An inclusive growth monitor for measuring the relationship between poverty and growth

by Christina Beatty, Richard Crisp and Tony Gore

This report presents a new tool – the inclusive growth monitor – to measure the relationship between prosperity and poverty. Economic prosperity does not necessarily benefit all and there is a compelling need to understand whether cities are delivering 'inclusive growth'.

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INSPIRING SOCIAL CHANGE

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Economic prosperity does not necessarily benefit all. This means there is a compelling need to understand the relationship between prosperity and poverty to see if cities are delivering 'inclusive growth'. This report presents a new tool – the Inclusive Growth Monitor – to measure that relationship.

The report:

- details how the Inclusive Growth Monitor was conceived and designed;
- presents data on all 39 LEP areas of England using 18 indicators to capture the relationship between economic performance or potential ('prosperity') and poverty and related forms of disadvantage ('inclusion');
- highlights the positive relationship between prosperity and inclusion at a single point in time, but shows that increases in prosperity over time are not necessarily associated with greater inclusion;
- provides a strategic framework to shape the inclusive growth agenda in cities and city regions.

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Summary

- There is increasing concern that disadvantaged groups and areas do not always benefit from economic growth. Evidence shows that growth in the form of additional national income or new jobs does not necessarily 'trickle down' to those most in need, including households experiencing poverty. This has led to calls to better understand the link between growth and poverty to help promote more inclusive forms of growth.
- Despite this, there is no comprehensive tool for measuring this relationship. Existing measures of economic growth related to production such as Gross Domestic Product (GDP) or Gross Value Added (GVA) fail to capture the nature and distribution of the proceeds of growth.
- This report presents a new tool – the inclusive growth monitor – that has been developed for the Joseph Rowntree Foundation to directly address the need to measure the relationship between growth and poverty. The report explains how the inclusive growth monitor was conceived and how it is constructed. The monitor will be updated annually by a team in the Inclusive Growth Analysis Unit based at the University of Manchester.
- The inclusive growth monitor is based on 18 commonly available indicators which have been grouped into two themes – prosperity and inclusion – that each contain nine indicators. The inclusion theme captures different aspects of poverty and related forms of disadvantage, while the prosperity theme incorporates different elements of economic performance or economic potential. Each theme contains three dimensions (three indicators in each) that reflect different aspects of prosperity or inclusion. This hierarchy is summarised in Table 1. The 18 indicators can be considered on their own or combined to create composite scores for any of the dimensions or themes. All data is presented at Local Enterprise Partnership (LEP) level to capture outcomes in functional economic areas.
- The value of the inclusive growth monitor lies in providing stakeholders with:
    - a strategic framework to shape the inclusive growth agenda in cities and city regions by identifying strengths and weaknesses across policy areas and, potentially, inform investment decisions;
    - a means of monitoring performance against inclusive growth objectives and benchmarking outcomes against other areas;
    - a tool that is more flexible and accessible in the way data can be presented and understood than alternative frameworks that are currently available.

Table 1: Building blocks of the inclusive growth monitor

Theme	Dimension	Broad indicator
Inclusion	*Income*	Out-of-work benefits
		In-work tax credits
		Low earnings
	Living costs	Housing affordability
		Housing costs
		Fuel poverty
	Labour market exclusion	Unemployment
		Economic inactivity
		Workless households
Prosperity	*Output growth*	Output
		Private sector businesses
		Wages/earnings
	Employment	Workplace jobs
		People in employment
		Employment in low pay sectors
	Human capital	Higher level occupations
		Intermediate and higher level skills
		Educational attainment

- The data generated through the inclusive growth monitor shows there is a clear positive association between prosperity and inclusion *levels* in 2014. LEP areas with higher levels of prosperity in that year tend to have higher levels of inclusion, and vice versa.
- There is a strong geographical divide in terms of levels of prosperity and inclusion in 2014 as measured by the underlying indicators. LEP areas with the highest levels of prosperity and inclusion tend to be in the south and east of England; those with the lowest levels are largely found in the north and Midlands.
- The picture of *change* in prosperity and inclusion levels between 2010 and 2014 is more mixed:

  - Some LEP areas that had low levels of prosperity in 2014 such as the Black Country, Greater Lincolnshire and Greater Birmingham and Solihull also experienced little relative change between 2010 and 2014. However, other LEPs – notably Greater Manchester and Sheffield City Region – with low levels of prosperity in 2014 experienced comparatively high amounts of change between 2010 and 2014. This suggests that some of the core cities in the north are narrowing the gap relative to other areas in England.
  - LEP areas such as London, Lancashire and Greater Birmingham and Solihull had low levels of inclusion in 2014 and saw relatively little change in those levels between 2010 and 2014. By contrast, some LEP areas in the north and Midlands with low levels of inclusion in 2014, particularly the Black Country and North Eastern, experienced some of the highest degree of positive change in inclusion levels in the preceding four years. This shows they are catching up, but not quickly enough to change relative positions significantly.
  - London experienced the highest amount of change in prosperity levels and the lowest amount of change in inclusion levels between 2010 and 2014. This challenges assumptions that prosperity and inclusion are automatically correlated. By contrast, some LEP areas that have seen less change in prosperity levels between 2010 and 2014 have seen more positive change in inclusion levels. One implication is that areas that are less buoyant economically (as measured by prosperity indicators) still have some capacity to make valuable inroads into poverty and related forms of disadvantage (as measured by inclusion indicators). A more active strategy to tackle spatial imbalances across and within regions may further strengthen an already positive relationship between inclusion and (limited) growth in prosperity in such areas.

1 Introduction

Why do we need an inclusive growth monitor?

There is increasing concern in the UK and overseas that disadvantaged groups and areas do not always benefit from economic growth. Evidence shows that growth in the form of additional national income or new jobs does not necessarily 'trickle down' to those most in need, including households experiencing poverty. This has led to calls to better understand the link between growth and poverty in order to promote 'inclusive growth'.

Despite this, there is currently no comprehensive tool available for measuring this relationship. Existing measures of economic growth related to production such as Gross Domestic Product (GDP) or Gross Value Added (GVA) fail to capture the nature and distribution of the proceeds of growth. To address this shortcoming, this report presents a new inclusive growth monitor for measuring the relationship between poverty and growth. This is a prerequisite for developing strategies and interventions to maximise the extent to which growth contributes to poverty reduction.

Introducing the inclusive growth monitor

This report explains the design of the inclusive growth monitor and provides some illustrative examples of how it can be used.

The monitor was developed in four stages which are reflected in the structure of this report.

- Section 2 outlines the thinking behind the inclusive growth monitor. It reviews the existing evidence base on the relationship between poverty and growth and shows how this informed the broad thematic content of the inclusive growth monitor. The section concludes by exploring alternative, existing approaches to measuring inclusive growth. It discusses the relative pros and cons of each broad approach and shows that the lack of an appropriate 'off-the-shelf' solution made it necessary to develop the new inclusive growth monitor presented here.
- Section 3 details the design of the inclusive growth monitor and begins by explaining the key principles underpinning its approach. It then outlines the construction of the inclusive growth monitor in terms of the hierarchy and number of indicators within each level; the spatial scale at which data is presented; the frequency of reporting; and the selection of indicators within the monitor.
- Sections 4 and 5 provide illustrative examples of how the inclusive growth monitor can be used and some analysis of what the data tells us about the relationship between prosperity and inclusion. Section 4 uses the example of the Leeds City Region to look at how data can be presented at the level of an individual Local Enterprise Partnership (LEP); Section 5 explores data across all 39 LEPs in England.

The monitor is a nested hierarchy built on 18 commonly available indicators which aggregate into six dimensions (three indicators in each) and two themes (nine indicators in each). These 18 indicators can be considered on their own or combined to create composite scores for any of the six dimensions or two themes. All data is presented at LEP level to capture outcomes in functional economic areas. The constituent parts of the monitor are shown in Table 2.

Table 2: The component parts of the inclusive growth monitor

Theme	Dimension	Indicator	Full definition of indicator
Inclusion	*Income*	Out-of-work benefits	% of working-age population receiving out-of-work benefits
		In-work tax credits	% in-work households with and without children receiving Child and/or Working Tax Credits
		Low earnings	Gross weekly pay at the 20th percentile
	Living costs	Housing affordability	Ratio of lower quartile house prices to lower quartile earnings
		Housing costs	Median monthly rents for private sector dwellings
		Fuel poverty	% of households classed as being 'fuel poor' (using Low Income–High Costs model)
	Labour market exclusion	Unemployment	% of working-age population not in employment but actively seeking work
		Economic inactivity	% of working-age population who are economically inactive
		Workless households	% of working-age households with no-one in work
Prosperity	*Output growth*	Output	Gross Value Added (GVA) per capita (in £ at current prices)
		Private sector businesses	Number of private sector workplaces per 1,000 resident population
		Wages/earnings	Median gross weekly pay for full-time workers
	Employment	Workplace jobs	Employee jobs by working-age population (jobs density)
		People in employment	% of working-age population in employment (employment rate)
		Employment in low pay sectors	% of workers employed in administrative and support services, wholesale and retail trade, accommodation and food services, and residential care sectors
	Human capital	Higher level occupations	% workers in managerial, professional and technical/scientific occupations (SOCs 1, 2 and 3)
		Intermediate and higher level skills	% working-age population qualified at NVQ Level 2 and above
		Educational attainment	% of pupils at the end of Key Stage 4 achieving five or more GCSEs or equivalent at grades A* to C (including English and maths)

2 Reviewing the links between poverty and growth

This section explains how the development of the inclusive growth monitor has been informed by the evidence base on the link between growth and poverty. It begins by looking at how that link has been conceptualised and the possibilities for representing this in the monitor. As shown below, this includes a very broad range of factors and not all of these can be easily measured. For this reason, the report moves on to identify those relationships that can be both empirically substantiated and measured at appropriate spatial scales. It explains how this review was used to set parameters for the contents of the inclusive growth monitor and concludes by looking at existing approaches to measuring 'inclusive growth'. This options appraisal assesses their relative strengths and weaknesses as the basis for validating the methods underpinning the inclusive growth monitor presented in this report.

Conceptualising the relationship between poverty and growth

An inclusive growth monitor needs to be rooted in an understanding of what is meant by poverty and by growth, and how they might be related. This provides a basis for selecting indicators to represent that relationship.

For the purposes of the inclusive growth monitor poverty is understood in the sense of JRF's preferred definition: 'When a person's resources (mainly their material resources) are not sufficient to meet their minimum needs (including social participation)' (Goulden and D'Arcy, 2014, p. 3). Ideally, an inclusive growth monitor would measure this directly using a standard indicator such as households below 60 per cent of median income. However, the lack of datasets to measure income at lower spatial scales means this is not possible. Instead, poverty must be measured using proxies such as levels of worklessness (unemployment or economic inactivity) or benefit claimant rates, as is common in other studies (e.g. Crisp *et al.*, 2014; Fenton, 2013; Lee *et al.*, 2014a). Growing concerns about high levels of in-work poverty (see MacInnes *et al.*, 2014) also suggest the importance of capturing low incomes among members of working households. These proxy measures are invariably imperfect but necessary given the lack of data on households experiencing poverty at sub-regional levels.

Growth is conventionally measured in terms of the change in Gross Value Added (GVA) or Gross Domestic Product (GDP):

- GVA measures the contribution to the economy of each individual producer, industry or sector in the United Kingdom;
- GDP is the monetary value of all the finished goods and services produced taking into account taxes and subsidies (GDP = GVA + taxes on products - subsidies on products).

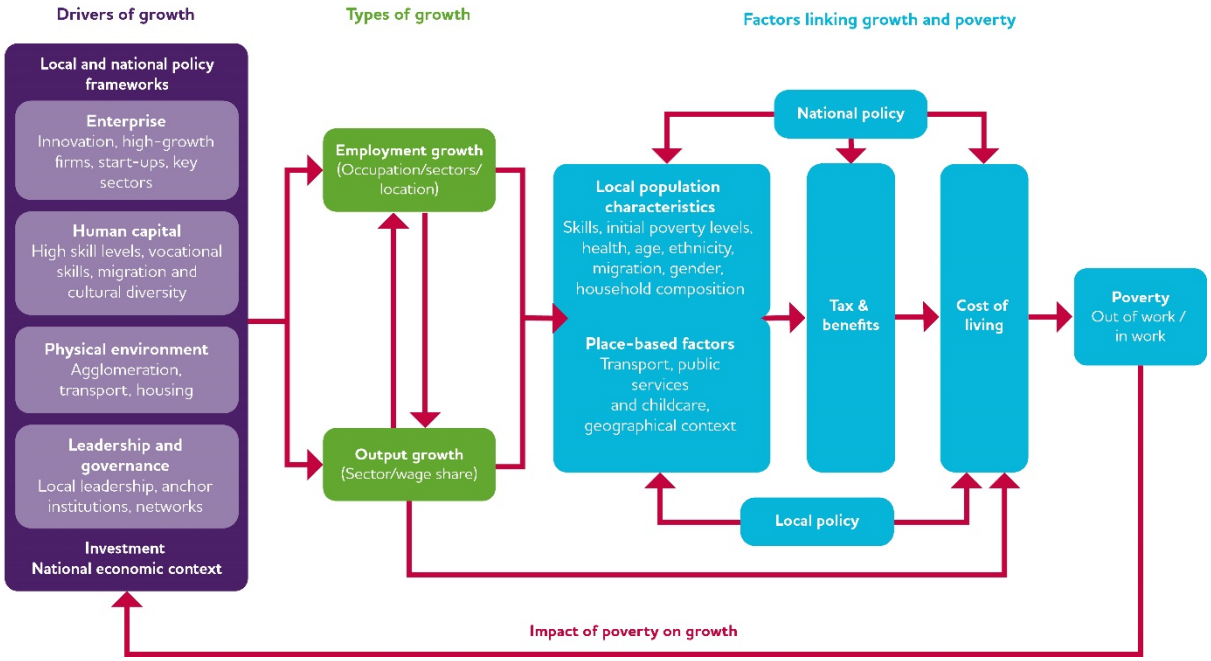
While constructed slightly differently, both measures effectively capture the combined output of all individuals in employment. In other words, they reflect the number of people in employment and how productive they are. This means that growth can increase on these measures if either existing workers become more productive or employment increases, or some combination of the two. These different potential routes to growth have varying implications in terms of poverty reduction. In one scenario, there may be a virtuous circle where productivity increases and firms reinvest additional profits in creating new jobs. Some of this additional employment may benefit households in poverty. Equally though, these jobs could be inaccessible to those experiencing poverty because of a lack of appropriate skills or experience. Alternatively, the new jobs created may offer insufficient pay and hours to lift households above poverty thresholds. Additional employment generated through growth is no guarantee of positive outcomes around poverty reduction.

