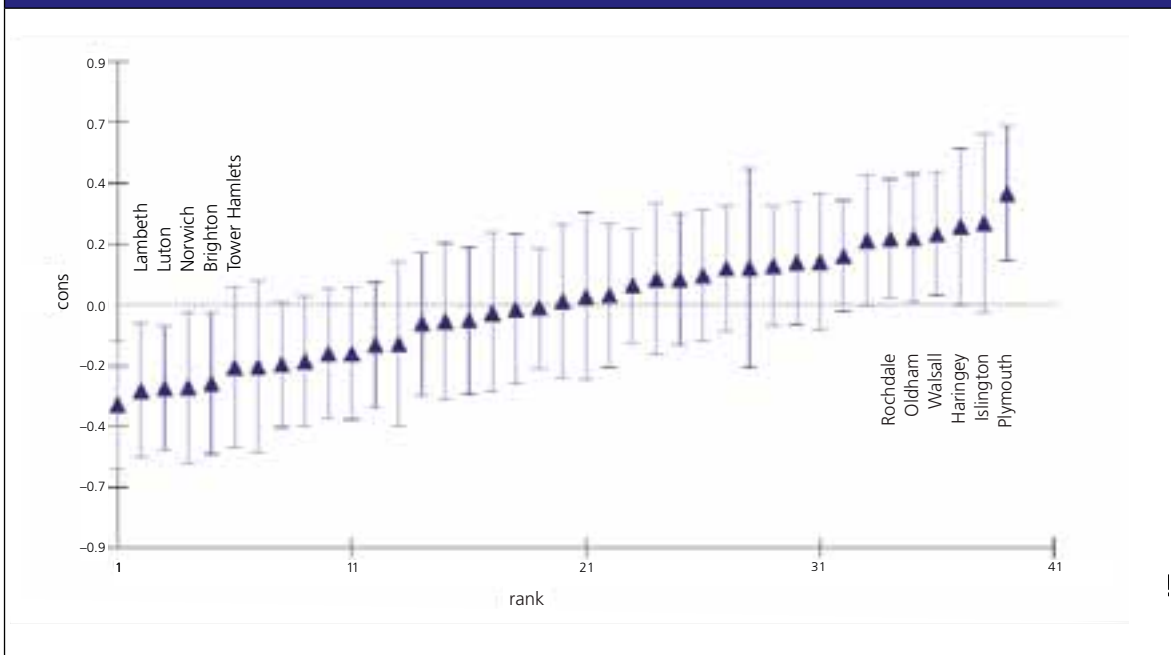
- 4.14 Previous chapters identify issues which help explain in part why some NDC areas have seen more change than others, and point to the relatively limited impact of area-level characteristics in understanding change for individuals. As is developed in chapters two and three, there are good reasons why it is difficult fully to explain some areas seeing more change than others, and why area-level factors are relatively limited in explaining individual-level change.
- 4.15 However, as is developed in Volume 6 the cumulative effect of NDC partnership spend and activity in these 39 areas is indeed associated with net positive impacts with regard to some indicators, when NDC Programme-wide change is compared with what happened in similarly deprived comparator areas. When a monetary figure is placed on these 'net outcome' benefits, then these substantially exceed the costs of the Programme (see Volume 6, 4.8). This Programme shows good value for money. Hence, it is difficult fully to explain why some of the 39 NDC areas have seen more change than others. But when change across these 39 as a whole over the 2002 to 2008 period, is assessed against change in other deprived areas, then there is evidence of a positive, and monetisable, net NDC effect.

Appendix 1

Multi-level modelling

Figure A1 provides details of change between 2002 and 2008 with regard to residents thinking the NDC Partnership had improved the area over time. Each of the 39 NDC areas is represented by a vertical line. The triangle on each line corresponds to the estimate of how different each NDC area is from the Programme-wide average, from what would have been expected given the characteristics of the individuals within each area. The line through each triangle represents the confidence intervals for each estimate: the chances are 95 in 100 that the 'true' value will fall between the top and the bottom of the line. The zero line represents the Programme-wide average. All of the NDC areas for which the line does not overlap with zero can be said to be significantly different from the Programme-wide average, given the known characteristics of residents within each area.

