



THE LONDON SCHOOL  
OF ECONOMICS AND  
POLITICAL SCIENCE ■

UNDERSTANDING THE  
RELATIONSHIP BETWEEN

# POVERTY AND INEQUALITY

OVERVIEW REPORT

John Hills, Abigail McKnight,  
Irene Bucelli, Eleni Karagiannaki,  
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Centre for Analysis of Social Exclusion

Research at LSE ■



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## ABOUT THE PROGRAMME

CASE collaborated with the LSE's International Inequalities Institute to lead a three-year programme of research on the connections between inequality and poverty, *Improving the Evidence Base for Understanding the Links between Inequalities and Poverty*, funded by the **Joseph Rowntree Foundation**.

An understanding that poverty and inequality are inextricably linked has given rise to a number of large international organisations setting joint inequality-poverty reduction targets on the basis that poverty cannot be seriously tackled without addressing inequality. However, the evidence base was relatively weak with only limited information available on the relationship between the two phenomena. The programme was designed to expand the evidence base on the links between inequality and poverty and to fill this knowledge gap. In the research summarised in this report we explored the relationship between inequality and poverty by:

- Examining philosophical concerns for poverty and inequality and how they may overlap
- Estimating the empirical relationship between income inequality and a variety of poverty measures
- Reviewing the existing evidence base on potential mechanisms that may drive any relationship

In other work within the programme we are investigating some of mechanisms identified in the evidence review and investigating potential policy options.

Other papers from the programme are listed on **page ii**.

## **DISCUSSION PAPERS FROM THE PROGRAMME**

### **Inequality, poverty and the grounds of our normative concerns**

LIPpaper 1 by Irene Bucelli

### **The relationship between poverty and inequality: Concepts and measurement**

LIPpaper 2 by Lin Yang

### **The empirical relationship between income poverty and income inequality in rich and middle income countries**

LIPpaper 3 by Eleni Karagiannaki

### **Multidimensional poverty and income inequality in the EU**

LIPpaper 4 by Lin Yang and Polly Vizard

### **Understanding the relationship between inequalities and poverty: resource constraint mechanisms**

LIP paper 5 by Lin Yang

### **Understanding the relationship between inequalities and poverty: mechanisms associated with crime, the legal system and punitive sanctions**

LIP paper 6 by Magali Duque and Abigail McKnight

### **Understanding the relationship between inequalities and poverty: dynamic mechanisms**

LIP paper 7 by Magali Duque and Abigail McKnight

### **Understanding the relationship between poverty, inequality and growth: a review of existing evidence**

LIP paper 8 by Abigail McKnight

### **The net effect of housing-related costs and advantages on the relationship between inequality and poverty**

LIP paper 9 by Lin Yang

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The research also draws on distributional statistics from the European Union Statistics on Incomes and Living Conditions (EU-SILC), the OECD Income Distribution Database and the World Wealth and Income Database (WID). The three databases are accessible respectively from: <http://ec.europa.eu/eurostat/web/income-and-living-conditions/data/database>, <https://stats.oecd.org/Index.aspx?DataSetCode=IDD>, and [www.wid.world](http://www.wid.world).



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# UNDERSTANDING THE RELATIONSHIP BETWEEN POVERTY AND INEQUALITY

## OVERVIEW REPORT

### SUMMARY

John Hills, Abigail McKnight, Irene Bucelli, Eleni Karagiannaki, Polly Vizard and Lin Yang with Magali Duque and Mark Rucci

**In this report we summarise the findings from a series of papers that explore the relationships between poverty measured in various ways and inequalities in people's incomes. This programme of research was motivated by the question of whether it is possible to separate concerns between poverty and inequality – is it in fact possible to be concerned about poverty but to be indifferent to inequality? As a corollary, does tackling poverty also require policies to reduce inequality?**

We review the philosophical debate, identifying a number of different standpoints. For some, inequality between people is the prime concern, with poverty one of its consequences. For others, poverty and ensuring that everyone meets some kind of minimum standard is the starting point. Inequality for some from these points of view would be of concern just for instrumental reasons, if in some way it leads to or exacerbates poverty, but not in its own right. In many cases, though, our concerns with poverty and inequality are not mutually exclusive. We can hold that both poverty and inequality are relevant for human deprivation, and that whether you start with a concern for poverty or a concern for inequality, they are *both* violating human dignity. They can also stand in mutually *reinforcing* relationships and hinder other social goals. A pluralist approach incorporates different justifications: one can *prioritise* poverty (as the most important determinant of deprivation, or reflecting human rights or humanitarian concerns) while also allowing that inequality matters, both in itself and instrumentally, because it worsens poverty.

This implies that for some perspectives at least there is a core empirical issue: whatever the underlying reasons for our concerns, is there empirical evidence that in practice poverty and inequality are linked? Here there are two competing propositions:

- i. That high inequality is associated with high rates of poverty, in a way that suggests either that there is a causal relationship of some kind, with higher inequality *leading to* greater poverty, or that the same factors drive both, so that tackling one is likely to mean reducing the other.
- ii. That high inequality is good for poverty reduction, measured against a fixed standard, at least, through the beneficial effects of the incentives it creates leading to economic growth, benefiting poor people in *absolute* terms, even if they are left behind *relative* to others.