An alternative scenario is one where growth occurs without creating significant numbers of jobs. This can happen, for example, where growth is driven by increases in productivity in high-skilled sectors due to new technologies. This may not generate additional employment, especially if profits are taken as

dividends rather than invested in labour. In this scenario there are likely to be few immediate benefits for households in poverty although additional spending by more highly paid workers may eventually create some additional employment. These different scenarios illustrate the need for indicators within the monitor to capture the different dimensions of growth in terms of output (GVA) and its component parts (employment and productivity/pay).

Defining poverty and growth provides some guide to the range of indicators the inclusive growth monitor needs to include. But there is also a range of factors which further mediate the relationship between poverty and growth that warrant inclusion. Lee *et al.* (2014a) provide a useful conceptual framework from an earlier study on poverty and growth (see Figure 1) that helps to illustrate this. This conceptual model suggests four drivers of growth (enterprise, human capital, the physical environment and leadership/government) that shape growth. The nature of this growth in terms of the type of employment created (sector, occupation and location), as well as the extent to which output is captured as profits or wages, will also inform poverty outcomes. Moreover, growth is filtered through four sets of mediating factors (local population characteristics, place-based factors, the tax and benefits system, and the cost of living). These mediating factors are, in turn, informed by national and local policy.

Figure 1: A conceptual framework of the link between growth and poverty



Source: Lee *et al.* (2014a)

This conceptual model and accompanying analysis is largely based on the premise that growth drives poverty reduction, but the authors also acknowledge the possibility that poverty reduction can drive growth. This can happen if poverty is acting as a 'drag' on growth because it reduces spending power in the local economy, reflects inefficient use of human capital and commands resources to address the consequences of poverty that could otherwise be used for growth enhancing activities (Lee *et al.*, 2014a, p.10). One implication is that reducing poverty could stimulate economic growth, although there is limited evidence to support this in the UK. One exception is work by Bivand and Simmonds (2014) which estimates that an out-of-work claimant moving into a Living Wage job benefits the local economy on average by £14,436 annually, of which £1,303 is the multiplier (the 'multiplier' is a measure of the additional economic output generated when individuals who begin to receive the Living Wage spend more on consumption in shops, restaurants, on consumer goods and so on). This illustrates how reducing poverty through moving individuals into employment could generate extra output and productivity that contributes to economic growth.

This conceptual model provides a useful foundation for understanding the different factors mediating the relationship between growth and poverty. There are clearly elements that should be included in an inclusive growth monitor. The cost of living, for example, will play an important role in shaping the link

between poverty and growth. Rapid growth in areas with limited housing stock may push up housing costs. This can limit the financial gains experienced by households in poverty that secure work or an increase in wages. However, the model also presents considerable conceptual and practical challenges in terms of developing an inclusive growth monitor. Some elements clearly do not lend themselves to ready quantitative measurement (e.g. leadership and governance). Others could be calculated but not without creating bespoke datasets to measure change at sub-national level (e.g. tax and benefit changes[1]). Moreover, trying to capture all the elements of this model may lead to an unwieldy and unworkable set of indicators of interest. One way of overcoming these conceptual and practical challenges is to look at the existing empirical evidence base. This helps to identify relationships that can be both empirically substantiated and measured at sub-national spatial levels such as cities and neighbourhoods.

The empirical relationship between poverty and growth

There are a small number of studies which directly explore the relationship between growth and poverty in the UK. These consistently find that there is no automatic link between economic growth and poverty reduction. Lee *et al.'s* (2014a) analysis of the 60 largest cities in the UK reported that some economically successful cities such as London had unchanged or increasing poverty rates at a time of growth between 2001 and 2010. Lupton *et al.'s* (2013) study of London between 2001 and 2011 also found that strong employment growth between 2000 and 2008 and relative economic resilience between 2008 and 2011 during the recession did not translate into lower poverty or reduced inequality. Finally, Cox *et al.'s* (2010) research on city regions in northern England highlighted the uneven geographical relationships between growth and poverty. They found that rising economic growth at the city-region level was not sufficient for reductions in economic deprivation at the neighbourhood level (measured using the Economic Deprivation Index). Even in city regions where growth was strongest, some neighbourhoods experienced increasing rates of deprivation.

There are also a number of studies which look at how poverty and growth are related in terms of the types of growth most strongly associated with poverty reduction and factors which mediate that relationship. Key findings include:

- Growth tends to be more positively associated with poverty reduction in areas where it is driven by employment. Employment growth has a particularly strong effect in cities with weak economies, where new employment has a larger impact on poverty (Lee *et al.*, 2014a).
- Growth can raise wages but also increase living costs such as those associated with housing with potentially negative impacts for households in poverty. Areas with higher GVA per head tend to have higher houses prices and higher ratios of lower quartile earnings to lower quartile house prices. This may offset the financial benefits of increased earnings for those towards the bottom of the earnings distribution in high GVA cities (Lee *et al.*, 2014a).
- Growth in high-skilled, high-paid jobs may not have immediate impacts for households in poverty unable to access employment. However, it may have lagged multiplier effects in terms of generating 'knock-on' employment in associated business and personal services sectors (e.g. office or retail work). Moretti suggests, for example, that high-tech, innovative sectors have the largest multiplier effects in generating five jobs for every one high-tech job (cited in Lee *et al.*, 2014b).
- There is a strong but declining association between worklessness and poverty. Ray *et al.* (2014) show that in 2011/12 workless families made up just under half (47 per cent) of all working-age adults in poverty, while those with at least one person in work made up just over half (53 per cent). High levels of in-work poverty mean that employment growth will not always benefit households in poverty even if members secure new jobs created. In 2013/14 more than half of people in poverty (6.8 million) were in families where someone was in work, 400,000 more than the number in poverty in families where no one was in work, including pensioner families (6.4 million) (MacInnes *et al.*, 2015). Characteristics of work associated with in-work poverty include temporary or precarious work, part-time work and low hourly pay (Ray *et al.*, 2014). Sector also matters with administrative and support services, wholesale and retail trade, accommodation and food services, and residential social care all more strongly associated with in-work poverty (Green *et al.*, 2014).
- Human capital in terms of workforce skills is a mediating factor in the relationship between poverty and growth but the optimum situation is not clear cut. Lee *et al.* (2014a) found that cities with larger proportions of resident populations with higher-level skills tend to have higher levels of GVA per adult than lower performing cities. However, it is not self-evident that raising skills alone will generate

growth and reduce poverty. On the one hand, higher skill levels may help to insulate some individuals from the risks associated with low income including low wages or worklessness (Taylor *et al.*, 2012). But on the other hand, it could also lead to underuse of skills in less buoyant economies (Schmuecker, 2014).

Incorporating the evidence base into the inclusive growth monitor

The review of conceptual and empirical literature above highlights a number of factors that need to be included in the inclusive growth monitor:

- output growth (GVA) and its component parts (employment and productivity/pay)
- material poverty and related proxies (worklessness and out-of-work or in-work benefit claimants)
- mediating factors including the cost of living (especially housing), workforce skills and job quality (pay, occupation and sector).

The inclusive growth monitor presented in this report organises these factors into two overarching 'themes' (inclusion and prosperity) and three related 'dimensions' for each theme, as shown in Table 2. Income, living costs and labour market exclusion are assigned to the 'inclusion' theme to represent aspects of poverty and disadvantage; and output growth, employment and human capital are allocated to the 'prosperity' theme to reflect economic performance or potential. The value of organising categories within hierarchies is that it enables different levels of analysis as explained in Section 3.

Table 3: Themes and dimensions in the inclusive growth monitor

Theme	Dimension
Inclusion	Income (including benefits)
	Living costs
	Labour market exclusion (worklessness)
Prosperity	Output growth
	Employment (including job quality)
	Human capital

This hierarchy of themes and dimensions provided the basis for selecting indicators (see Section 3).

Existing approaches for measuring inclusive growth

There has been relatively little work to develop frameworks to directly measure the relationship between poverty and growth in the UK and the Global North. However, there is a more extensive body of work around inclusive growth that concentrates on the relationship between growth and inequality, particularly outside the UK. This emphasis on inequalities in income and wealth reflects a concern that a focus on poverty alone fails to capture how the proceeds of growth may also be distributed unevenly among large swathes of the 'non-poor' population (ADB, 2011; Anand *et al.*, 2013; European Commission, 2013; Ramos *et al.*, 2013; Stiglitz *et al.*, 2009).

It has prompted a range of global financial and economic institutions – including the International Monetary Fund (IMF), European Commission, Organisation for Economic Co-operation and Development (OECD), Asian Development Bank (ADB) and World Bank – to explore understandings of, and develop frameworks to monitor, inclusive growth (ADB, 2011; Anand *et al.*, 2013; Cingano, 2014; European Commission, 2013; OECD, 2014). There has also been interest in measuring 'inclusive' or 'good' growth at the level of cities or sub-regions using a range of economic, social or environmental indicators (Brookings, 2016; Greater MSP, 2015; PWC, 2013). Poverty indicators do feature in some of these approaches (e.g. the Minneapolis Saint Paul (MSP) Regional Indicators Dashboard) but there is no framework that systematically analyses the relationship between poverty and growth. However, it should be noted that this is very much a live agenda. Work continues in this area with the OECD launching an

Inclusive Growth in Cities campaign in 2016 that will, among other things, develop a set of internationally comparable indicators to measure societal progress and inclusiveness in cities and regions.[2]

Broadly, all existing frameworks tend to fall into three main approaches:

- A single indicator or headline indicators such as the LSE Growth Commission's proposal to measure median household income as a complementary indicator to GDP growth (Aghion *et al.*, 2013). The New Economics Foundation (NEF) has also proposed a set of three headline indicators to measure inequality in the UK (NEF, 2014).
- A dashboard of indicators such as the ADB's Framework of Inclusive Growth Indicators that presents an annual dashboard of 35 inclusive growth indicators across 48 Asian and Pacific countries that cuts across a series of themes (ADB, 2011). In the United States, the Minneapolis Saint Paul Regional Economic Development Partnership (Greater MSP) has also created a Regional Indicators Dashboard which compares the performance of MSP against 11 'peer regions' across the US based on a set of 55 indicators (Greater MSP, 2015).
- A composite index such as the Demos-PWC Good Growth Index which measures the performance of the largest UK cities (at LA and LEP level) against a basket of ten categories defined and weighted through public surveys of what economic success and wellbeing means (PWC, 2013). The Brookings Institution in the United States has also produced a Metro Monitor which tracks relative performance in the 100 largest US metropolitan areas against nine indicators that are used to create composite ranks in three categories of growth, prosperity and inclusion.

Each of these approaches with illustrative examples is outlined in Table 4.

Table 4: Existing approaches for measuring inclusive growth

Framework (source)	Key features	Stated rationale
Single or headline indicator(s)		
World Bank's Global Database of Shared Prosperity (World Bank, 2015)	Measures income growth of bottom 40 per cent of population. Can be benchmarked against average income growth of entire population.	Provides direct focus on less well-off and moves away from emphasis on GDP per capita.
LSE Growth Commission (Aghion *et al.*, 2013)	Advocates measuring median household income as a complementary indicator to GDP growth.	GDP is an inadequate measure of human wellbeing. The choice of a single complementary indicator reflects our 'limited collective attention span'.
New Economics Foundation (NEF) proposal to set targets for tackling inequality in the UK (NEF, 2014)	NEF propose setting targets within the UK for inequalities using the following indicators: income inequality as measured by the Palma ratio (the ratio of richest 10% of the population's share of gross national income (GNI) divided by the poorest 40% of the population's share); inclusive growth measured by change in real median household incomes to gauge if and how the population is benefitting from economic growth or being hit by recession; wealth inequality measured by the concentration of wealth in the top 1%, captured using tax records and ONS surveys.	The negative social and economic impacts of rising inequality demand that the UK government set targets for tackling inequality in the same way that it currently has targets for poverty.
Dashboard of indicators		
Asian Development Bank's Framework of Inclusive Growth Indicators	An annual dashboard of 35 inclusive growth indicators across 48 Asian and Pacific countries that cuts across a series of themes: (i) poverty and inequality (income and non-	Growing income inequalities in the Asia Pacific region despite economic growth can

(ADB, 2011)	income); (ii) economic growth and employment; (iii) key infrastructure endowment; (iv) access to education and health; (v) access to basic infrastructure utilities and services; (vi) gender equality and opportunity; (vii) social safety nets; and (viii) good governance and institutions.	exclude the poor from the benefits of growth, waste human capital and threaten social unrest that could undermine the long-term sustainability of growth.
Minneapolis-St. Paul (MSP) Regional Indicators Dashboard (Greater MSP, 2015)	A dashboard of 55 indicators across eight themes (economy, education, infrastructure, business vitality, environment, talent, liveability, and vital statistics) that compares the performance of MSP to 11 other regions in the United States. It includes two 'shared prosperity' indicators based on poverty rates for, respectively, white people and people of colour.	The dashboard is intended to track the region's change on economic, environmental, and social outcomes as the basis for improving the region's economic competitiveness
Composite index		
International Policy Centre for Inclusive Growth (IPC-IG) Inclusiveness Index (II) (Ramos et al., 2013)	Index of developing countries based on three indicators of: poverty (headcount ratio at US$2 a day PPP); inequality (measured using GINI); employment (employment to population ratio). Countries are scored using a min–max normalisation of data on its three component parts i.e. scores for each country are based on distance from the best situations within the group of developing countries analysed.	Addresses a need to develop an inclusive growth framework that can measure how the proceeds of growth are distributed (poverty and inequality) and how growth changes opportunities for economic participation (employment).
Demos-PwC Good Growth Index (PWC, 2013)	The Demos-PwC Good Growth for Cities Index measures the performance of the largest UK cities (at LA and LEP level) against a basket of ten categories defined and weighted through public surveys of what economic success and wellbeing means. Each category is represented by a single indicator.	Aims to shift debate on local economic development from a narrow focus on Gross Value Added (GVA) to a more holistic measure, understanding the wider impacts that are associated with economic success in a city.
Brookings Metro Monitor (Brookings, 2016)	Assesses relative change in the 100 largest US metropolitan areas by using nine indicators that are standardised and aggregated into composite ranks against three headline categories: growth, prosperity and inclusion.	Aims to advance new ways of measuring success in metropolitan America and provide data to help local and regional leaders understand whether economic development is yielding better outcomes.