A1.1: Multilevel models: New Deal for Communities partnership improved the area



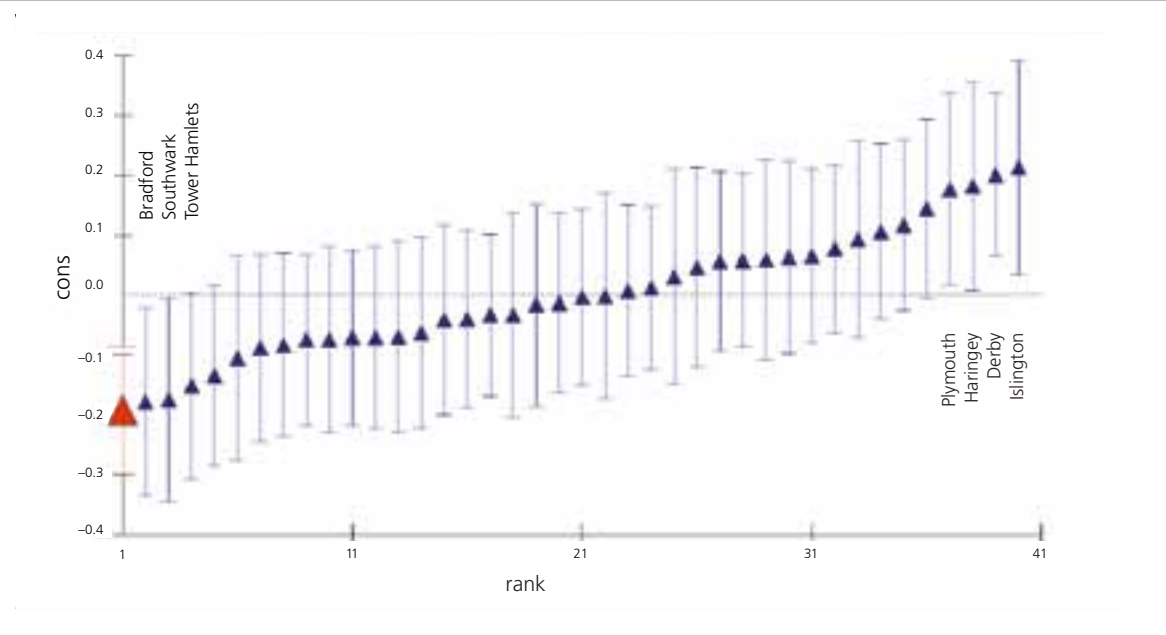
This shows that:

- Plymouth, Haringey, Walsall, Oldham and Rochdale NDC areas all saw significantly greater change than the Programme-wide average after taking into account the characteristics of individuals within these areas
- conversely five areas were significantly below the Programme-wide average : Lambeth, Luton, Norwich, Brighton and Tower Hamlets
- the detailed statistical model which underpins this diagram indicates that there is a significant area effect, and that the variation in levels of change recorded amongst residents for increases in thinking the NDC partnership has improved the area cannot be explained entirely by the differences in the characteristics of the individuals within these areas
- however, this area effect accounts for only 4.1 per cent of variation seen across all NDC residents: 95.9 per cent can be explained or predicted by individual-level effects.

The second indicator relates to increases in thinking the area improved in the last two years. Figure A2 presents the estimated difference for each NDC area from the average change, bearing in mind what might have been expected given the composition of residents in each area. Here a 40th line with a larger triangle is included. This represents the estimate for the comparator areas survey. This allows for an assessment of change, not just across NDC areas, but also against that occurring in other non-NDC deprived areas. After taking into account differences in the composition of the population within each of the 40 areas, this shows that:

- change experienced in the comparator areas is, not only significantly below the average, but is lower than all 39 NDC areas
- Islington, Derby Haringey and Plymouth not only saw significantly better change than the comparator areas, but also experienced significantly more change than the Programme-wide average
- Oldham, Southampton, Salford, Luton, Walsall, Knowsley, Coventry Middlesbrough and Sunderland saw significantly greater change than might be expected on this indicator when assessed against what occurred in the comparator areas
- change in Bradford and Southwark was significantly below the Programme-wide average
- just 2.2 per cent of the variation can be attributed to area-level differences, and 97.8 per cent by the characteristics of the individuals included within the model.

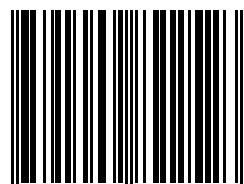
A1.2: Multilevel models: Area improved last two years



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