All of these approaches have strengths and limitations. A headline indicator provides a simple, digestible figure but arguably lacks the breadth and nuance to fully reflect the complex relationship between poverty and growth. A dashboard of indicators offers a broader range of data that better reflects that complexity yet can struggle to identify a clear set of relationships amidst this 'noise'. Finally, a composite index can address this shortcoming by combining data from several indicators to provide a composite score that summarises patterns of change. It also allows the relative performance of different areas to be easily compared. But the final score derived from the underlying data may not itself be intuitive or

meaningful. Moreover, rankings based on composite scores can illustrate relative performance but the degree of difference between areas will not be apparent without the underlying data.

The relative pros and cons of each approach indicate the need to produce a monitor that draws on the best elements of each while avoiding the pitfalls of any single approach. For this reason our inclusive growth monitor is deliberately flexible in the way it is constructed and the options for presenting data, as detailed in Section 3. Of all the approaches outlined above, the Brookings Metro Monitor 2016 is perhaps closest to achieving this flexibility. The website provides data on both performance of the underlying nine indicators as well as rankings based on standardising and aggregating these values into three themes (growth, prosperity and inclusion) with three indicators in each.[3] Nonetheless, it still does not represent an 'off-the-shelf' solution as it does not include indicators on all the factors that inform the relationship between poverty and growth. There are, for example, no measures to capture skills, housing costs or worklessness. All this suggests the need for a new monitoring tool to measure the relationship between poverty and growth. Section 3 details the inclusive growth monitor that the research team has developed to directly address this need.

3 The design of the inclusive growth monitor

The inclusive growth monitor presented in this paper uses a building block approach based on a set of 18 indicators that can be read individually or combined to create a composite score for dimensions and themes. This section explains precisely how the monitor is designed and constructed. It begins by explaining the key principles informing the approach. It then outlines the construction of the monitor in terms of the hierarchy and number of indicators within each level; the spatial scale at which data is presented; the frequency of reporting; and the 18 indicators selected to create the monitor.

Key principles

A set of key principles underpins the inclusive growth monitor. They reflect the need for it to be robust, intuitive and capable of meeting the needs of primary users that might include local authorities, combined authorities and Local Enterprise Partnerships (LEPs). The key principles are that the monitor is:

- conceptually and empirically informed;
- flexible in construction to avoid the pitfalls of any single approach;
- replicable in using publicly available data;
- relatively straightforward to update in terms of the analytical skills and time required;
- simple to understand including by non-specialist audiences;
- representative of the geographies at which labour markets and institutions responsible for economic development (e.g. LEPs) operate.

These principles are embedded in the construction of the inclusive growth monitor as outlined in the sections below.

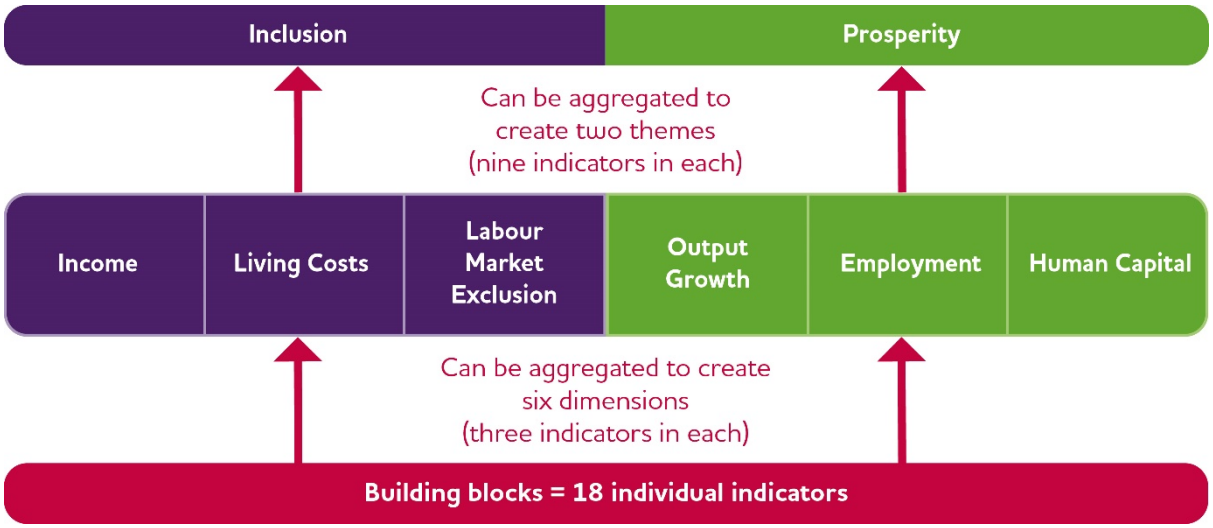
A flexible approach

A multi-level framework

The inclusive growth monitor uses a building block approach founded on a base level of 18 indicators. These 18 indicators can be presented in their own right or combined to produce a composite score for dimensions and themes. This hierarchy is outlined in Figure 2.

There are a number of rationales for this multi-level approach. The monitor effectively combines two different approaches - dashboard and composite index - to avoid the pitfalls of any single method. The 18 base indicators selected (see Section 3.5) provide the breadth of data needed to understand the complex relationship between prosperity and inclusion. It also avoids the limitations of only using a composite score or index approach where scores might not be intuitive as they are not presented as 'real rates' (see Fenton, 2013).

Figure 2: A multi-level framework



At the same time, the ability to aggregate several indicators to create composite scores for dimensions and themes overcomes the 'noise' associated with a long list of indicators. These broader composite measures also make nested relationships clearer by illustrating the relative contribution of each dimension to theme scores. For example, it will show if the living costs dimension makes a particular high contribution to the inclusion theme score. Composite scores also enable ready comparisons across areas. For instance, it is easier to see how one LEP area has changed in terms of prosperity relative to other LEP areas using a single score rather than studying nine separate indicators.

The number of indicators

The choice of 18 indicators reflects the need to incorporate six dimensions that each represent different aspects of prosperity and inclusion (see Section 2). Selecting three indicators in each dimension helps to provide depth and rigour. The decision to construct dimensions around three indicators was based on a mix of conceptual, methodological and pragmatic reasons. A single indicator was deemed insufficient to represent each dimension. For example, there is no one indicator which alone could represent the employment dimension in the prosperity theme. Multiple indicators are needed to reflect the number of residents in employment (the employment rate), the number of jobs being created relative to the working-age population (job density) and the quality of employment generated (using sector as a proxy for in-work poverty). Each of these indicators has merit and tells us something about different aspects of employment growth. But no indicator in isolation can provide the full context.

Using a basket of three indicators per dimension also ensures that movement in any single indicator does not disproportionately impact on the dimension score. It helps to balance out the contribution of any one indicator or dimension to the overall picture and, in doing so, to remove the need for weightings to be introduced. It also provides a useful symmetry with the three dimensions each containing three indicators within both of the overarching themes of prosperity and inclusion.

The choice of three indicators was also guided by the availability of data as, for some dimensions, there were no more than three appropriate indicators. A further practical reason is that limiting the number of indicators increases the ease of updating them on a regular basis to track trends over time.

Spatial scale

The choice of spatial scale for the inclusive growth monitor needs to reflect the areas for which relevant datasets are available, the institutional geographies in which local policy actors operate, and the geographies of local labour markets. For this reason, the monitor presents data at the LEP level because this sub-regional geography most closely meets all these needs. Data is readily available for LEPs including a number of datasets from the Annual Population Survey (APS) and Business Register and Employment Survey (BRES) that are used in the monitor. Where data is not available at LEP level (e.g. earnings data from the Annual Survey of Hours and Earnings) it is usually available for local authority

districts and can be combined to produce a count, rate or percentage for the LEP area. In a small number of instances where data is not available at local authority level (e.g. educational attainment data from the Department for Education), population weighted average LEP level data can be derived. One additional advantage of presenting data at LEP level is that it reduces the unreliability of survey-based estimates experienced when using data at lower spatial scales.

The choice of scale also captures the geographical context within which local decision-makers operate, particularly in terms of generating growth. LEPs are a key vehicle for delivering local economic development and reflect the increasing emphasis by policy-makers on sub-regions as a spatial scale for designing and delivering spatial strategy and policies. There are 39 LEPs covering the whole of England, each of which contains on average 10 local authority districts (LADs), although they vary considerably in size both in terms of population and numbers of LADs. They are based on groups of LADs intended to reflect city regions, adjacent counties and other sub-regional groupings.

A final reason for the choice of LEPs is that they better represent the area at which labour markets operate. LEPs were explicitly intended to represent functional economic areas when created. These tend to extend beyond district level boundaries. For example, jobs in a city centre might be taken by people commuting in from surrounding areas as well as local residents within the city boundary. This has implications for the spatial relationship between poverty and growth. For example, jobs created in a city experiencing growth may well be filled by individuals living outside the district. Multiplier effects may also spill over into adjacent LADs where employees live. All this may have beneficial impacts for households in poverty but not necessarily contained in the LAD where job growth occurs. Presenting data from the monitor at LEP level may capture some of these wider spatial impacts.

These three factors – the different spatial scales for which data is available, the spatial level at which policy decision-makers operate, and the scale at which local labour markets operate – all point towards the appropriateness of presenting data at the LEP level.

Frequency of reporting

The inclusive growth monitor provides annual data on LEP areas between 2010 and 2014. This timeframe reflects a deliberate decision to look at the relationship between poverty and growth in the aftermath of the 2008/09 recession. Including the financial crisis and subsequent economic downturn would, arguably, add too much volatility to a dataset based on a relatively short time period. It is also a practical decision based on the lack of data for some indicators before 2010. The lag in the availability of some datasets means that it is only possible to provide data up to two years before the current reporting year. The intention is to update the monitor annually to ensure the data is timely. It is not possible to do this more frequently as some indicators are only updated once a year.

Choice of indicators

The foundation of the inclusive growth monitor is a set of 18 indicators. These are detailed in Tables 5 and 6. These indicators were selected after themes and dimensions had been identified through the evidence review process outlined in Section 2. This sequence meant that indicators were chosen on the basis of a conceptually- and empirically-informed understanding of the relationship between poverty and growth. They are not intended to be an exhaustive set of indicators capturing every facet of poverty and growth. Rather, they represent a focused selection of indicators that best represent key elements of that relationship. They were also chosen on the basis of availability and reliability at a local level.

The final 18 indicators were chosen from a longlist of 37 drawn up according to their ability to reflect some aspect of the six dimensions. This longlist was scoped through a combination of existing knowledge within the study team and an exploratory search of official data sources such as NOMIS, the Office for National Statistics (ONS) website and various government departments' online statistical repositories.

This longlist was then assessed in terms of each indicator's suitability for inclusion in the final monitor based on four criteria:

- availability at an appropriate spatial scale: data for each indicator needs to be available for, or readily convertible to, LEP areas;

- reliability: estimated figures from sample surveys such as the APS should generally fall within a reasonable confidence level (+ or -10 per cent) and should not be subject to intermittent suppression because of small numbers;
- regularity: the dataset (and by implication the variable of interest) should be updated at least annually, so it can be continually tracked;
- range: indicators need to illustrate different aspects of each dimension and avoid, as far as possible, auto-correlation where one indicator broadly moves in line with, or inversely proportionate to, another indicator.

This assessment meant that some categories and associated indicators had to be excluded altogether as there are no suitable datasets. Transport costs and personal debt fall into this category. In other cases data existed but at too wide a spatial scale: disposable household income is an example of this. Issues of reliability also meant that some indicators initially selected from the longlist for inclusion in the inclusive growth monitor had to be discarded. For example, an indicator to measure the economically inactive who are discouraged from looking for work from the APS was shortlisted to measure latent demand for employment among this group. However, it was eventually dropped because of suppression of large amounts of data due to small sample numbers.

By the end of this assessment process three indicators had been selected for each of the six dimensions. Table 5 shows the range of indicators selected under the three dimensions in the inclusion theme to represent different aspects of poverty. The rationale for the selection within each dimension is as follows:

- Income: proxy indicators provide some reflection of levels of out-of-work poverty (out-of-work benefits) and in-work poverty (tax credits), as well as capturing the level of earnings among the lowest paid workers as a further measure of low income[4].
- Living costs: the range of indicators shows how the cost of living is changing with potential implications for households in poverty. It measures changes in the cost of private rented sector housing (median rent levels for a two-bedroom property) and the extent to which private housing is affordable to those on lower incomes (house price to earnings ratio). An indicator of fuel poverty is also included to widen coverage beyond housing costs and incorporate the relative affordability of energy costs, another key factor which has an impact on low-income households.
- Labour market exclusion: Indicators of unemployment and economic inactivity provide a measure of overall exclusion from the labour market. A third indicator of the proportion of working-age households where no-one is in employment provides a measure of concentration of labour market exclusion at a household level.

Table 6 shows the range of indicators selected under the prosperity theme to capture different elements of economic performance or potential. The rationale for their selection is:

- Output growth: The choice of indicators reflects the need to have a standard measure of output growth (GVA per capita); an indication of the changing scale of business and enterprise in an area (private sector workplaces); and a general measure of earnings levels (median full-time employee earnings) as a reflection of productivity. In combination, these capture the potential of the area to generate growth that is not necessarily driven by employment.
- Employment: This measures employment as one of the components of growth. The workplace jobs indicator shows the extent to which the area is creating employment. Including the employment rate also provides an assessment of the extent to which residents within the area are benefitting from jobs created. Finally, a measure of jobs created in sectors more strongly associated with in-work poverty (Green *et al.*, 2014) is also included. This is intended to gauge the extent to which employment growth occurs in sectors least likely to support poverty reduction.
- Human capital: This provides some indication of the extent to which the local economy is (capable of) moving towards a 'higher value' model of growth. It includes an indicator for higher level occupations where better remuneration means that in-work poverty is less likely. The remaining two indicators are closely related, with one focusing on intermediate and higher level vocational qualifications (NVQ Level 2 and above), and the other on qualifications achieved during compulsory schooling (five or more GCSEs at grades A*–C). In combination these indicators provide an indication of the demand for higher level skills and the extent to which this could be met by the local workforce.

Table 5: Dimensions and associated indicators for the inclusion theme

Dimension	Indicator	Definition	Geography	Source
Income	Out-of-work benefits	% of working-age population receiving out-of-work benefits	Place of residence; LEPs; LADs; wards	DWP Work and Pensions Longitudinal Study (benefit claimants – working-age client group)
	In-work tax credits	% in-work households with and without children receiving Child and/or Working Tax Credits	Place of residence; LADs; LSOAs	HMRC Child and Working Tax Credit finalised award statistics – geographical statistics; APS
	Low earnings	20th percentile of gross weekly earnings*	Place of residence; LADs	Annual Survey of Hours and Earnings (ASHE) resident analysis
Living costs	Housing affordability	Ratio of lower quartile house prices to lower quartile earnings	Place of residence; LADs	CLG Housing Statistics Table 576
	Housing costs	Median monthly rents for private sector two-bedroom properties	Place of residence; LADs	Valuation Office Agency PRS Market Statistics
	Fuel poverty	% of households classed as being 'fuel poor' (using Low Income-High Costs model)	Place of residence; LADs; LSOAs	DECC Fuel Poverty sub-regional statistics
Labour market exclusion	Unemployment	% of working-age population not in employment but actively seeking work	Place of residence; LEPs; LADs	Annual Population Survey (APS)
	Economic inactivity	% of working-age population who are economically inactive	Place of residence; LEPs; LADs	Annual Population Survey (APS)
	Workless households	% of working-age households with no-one in work	Place of residence; LEPs; LADs	Annual Population Survey (APS)

* Twenty per cent of full-time workers receive earnings equal to or below this threshold.

Table 6: Dimensions and associated indicators for the prosperity theme

Dimension	Indicator	Definition	Geography	Source
Output growth	Output	Gross Value Added (GVA) per capita (in £ at current prices)	Place of work; NUTS2 and 3	ONS Regional GVA (Income Approach) Statistics; Mid-year population estimates
	Private sector businesses	Number of private sector workplaces per 1,000 resident population	Place of work; LEPs; LADs; MSOAs	UK Business Counts – Local Units; Mid-year population estimates
	Wages/earnings	Median gross weekly pay for all workers	Place of work; LADs	Annual Survey of Hours and Earnings (ASHE) workplace analysis
Employment	Workplace jobs	Employee jobs by working-age population (jobs density)	Place of work; LEPs; LADs; wards	Business Register Employee Survey (BRES); Annual Population Survey (jobs density series)
	People in employment	% of working-age population in employment (employment rate)	Place of residence; LEPs; LADs	Annual Population Survey (APS)
	Employment in low pay sectors	% employed in administrative and support services, wholesale and retail trade, accommodation and food services, and residential social care	Place of work; LEPs; LADs; wards	Business Register Employee Survey (BRES)
Human capital	Higher level occupations	% workers in managerial, professional and technical/ scientific occupations (SOCs 1, 2 and 3)	Place of residence; LEPs; LADs	Annual Population Survey (APS)
	Intermediate and higher level skills	% working-age population qualified at NVQ Level 2 and above	Place of residence; LEPs; LADs	Annual Population Survey (APS)
	Educational attainment	% of pupils at the end of Key Stage 4 achieving five or more GCSEs or equivalent at grades A* – C (including English and maths)	Place of residence; LEAs	Department for Education GCSE (Key Stage 4) statistics

The indicators selected largely focus on the working-age population. This choice is deliberate and reflects the observation that economic growth will impact most directly on working-age adults and other household members. Pension-age poverty is unlikely to be affected given its greater amenability to national level tax and benefit changes than economic change. While people aged 65 and above are increasingly remaining in work, the proportion remains relatively small, and the vast majority of the workforce falls into the 16 to 64 age bracket.

4 Exploring the link between prosperity and inclusion within a single LEP area

The design of the inclusive growth monitor provides a number of different ways of looking at the relationship between prosperity and inclusion. This section shows how the data can be presented for an individual LEP area using the example of the Leeds City Region. It presents individual indicators in dashboard and scorecard formats; it then provides composite scores for dimensions and themes. Section 5 illustrates how the monitor can also be used to understand how the relationship between prosperity and inclusion varies across all LEP areas in England.

Measuring inclusive growth for individual LEP areas

There are a number of options for presenting data for individual LEP areas. Taking Leeds City Region as an example this section provides data as:

- a 'dashboard' of 18 indicators displayed as time-series line charts for the period between 2010 and 2014. Data for the Leeds City Region area is benchmarked against the wider region (Yorkshire and the Humber) and England;
- a summary scorecard setting out the position of the Leeds City Region LEP area in comparison with Yorkshire and Humber as well as England across all 18 indicators;
- time-series bar charts showing composite scores for each dimension and theme between 2010 and 2014.

Dashboard of indicators

Benchmarking the 18 indicators which form the building blocks of the inclusive growth monitor against regional and national comparators provides a useful picture of trends in the Leeds City Region LEP area relative to the wider context. This dashboard offers a quick visual reference and will be a familiar approach to stakeholders such as local authorities and LEPs. Figure 3 shows the nine prosperity indicators; Figure 4 the nine inclusion indicators. The data is easy to understand as it based on 'real' data rather than a derived score. The indicators are grouped within their respective themes and dimensions. A dashboard enables comparisons to be made easily. For example, it shows that Leeds City Region has lower living costs than England on the two indicators related to housing, which suggests living costs are less likely to contribute to poverty. The LEP area also has a larger proportion of residents working in higher skilled occupations than England or the wider region. It also outperforms Yorkshire and Humber on most indicators, especially those within the employment and income dimensions. It fares less favourably relative to the region in terms of living costs.

Figure 3: Prosperity indicators for Leeds City Region LEP area

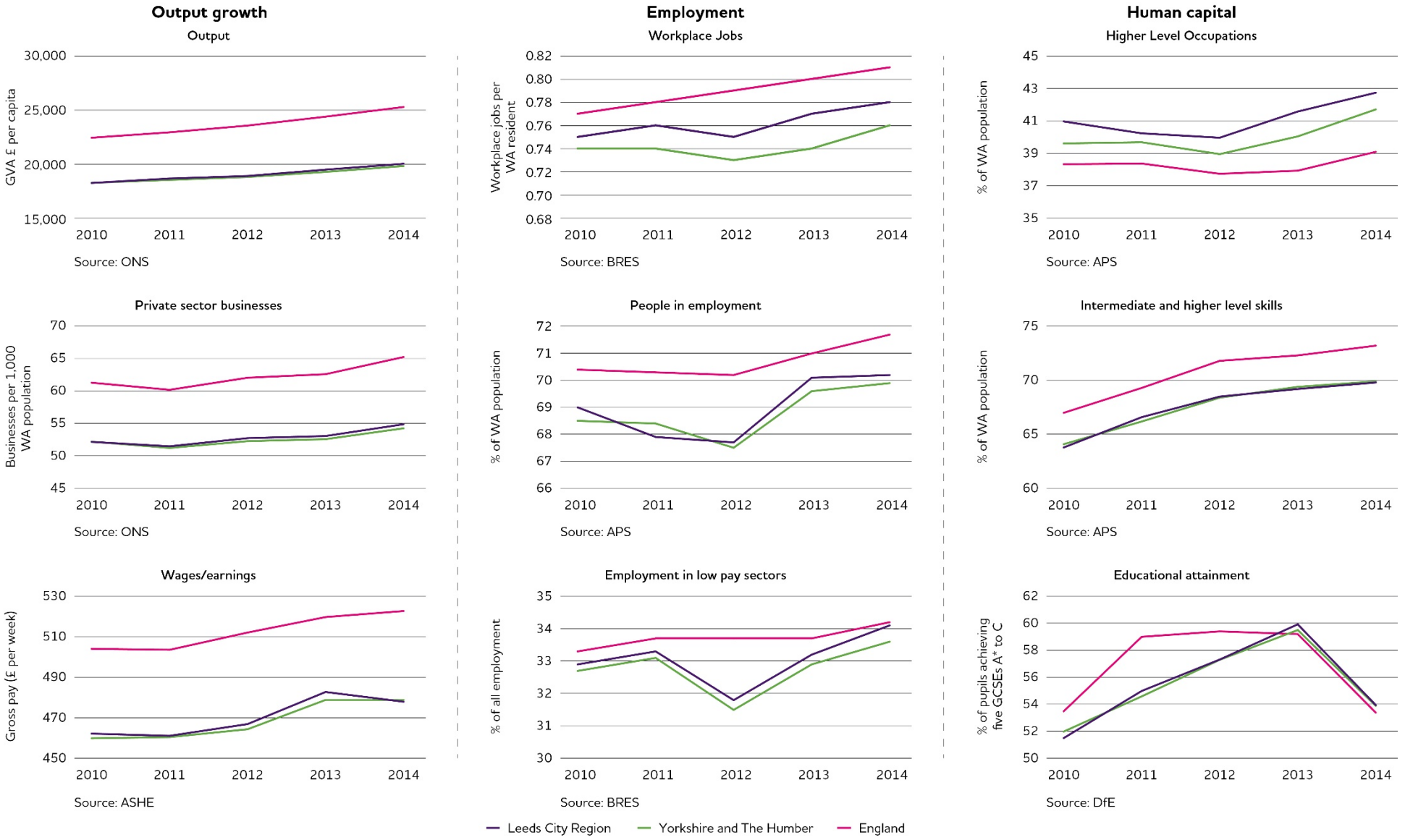
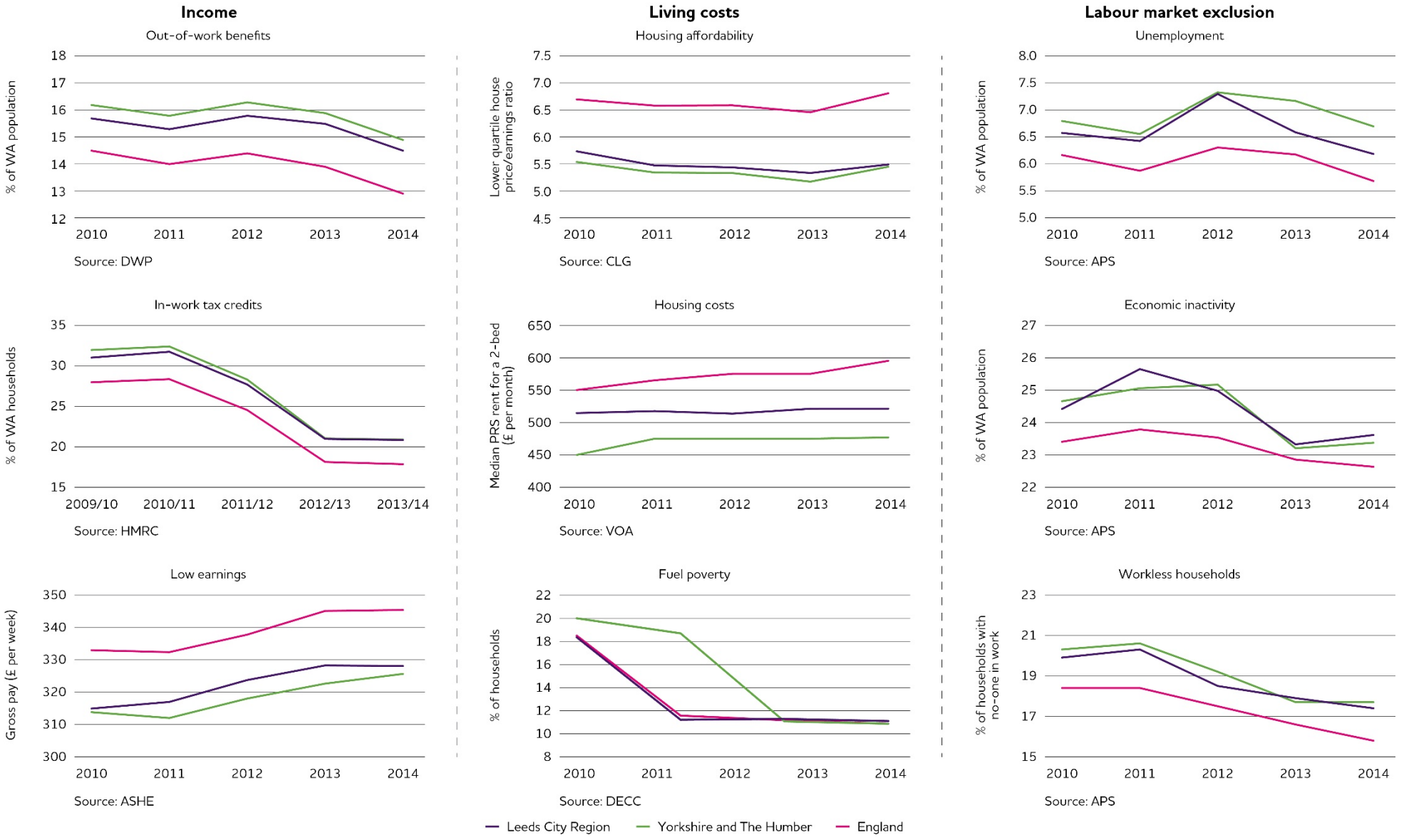


Figure 4: Inclusion indicators for Leeds City Region LEP area



Summary scorecard

Summarising trends relative to wider benchmarks from 18 separate charts can be challenging. A summary scorecard showing whether Leeds City Region exceeds regional or national benchmarks can help make relationships clearer. The scoreboard in Table 7 indicates how the LEP area compares with the wider region and England by aggregating points against indicators for all six dimensions, two themes and overall across all 18 indicators. For any given year, a positive score of one is awarded for each indicator which 'outperforms' the relevant benchmark. In some cases, outperforming a benchmark means the LEP area is above the benchmark, e.g. the employment rate; in other instances, outperforming means being below the benchmark, e.g. the unemployment rate.

An LEP that outperforms the benchmark in a given year for all three indicators within a particular dimension achieves a maximum score of three; underperformance relative to the benchmark on all three indicators would lead to the minimum score of zero. The scores can be combined to create a maximum score of nine for each of the two themes – prosperity and inclusion – or a maximum overall score of 18 for the whole range of indicators.

It is immediately apparent that the Leeds City Region LEP area tends to outperform the region (Yorkshire and the Humber) far more often than England in each of the five years. This difference can be quite stark. For example, Leeds City Region is below the national benchmark on all three indicators within the employment dimension every year, yet only underperforms the region on one of the indicators in a single year (the employment rate in 2011). The notable exception to the tendency to underperform the national benchmark is in relation to living costs, with the city region more affordable in terms of rented and private housing than England in all years.

Table 7: Summary scorecard showing the performance of Leeds City Region LEP area against regional and national benchmarks

Theme	Dimension	Benchmark	2010	2011	2012	2013	2014
Prosperity theme	Output growth	National	0	0	0	0	0
		Regional	1	3	3	3	2
	Employment	National	0	0	0	0	0
		Regional	3	2	3	3	3
	Human capital	National	1	1	1	2	2
		Regional	1	3	3	2	2
	Total	***National***	***1***	***1***	***1***	***2***	***2***
		Regional	***5***	***8***	***9***	***8***	***7***
Inclusion theme	Labour market exclusion	National	0	0	0	0	0
		Regional	3	2	3	1	2
	Living costs	National	3	3	2	2	2
		Regional	1	1	0	0	0
	Income	National	0	0	0	0	0
		Regional	3	3	3	3	3
	Total	***National***	***3***	***3***	***2***	***2***	***2***
		Regional	***7***	***6***	***6***	***4***	***5***
Overall score		National	**4**	**4**	**3**	**4**	**4**
		Regional	**12**	**14**	**15**	**12**	**12**

NB: Maximum score = 3 for each dimension; Max = 9 for each theme; Max = 18 overall

Composite scores

Dashboards and scorecards provide useful summaries of performance against national and regional benchmarks. However, the overall aim of the monitor is to combine different measures to produce a holistic view of 'inclusive growth' that reflects the relationship between prosperity and inclusion over time. One technique that allows indicators to be combined is to 'normalise' the scores for all 18 indicators and then sum these scores across dimensions or themes. Normalisation effectively places all values on the same 'metric' (a score of 0 to 1) and relates any given value for a particular indicator to the distribution of values across the whole range seen across all LEPs.

For instance, normalising employment rates would convert all rates to a score of 0 to 1. An LEP with the highest employment rate scores 1 and an LEP with the lowest rate scores 0. All other LEPs are then allocated a score higher than 0 but less than 1 depending on their relative position within the range of employment rates across all LEPs. An LEP with an employment rate that is exactly in the middle of that range would score 0.5. This would happen, for example, if an LEP had an employment rate of 70 per cent in a range where the highest rate among all LEPs was 80 per cent and the lowest rate among all LEPs was 60 per cent.

One distinct advantage of using normalisation techniques is that it enables indicators using different metrics (e.g. house prices and employment rates) to be put on the same scale and compared. The normalised scores have been created in such a way that a high normalised score is *always* more positive than a low normalised score even if the reverse is true of the underlying data. For example, the LEP area with the lowest level of fuel poverty will score the highest of all LEPs (one point).

Indicators

The normalised scores for individual indicators are illustrated below. Figure 5 shows scores for each of the nine indicators within the inclusion theme and Figure 6 for the nine indicators in the prosperity theme. Each cluster of bars represents the score achieved by the Leeds City Region area relative to the range across all LEPs in the five years from 2010 to 2014. A score of one is the highest and most positive value on any given indicator. The charts clearly show that Leeds City Region area scores at the lower end of the range for some indicators such as output growth (GVA per capita) and private sector businesses (Figure 6). At the same time, it scores highly for low pay sectors (meaning it has a lower proportion of workers in these sectors) and for the two housing-related indicators, which reflects the lower living costs in Leeds City Region relative to other LEP areas (Figure 5).

Figure 5: Normalised scores for Leeds City Region within the inclusion theme, 2010–2014

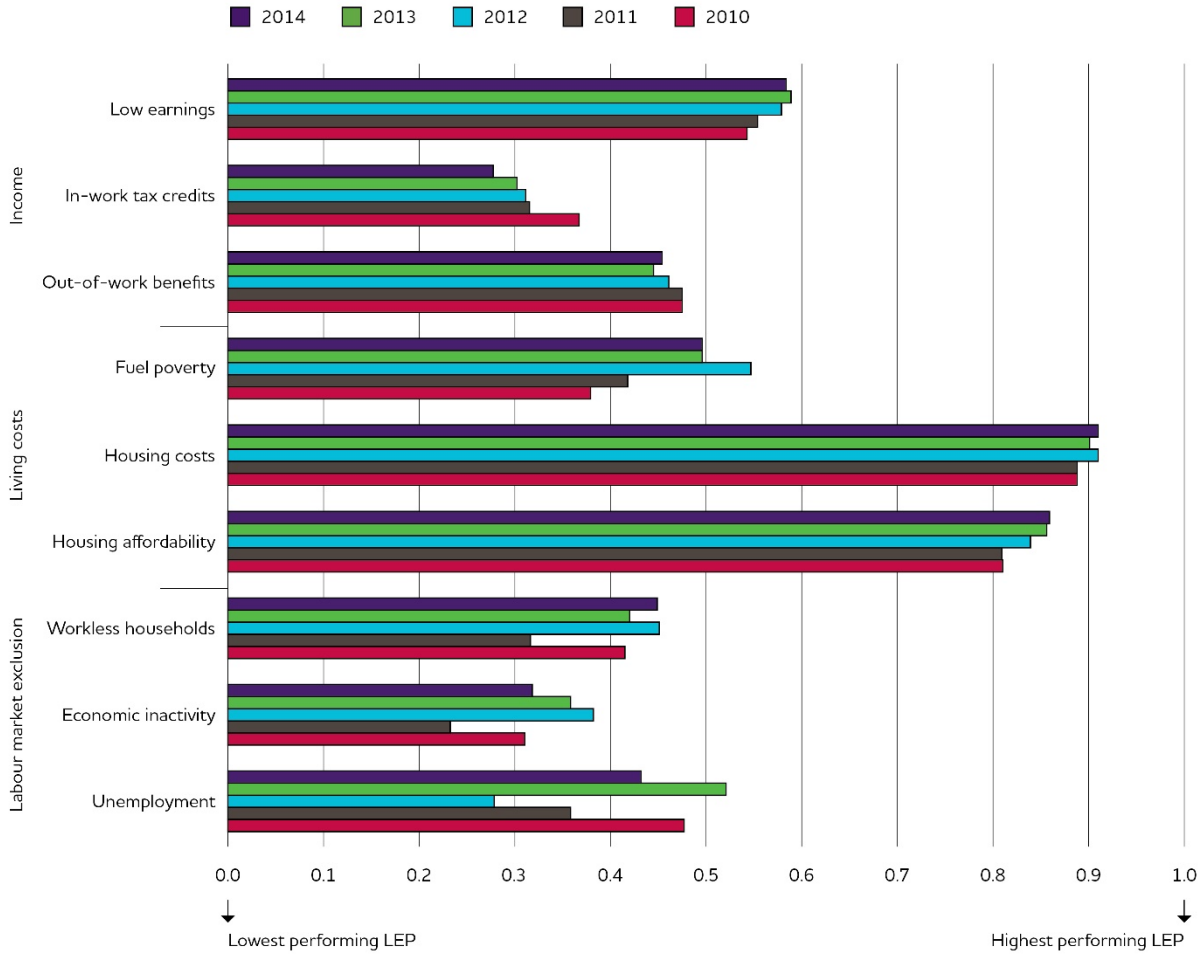
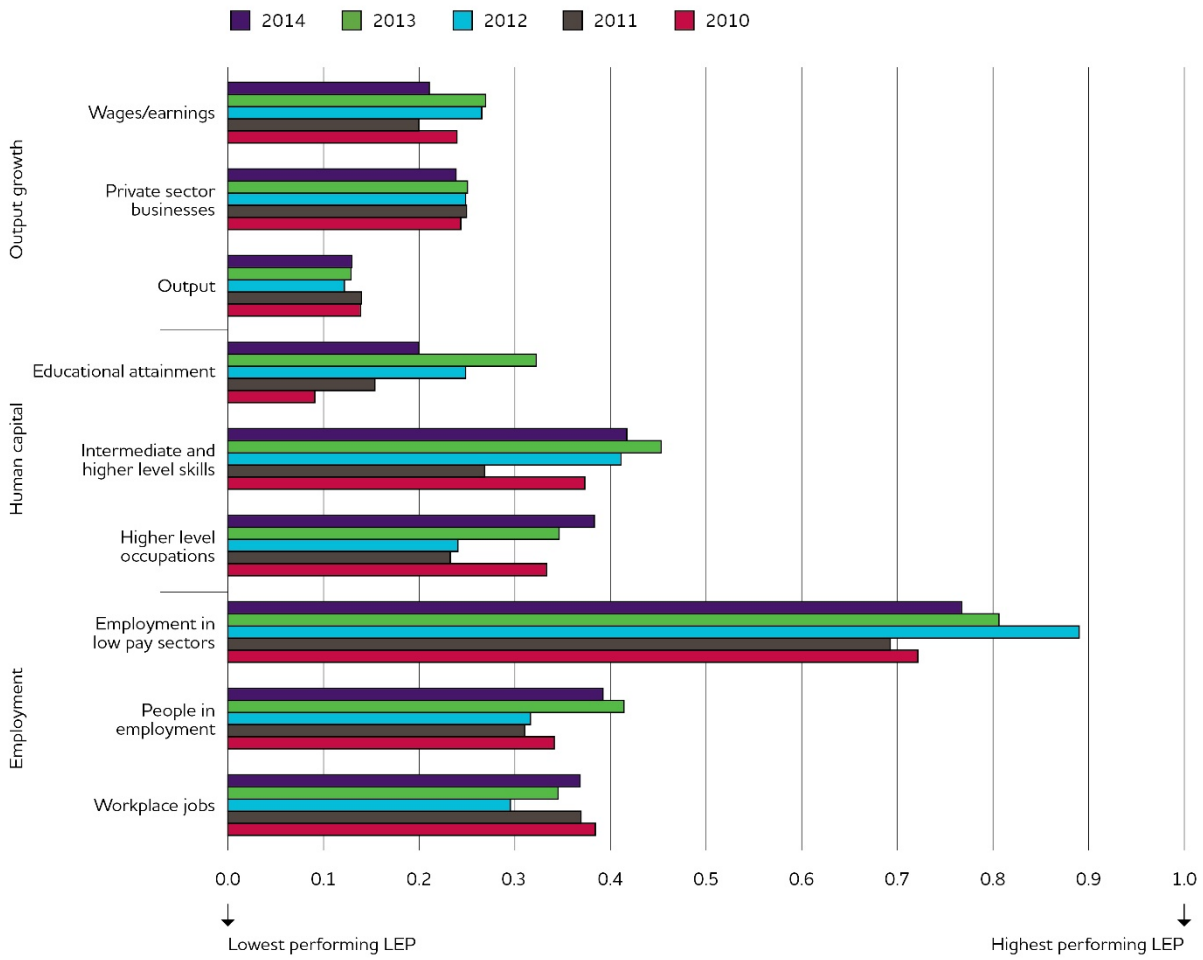


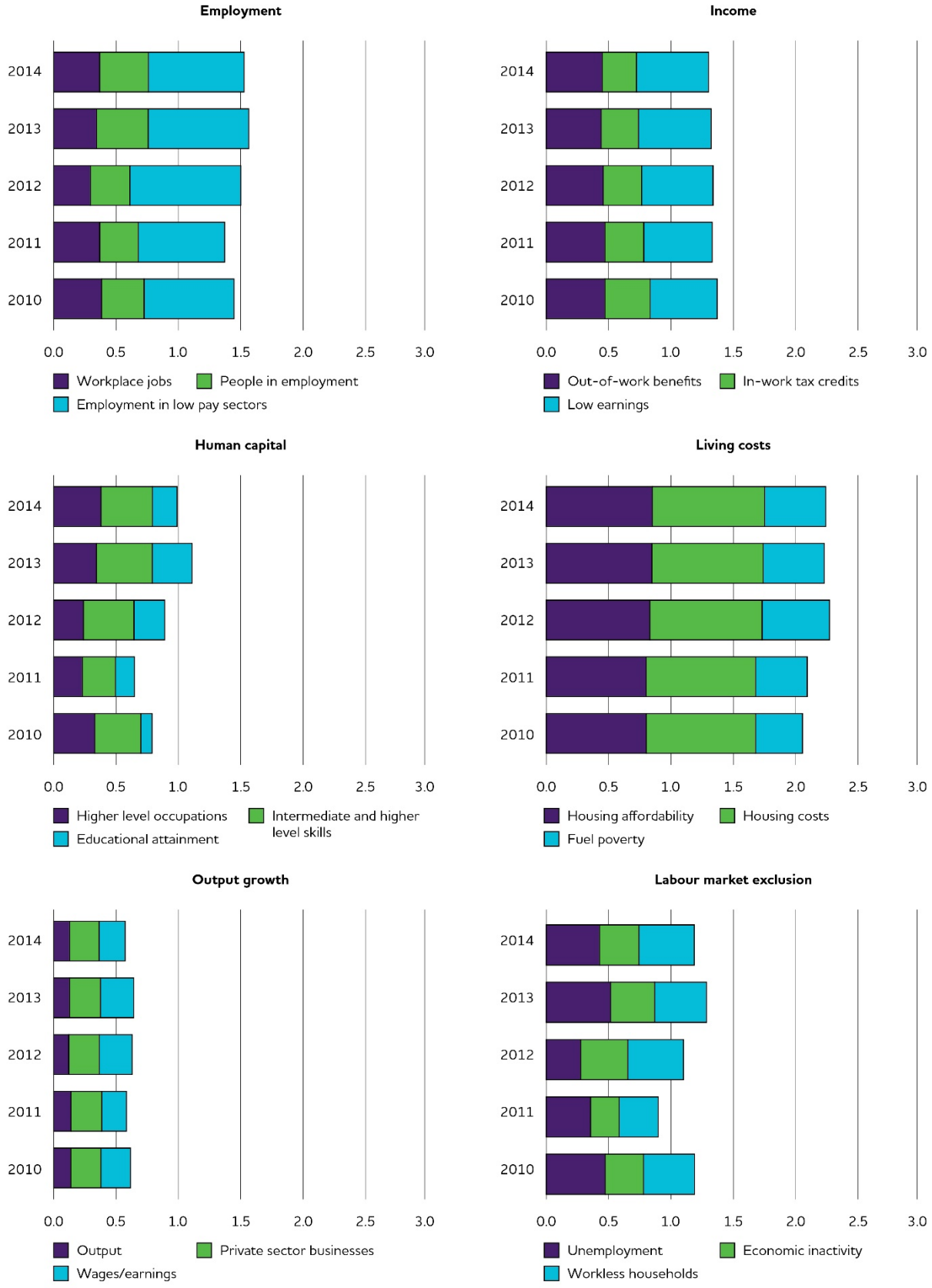
Figure 6: Normalised scores for Leeds City Region within the prosperity theme, 2010–2014



Dimensions

Normalised scores for individual indicators can then be aggregated to create composite scores for dimensions. This is useful for summarising performance across the three indicators in each dimension. The highest (positive) score that an LEP could achieve is three points if it outperformed all other LEPs on all three indicators; a score of zero would indicate an LEP had underperformed all other LEPs on all three indicators. The stacked bar charts in Figure 7 show the contribution of each indicator to the composite scores for each of the six dimensions. It shows, for example, that the score for the proportion of workers in low pay sectors accounts for a large proportion of the employment dimension score. Change over time is also evident. The Leeds City Region LEP area saw its score for labour market exclusion fall in 2011 but then pick up in the subsequent two years before falling slightly again in 2014. The scores are relative to all other LEP areas, indicating that Leeds City Region is at the top end of the range for living costs, close to the middle for employment and in the lower end of the range for output growth and human capital.

Figure 7: Composite scores for dimensions for Leeds City Region LEP, 2010–14



Themes

Composite scores can also be created for the two themes of prosperity (Figure 8) and inclusion (Figure 9). The maximum score for each theme is nine. These show that the prosperity score for Leeds City Region dipped in 2011 before rising slightly in 2012 and 2013 and then falling slightly in 2014. There is a similar pattern for the inclusion score, albeit from a higher base. Overall, Leeds City Region scores higher relative to other LEPs on inclusion rather than prosperity. However, it is difficult to set this in context without seeing the scores for all the other 38 LEPs. Section 5 provides this broader picture of the relationship between prosperity and inclusion across all LEPs. This helps to locate the relative position of individual LEPs and also to show the distinct variations between LEPs in terms of the link between prosperity and inclusion.

Figure 8: Composite prosperity scores for Leeds City Region LEP area, 2010–14

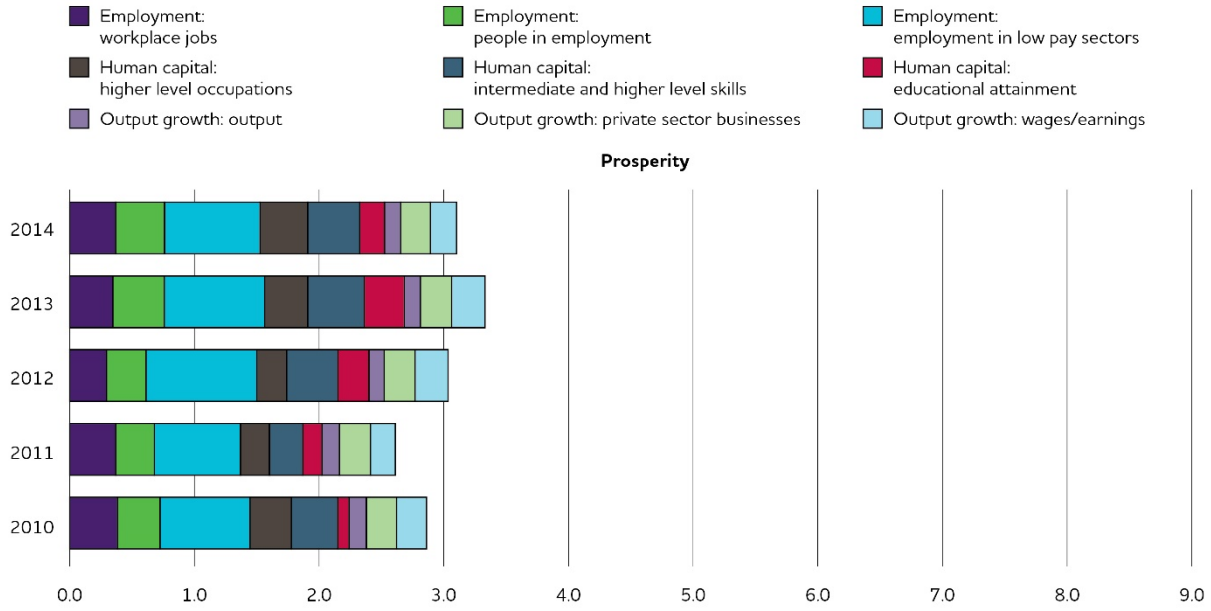
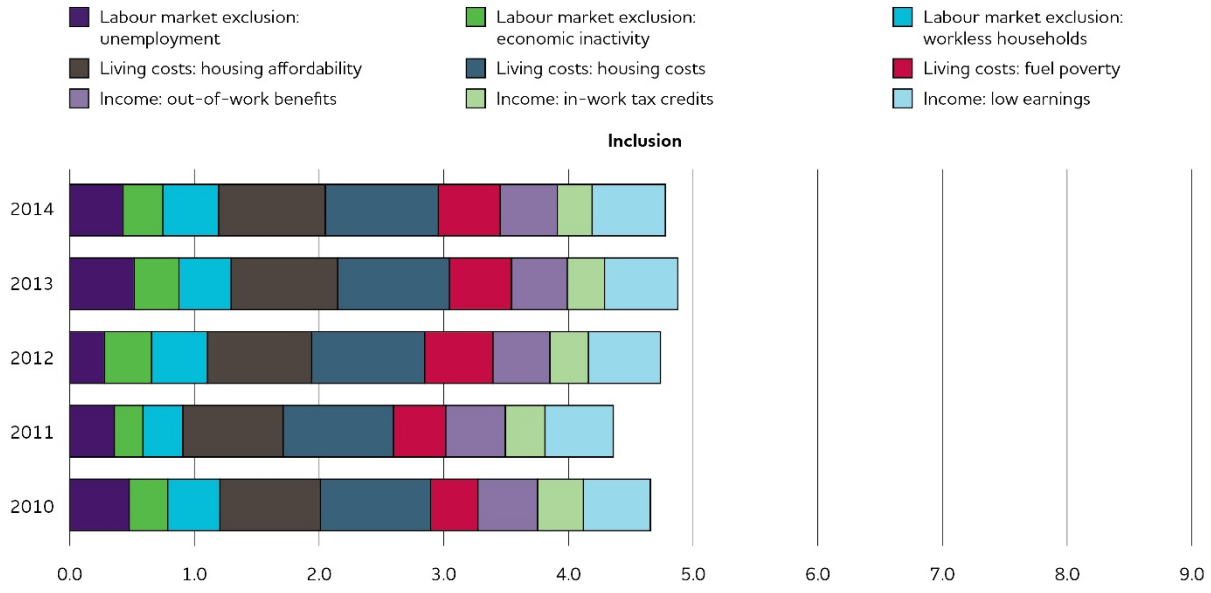


Figure 9: Composite inclusion scores for Leeds City Region LEP area, 2010–14



5 Exploring the link between prosperity and inclusion across all LEP areas

The inclusive growth monitor can be used to look at relationship between prosperity and inclusion across all 39 LEP areas. This broader picture helps to contextualise the situation of any one LEP and see how the link between prosperity and inclusion varies across England. This section looks first at how each LEP scores on prosperity and inclusion *levels* in 2014 as the latest year for which data is available. It then looks at *changes* in prosperity and inclusion levels between 2010 and 2014 to capture movement between the beginning and end of the time series. This change score is based on movement in the underlying indicators which are normalised and aggregated to create a composite change score.

To clearly distinguish between these two timeframes, scores based on the latest 2014 data are described as 'level' scores while scores based on movement in underlying indicators between 2010 and 2014 are described as 'change' scores. This is an important distinction. Level scores reflect the current, relative position of LEPs in terms of the level of underlying indicators in 2014. For example, the LEP with the lowest unemployment rate in 2014 will achieve the maximum level score of one for that indicator once normalised. Change scores reflect the degree of movement in the level of indicators between 2010 and 2014. The same LEP may experience little change in (already low) levels of unemployment between 2010 and 2014 relative to other LEPs and would therefore record a low change score.

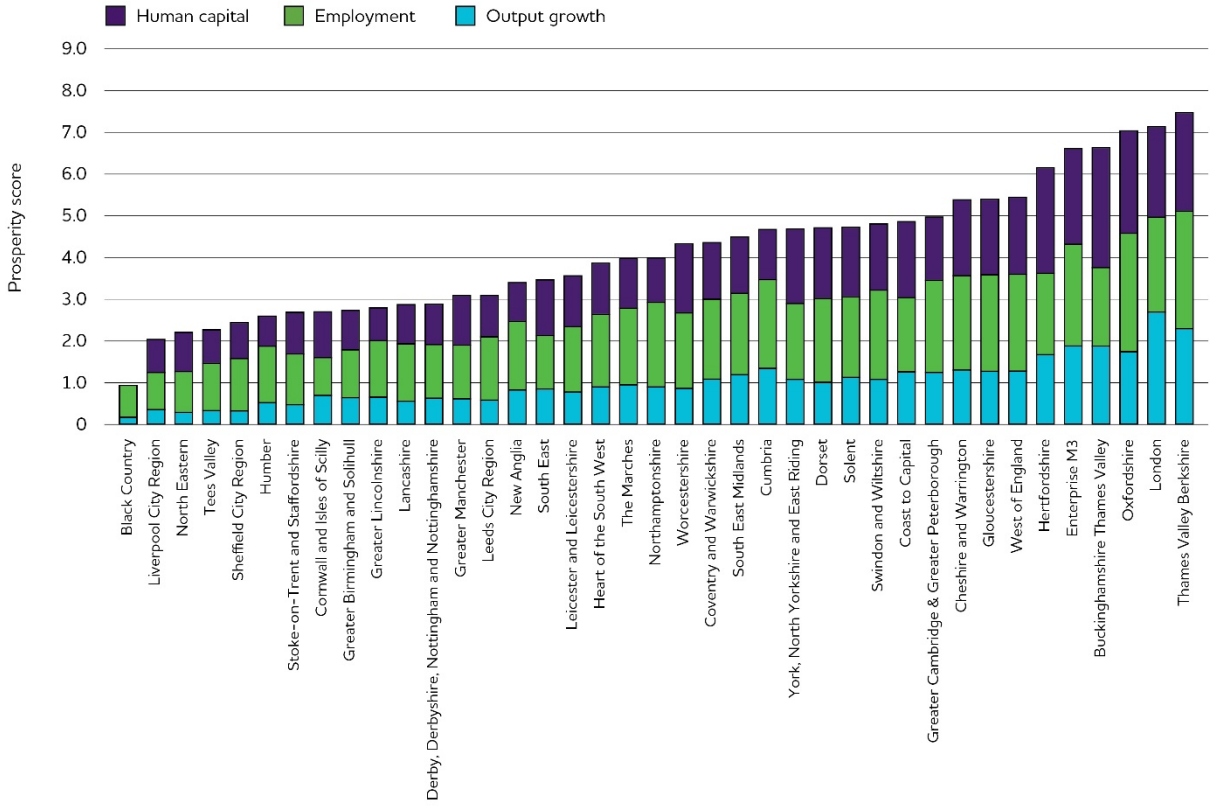
Prosperity and inclusion: level scores in 2014

This subsection presents the level scores for prosperity and inclusion based on levels of the underlying indicators in 2014. The values for each indicator have first been 'normalised' on a scale of 0 to 1, and then aggregated to provide a composite level score. The highest possible level score for each theme is nine (the LEP with the highest relative position on all nine indicators) and the lowest zero (the LEP with lowest relative position on all nine indicators). Again, it should be remembered that a higher score is always more positive.

Prosperity

Figure 10 shows the composite level scores for prosperity in each of the 39 LEP areas in 2014, broken down by its three constituent dimensions (output growth, human capital and employment). The chart shows strong geographical differences. LEPs in the lowest quartile (the 10 LEPs with the lowest scores) consist mainly of areas in the north and Midlands with the exception of Cornwall and the Isles of Scilly. These are largely areas that have experienced a decline in their industrial base in recent decades. The stacked bars shows these areas tend to score very low on the output growth dimension and, in the case of the Black Country, on human capital too. By contrast, LEP areas in the highest quartile (the 10 LEPs with the highest scores) are almost exclusively in the south with the exception of Cheshire and Warrington. The precise contribution of the three dimensions varies, with London achieving the highest output growth score while Oxfordshire has the highest score on employment.

Figure 10: Prosperity scores (levels) for all LEPs, 2014



Inclusion

A similar pattern emerges when looking at the composite level scores for the inclusion theme in 2014. Again, these are broken down into the three constituent dimensions (income, living costs and labour market exclusion).

Figure 11 shows that most LEPs in the lowest quartile are, again, located in the former industrial heartlands of the north and Midlands. Indeed, seven of these LEPs are in the lowest quartile for both inclusion and prosperity in 2014 (see Table 8). By contrast, the majority of LEPs in the highest quartile tend to be based in the south or east of England. Eight of these LEPs are also in the highest quartile for prosperity in 2014 (Table 8). The notable exception is London which achieved the second highest level score on prosperity out of all 39 LEPs but the eighth lowest on inclusion. This might suggest that the high levels of economic buoyancy London is experiencing does not automatically translate into positive trends around poverty, at least in the short term. As the next subsection shows, London is something of an outlier in bucking the tendency of higher prosperity level scores to be associated with higher inclusion level scores.

Figure 11: Inclusion scores (levels) for all LEPs, 2014

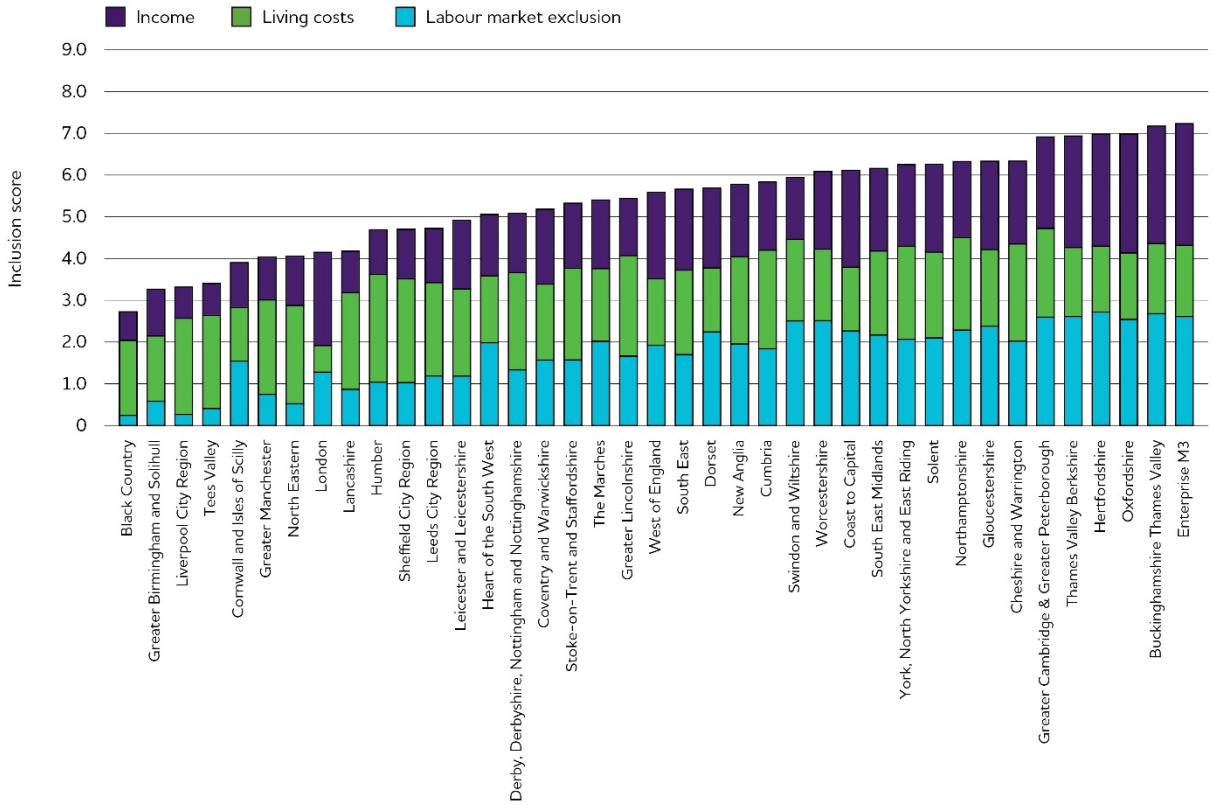


Table 8: LEPs in the top and bottom quartile for prosperity and inclusion scores (levels) in 2014

Low prosperity and low inclusion (LEPs in bottom quartile for prosperity and inclusion in 2014)	High prosperity and high inclusion (LEPs in top quartile for prosperity and inclusion in 2014)
Black Country	Buckinghamshire Thames Valley
Cornwall and Isles of Scilly	Cheshire and Warrington
Greater Birmingham and Solihull	Enterprise M3
Humber	Gloucestershire
Liverpool City Region	Greater Cambridge & Greater Peterborough
Tees Valley	Hertfordshire
North Eastern	Oxfordshire
	Thames Valley Berkshire

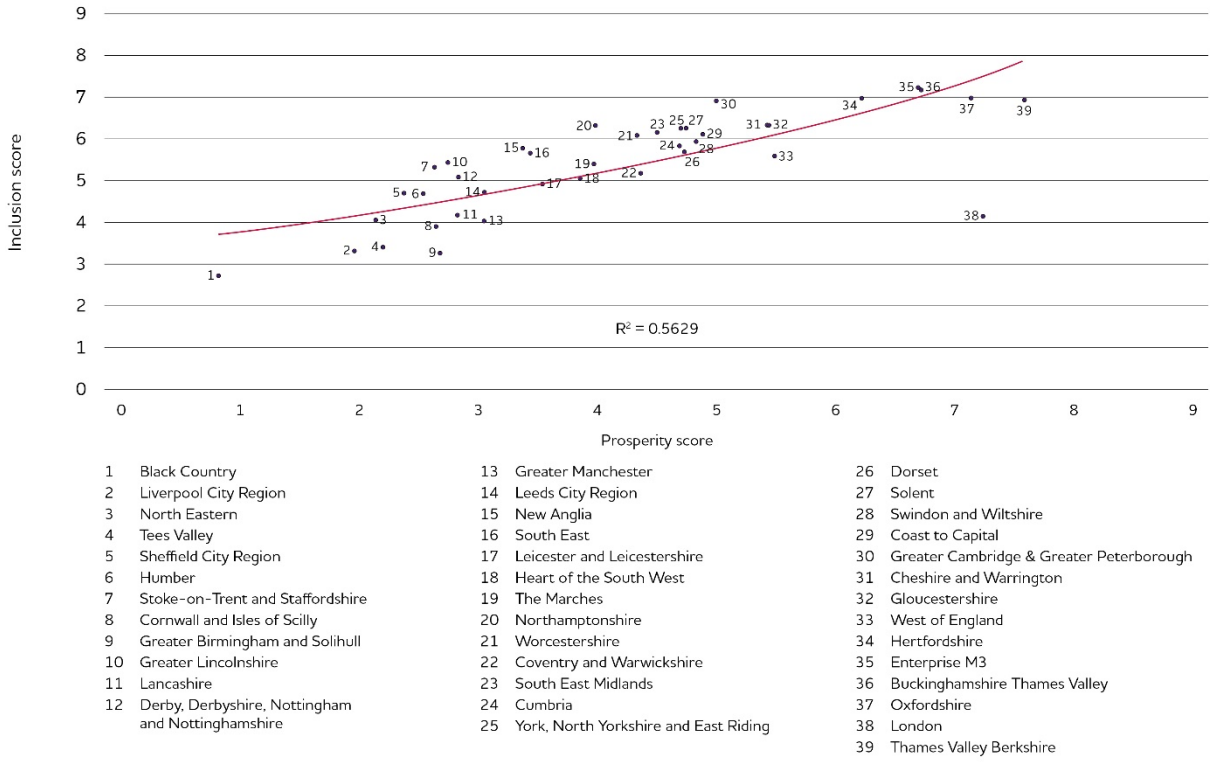
The relationship between prosperity and inclusion (levels)

Understanding the relationship between prosperity and inclusion is the main aim of the inclusive growth monitor. Plotting prosperity and inclusion level scores on a scatter chart is a useful way of observing this

relationship (Figure 12). This shows there a fairly clear positive relationship with LEPs tending to score similarly on both prosperity and inclusion based on levels in 2014.

This relationship is fairly strong with the trend line explaining just over half the 'fit' between the prosperity and inclusion scores ($R^2 = 0.56$). In others word, LEPs that have relatively low scores for prosperity also tend to score relatively low on inclusion. This is the case with a number of LEPs in the north, Midlands and also Cornwall which are located around the lower left end of the trendline. Conversely, there is a cluster of LEPs in the south with high scores for both prosperity and inclusion grouped around the top right end of the trendline. London clearly stands out by virtue of its low score on inclusion and high score on prosperity.

Figure 12: Scatter chart showing prosperity and inclusion scores (levels) for all 39 LEPs, 2014



1	Black Country	13	Greater Manchester	26	Dorset
2	Liverpool City Region	14	Leeds City Region	27	Solent
3	North Eastern	15	New Anglia	28	Swindon and Wiltshire
4	Tees Valley	16	South East	29	Coast to Capital
5	Sheffield City Region	17	Leicester and Leicestershire	30	Greater Cambridge & Greater Peterborough
6	Humber	18	Heart of the South West	31	Cheshire and Warrington
7	Stoke-on-Trent and Staffordshire	19	The Marches	32	Gloucestershire
8	Cornwall and Isles of Scilly	20	Northamptonshire	33	West of England
9	Greater Birmingham and Solihull	21	Worcestershire	34	Hertfordshire
10	Greater Lincolnshire	22	Coventry and Warwickshire	35	Enterprise M3
11	Lancashire	23	South East Midlands	36	Buckinghamshire Thames Valley
12	Derby, Derbyshire, Nottingham and Nottinghamshire	24	Cumbria	37	Oxfordshire
		25	York, North Yorkshire and East Riding	38	London
				39	Thames Valley Berkshire

Prosperity and inclusion: change scores between 2010 and 2014

The prosperity and inclusion level scores in 2014 only provide a partial picture as they are based on a single point in time and do not take into account any change in previous years. This means they do not show whether individual LEPs have experienced positive change (i.e. increases in prosperity or inclusion) and narrowed the gap with other areas. The data in this section addresses this by presenting prosperity and inclusion change scores between 2010 and 2014. The scores are based on the percentage change in the nine underlying indicators for each theme over this period. These percentage change figures for each indicator have first been 'normalised' on a scale of 0 to 1, and then aggregated to provide a composite change score. The highest possible change score for each theme is nine (most amount of positive change on all nine indicators) and the lowest zero (least amount of positive change on all nine indicators).

Prosperity

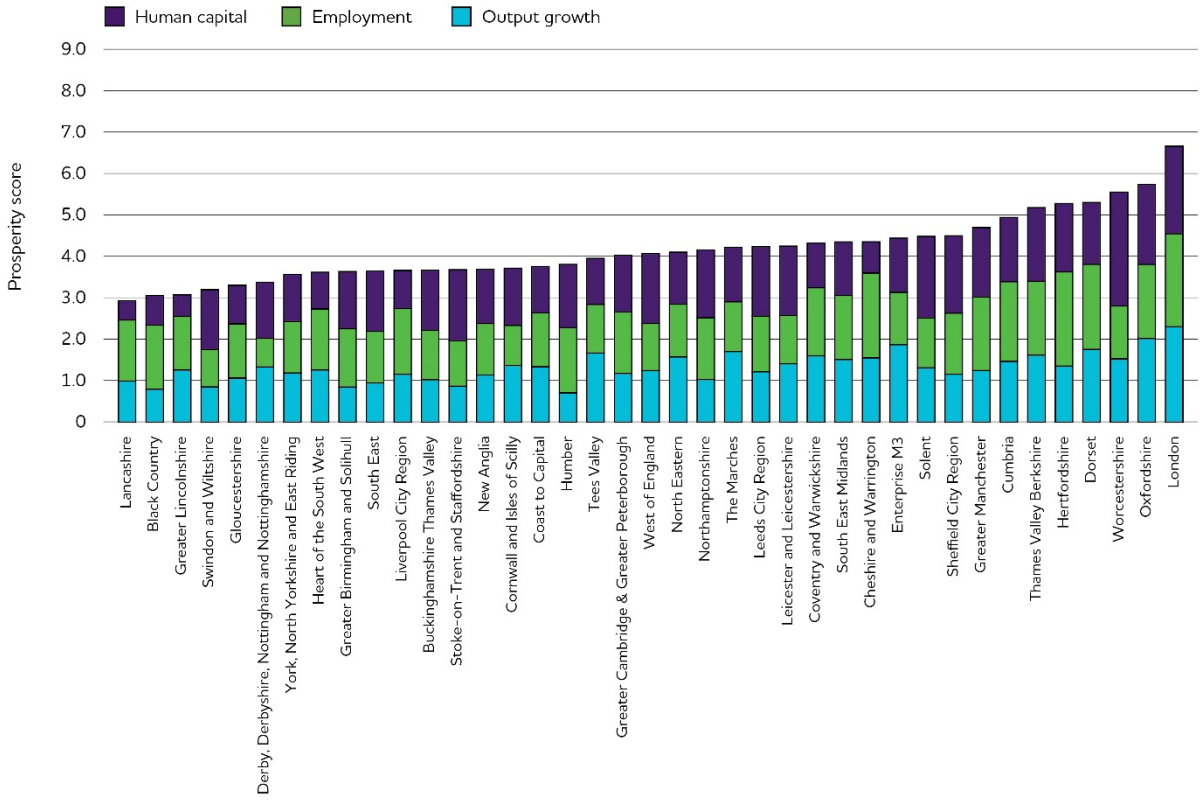
Figure 13 shows the prosperity change scores for all 39 LEP areas. Some LEP areas occupy similar relative positions as their level score. Three of the LEP areas – the Black Country, Greater Lincolnshire and Greater Birmingham and Solihull – in the lowest quartile for level scores are also in the lowest

quartile for change scores. This indicates that, in relative terms, these areas have seen less positive change in underlying prosperity indicators between 2010 and 2014 and that prosperity remains muted in 2014.

However, some LEPs in the lowest quartile for prosperity level scores achieve better relative scores for change between 2010 and 2014. For example, North Eastern is in 37th place out of all 39 LEPs in terms of prosperity level scores in 2014 but 19th in terms of prosperity change scores. Two of the LEPs centred around core cities in the north – Greater Manchester and Sheffield City Region – occupy the highest quartile for prosperity change scores despite lower relative placings based on level scores in 2014. This difference suggests that some of the core cities in the north are narrowing the gap relative to other areas in the England, albeit not at a pace to significantly improve their level scores for prosperity. It also shows the north–south distinction that emerges strongly for current level scores is less clearcut for change scores over time.

There is also a slightly more mixed picture in terms of the highest scoring LEPs. London, Thames Valley Berkshire, Hertfordshire and Oxfordshire all fall in the highest quartile for prosperity on both their level score in 2014 and change score between 2010 and 2014. At the same time, Gloucestershire is one of the highest placed LEPs in 2014 in terms of prosperity level scores but in the bottom quartile for change. This shows that the relationship between current prosperity (levels) and growth in prosperity over time (change) can vary across LEPs.

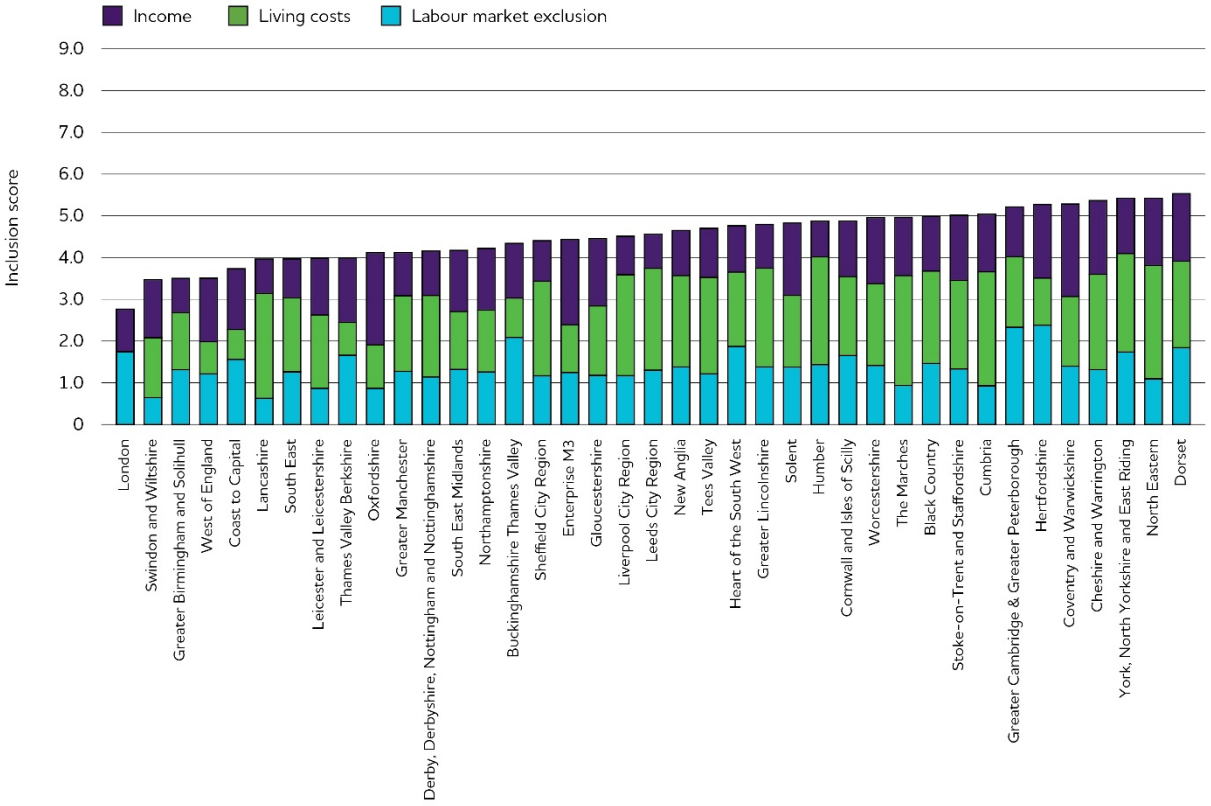
Figure 13: Prosperity scores (change) for all LEPs, 2010–2014



Inclusion

The inclusion change scores between 2010 and 2014 (Figure 14) also reveal a mixed picture. Three of the LEP areas (London, Lancashire and Greater Birmingham and Solihull) in the lowest quartile for inclusion level scores in 2014 also occupy the lowest quartile for change scores. In other words, they perform less well on underlying levels of poverty and disadvantage as represented by the indicators than other LEPs in 2014 and have seen comparatively less positive change in those levels between 2010 and 2014. Once again, the stark disjuncture between prosperity and inclusion in London is apparent. London experienced the highest amount of change in prosperity and the lowest amount of change in inclusion in this period. This challenges assumptions that prosperity and inclusion are automatically correlated.

Figure 14: Inclusion scores (change) for all LEPs, 2010–2014



At the other end of the scale, three LEPs – Cheshire and Warrington, Hertfordshire, and Greater Cambridgeshire and Greater Peterborough – are in the highest quartile for both level and change scores on inclusion. Meanwhile, two LEPs which featured in the top quartile of inclusion level scores in 2014 (Thames Valley Berkshire and Oxfordshire) sit in the lowest quartile for change. However, this may simply indicate limited headroom for improvement in areas where underlying poverty and other forms of disadvantage are already low. Perhaps more significantly, two areas (the Black Country and North Eastern) achieving some of the lowest inclusion level scores in 2014 are in the highest quartile for change scores. Evidently, this degree of change is still not sufficient to move them out of the lowest quartile for inclusion in 2014 but, nonetheless, indicates a positive degree of improvement on inclusion relative to other LEPs.

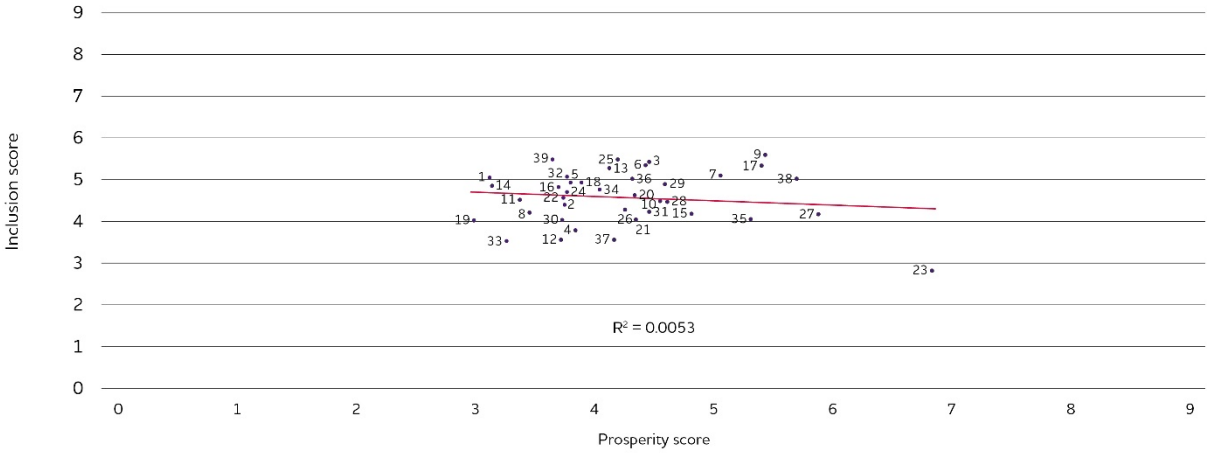
The relationship between prosperity and inclusion (change)

Unlike the level scores, there is little correlation between change scores for prosperity and inclusion. This is shown by the clear lack of 'fit' revealed in the scatter chart in Figure 15 ($R^2 = 0.0053$).

Some LEP areas score reasonably highly on change in prosperity scores but not inclusion (Greater Manchester, Oxfordshire and Thames Valley Berkshire). London's position as an outlier is once again apparent, with the highest change score for prosperity and lowest for inclusion. This appears to confirm that growth in prosperity over time is not necessarily associated with positive changes in poverty and associated disadvantages as measured by underlying inclusion indicators. An increase in prosperity scores without a corresponding increase in inclusion scores might be less of a concern in LEP areas that have low amounts of poverty to start with. It may be more of an issue, however, in areas with high levels of poverty.

Meanwhile, some LEP areas such as the Black Country and Greater Lincolnshire score reasonably highly on change in inclusion but less highly on prosperity. This may indicate that there is still scope to achieve positive change in outcomes around poverty reduction even when economic growth is less strong in relative terms. Some of the policy implications that stem from these findings are discussed in the final concluding section that follows.

Figure 15: Scatter chart showing prosperity and inclusion scores (change) for all 39 LEPs, 2010–14



1 Black Country
2 Buckinghamshire Thames Valley
3 Cheshire and Warrington
4 Coast to Capital
5 Cornwall and Isles of Scilly
6 Coventry and Warwickshire
7 Cumbria
8 Derby, Derbyshire, Nottingham and Nottinghamshire
9 Dorset
10 Enterprise M3
11 Gloucestershire
12 Greater Birmingham and Solihull
13 Greater Cambridge and Greater Peterborough
14 Greater Lincolnshire
15 Greater Manchester
16 Heart of the South West
17 Hertfordshire
18 Humber
19 Lancashire
20 Leeds City Region
21 Leicester and Leicestershire
22 Liverpool City Region
23 London
24 New Anglia
25 North Eastern
26 Northamptonshire
27 Oxfordshire
28 Sheffield City Region
29 Solent
30 South East
31 South East Midlands
32 Stoke-on-Trent and Staffordshire
33 Swindon and Wiltshire
34 Tees Valley
35 Thames Valley Berkshire
36 The Marches
37 West of England
38 Worcestershire
39 York, North Yorkshire and East Riding

6 Conclusion

The inclusive growth monitor provides new insights into the relationship between growth and poverty. At the local level, it provides practitioners with a strategic framework to shape the inclusive growth agenda in cities and city regions by identifying strengths and weaknesses across policy areas and, potentially, shape investment decisions. It offers them a means of monitoring performance against inclusive growth objectives and benchmarking outcomes against other areas. The inclusive growth monitor is more flexible and accessible in the way that data can be presented and understood than alternative frameworks. It will be updated annually by a team in the Inclusive Growth Analysis Unit based at the University of Manchester.

The stark geographical differences that emerge when looking at prosperity and inclusion scores in terms of levels in 2014 confirm longstanding concerns about regional spatial imbalances. However, this is not just a simple tale of a north – south divide. Change scores between 2010 and 2014 show that some LEP areas in the north experienced some of the most positive relative movements in underlying inclusion indicators.

This ability to make sense of the relationship between prosperity and inclusion, and how this varies spatially, is all the more important in the current political and economic context. The Conservative government is committed to reducing the public deficit through a package of 'austerity' measures to cut spending. At the same time, devolution of new responsibilities and funding through sub-regional mechanisms such as Local Enterprise Partnerships (LEPs), Growth and Devolution Deals, the introduction of metro-mayors and the current Cities and Devolution Bill all seek to stimulate local economic development. This expectation that growth picks up the slack of lower public spending raises important questions about who benefits from growth.

The analysis presented in this report is intended mainly to illustrate how the inclusive growth monitor is constructed and can be used. Nonetheless, the findings reported hint at broad policy implications for spatial policy. The link between prosperity and inclusion is largely a positive one, at least in terms of current levels. LEP areas with the highest prosperity scores in 2014 also have the highest inclusion scores. This suggests that raising levels of prosperity is an important part of any anti-poverty strategy. However, the more mixed picture shown by change scores indicates that growth in prosperity over time will not *necessarily* translate into higher levels of inclusion. This is clearly shown in the extreme case of London where strong economic growth (as measured by prosperity indicators) has occurred without concurrent reductions in high levels of poverty and disadvantage (as measured by inclusion indicators). While something of an outlier, the sheer size of the capital means it cannot be ignored. Here, policy-makers clearly need to address how the proceeds of growth might be shared more equitably.

At the other end of the scale, some LEP areas have seen a relatively high degree of positive change in poverty (as measured by increases in inclusion scores) but less economic growth (as measured by increases in prosperity scores). This means the limited amount of growth they achieve from a low base is still, in relative terms, associated with positive outcomes around poverty. One implication is that areas that are less buoyant economically still have capacity to make valuable inroads into poverty. A more active strategy to tackle spatial imbalances across and within regions may further strengthen an already positive relationship between poverty and (limited) growth in such areas. At the very least, the data appears to make the case for not just focusing on those areas already experiencing, or best primed for growth, to achieve anti-poverty goals.

It is important to note that the inclusive growth monitor can only reflect on the association between poverty and growth and not the direction of that relationship. The question of whether growth reduces poverty or reducing poverty drives growth is clearly important but not one which can be answered here. More research is needed to address this. What the monitor presented here can contribute, however, is a tool for better understanding how poverty relates to growth in different areas across England.

Notes

1. For an example of how this can be done see Beatty and Fothergill (2013).

2. More details of the OECD's Inclusive Growth in Cities campaign can be found at: www.oecd.org/inclusive-growth/about/inclusive-cities-campaign/#d.en.381962.

3. The Metro Monitor website can be found at www.brookings.edu/research/reports2/2016/01/metro-monitor#V0G10420).

4. Indicators based on benefit claimant rates are susceptible to policy changes to eligibility or tightening of conditionality which can reduce claimant rates without necessarily changing underlying levels of poverty and other forms of material disadvantage. This may impact on some areas more than others, providing a misleadingly positive picture of change. Including survey-based indicators in the labour market exclusion dimension that are less susceptible to policy change serves to mitigate such effects.

5. It should be noted that 2014 data was unavailable for two indicators – fuel poverty and workplace jobs (jobs density) – at the time of publication. The 2014 figure for fuel poverty is omitted in the dashboard here but, where necessary later to create normalised and composite scores, the 2013 figure has been used for 2014 as well. An estimate for the 2014 workplace jobs indicator has been created using a different data source. This is explained fully in a separate technical note available at www4.shu.ac.uk/research/cresr/sites/shu.ac.uk/files/jrf-inclusive-growth-technical-notes.pdf. Any future updates of the inclusive monitor will incorporate the official statistics where available.

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