In all of this, precise definitions matter. In the empirical analysis summarised in the report we look at a variety of ways in which one can measure income inequality, using measures which put more or less weight on inequalities in different parts of the distribution, and at different ways of measuring the extent of poverty, both monetary measures and those which incorporate wider measures of deprivation. We also test some of the relationships found by examining whether changes in poverty are associated with changes in inequality, a stronger test than just looking at associations at one moment.

Using a variety of inequality measures matters, because any observed relationship *could* simply be the mechanical result of the definition used. In particular, the main measure of relative poverty published by the UK government and used widely in international comparisons, is a count of how many people have incomes below a certain proportion (60 per cent commonly) of the median, or middle, income. There is, in fact, no necessity for this measure to be linked to *overall* income inequality – there could be no-one with an income very far below the national median, for instance, at the same time as there being considerable inequality in the top half. But it would be unsurprising to see a close relationship between relative poverty measured this way and measures of inequality in the bottom half of the income distribution.

That said, what the empirical evidence shows is an association between higher income inequality and higher poverty that is *not* the result of a mechanical or arithmetical link of this kind. In headline terms, looking first at income-based measures of relative poverty:

- Over the last fifty years in the UK there is a clear positive empirical association between income inequality and relative income poverty. Years with comparatively low inequality had lower relative poverty, and those with high inequality had higher poverty rates.
- This is true using a variety of inequality measures, looking at the UK over time. Overall there is even a (weak) positive correlation between inequality at the very top of the income distribution, measured by the share of income received by the top 1 per cent, and relative income poverty.
- However, the patterns of association have not been constant over time. During the 1970s and the 1980s the different series for income inequality and relative poverty did move closely together. But the falls in relative poverty from the early 1990s to 2010 were not matched by similar falls in income inequality. Whatever the underlying long-term relationships between inequality and poverty rates, policies and other factors can make a difference from year to year.
- Looking across European Union and other industrialised countries, higher income inequality, measured in a variety of ways, is associated with higher relative poverty. We simply do not observe countries with high income inequality and low relative poverty: achieving that seems to have eluded the policy-makers in many countries.

- Furthermore, *changes* in inequality over time in a country are associated with changes in relative poverty, although the relationship is weaker than when comparing levels in a single year, and in some countries the two have moved in opposite directions. This relationship remains strong and statistically significant, even controlling for factors such as initial inequality and the rate of income growth.
- However, looking across industrialised countries we found no consistent pattern in how the income shares of the very top of the distribution (top 1, 5 and 10 per cent) relate to relative poverty rates.

We also look at aspects of poverty beyond income-based measures to examine the link between a country's level of income inequality and how this may relate to the way its most deprived individuals experience poverty across multiple dimensions of life:

- Using indicators of material deprivation and multi-dimensional poverty also shows significant associations between levels of poverty and income inequality in different European Union countries, suggesting that these are not the result simply of measuring poverty in only monetary terms.
- These results apply controlling for a wide range of micro- and macro-level variables and differences between countries. The relationships we found are not simply the result of the other underlying factors which are separately associated with both poverty and income inequality, thus creating an apparent association between them.
- However, this analysis does not show a statistically significant relationship between *changes* in inequality and *changes* in material deprivation or multi-dimensional poverty measures, looking at the narrow period between 2007 and 2011 for which we have data. This does not necessarily contradict the observation that material deprivation and multi-dimensional poverty are linked to income inequality at a point in time, as there may be longer lags than four years (or less) between the two (and this particular period overlapped the onset of economic crisis).

We also look at the evidence for the competing proposition – that income inequality may be good for poverty reduction, at least against fixed standards, for instance through increasing growth.

- However, looking at recent European experience we found that changes in inequality are positively associated with changes in poverty against an *anchored* standard – increasing inequality implies a *slower* reduction (or *faster* increase) in poverty even against a fixed standard. High initial inequality and growing inequality appear to hold back reductions in poverty rates against a fixed line. This goes against the prediction that greater inequality would help speed poverty reduction against a fixed line.
- One tradition in economics suggests that there is a trade-off between equality and growth, stressing the positive effects of the incentives for work, investment and risk-taking that go with wider inequalities. However, other economists have suggested a series of ways in which inequality can damage growth.

- The competing theoretical relationships between poverty, inequality and growth suggest that this is an empirical question. But here the evidence is also divided, with some studies suggesting that inequality helps growth, but many finding the opposite, depending on the precise models, selection of countries, and measurements used. The equivocal nature of the evidence suggests that the positive links we find between greater inequality and greater poverty should remain the main focus, rather than concerns that lower inequality would hold back growth.
- The evidence supports the idea that the relationship between inequality may be non-linear, with very low levels and high levels of inequality both damaging growth, but for a wide range in between the effect of changes in inequality being roughly neutral. This implies that the positive links between greater inequality and greater poverty would remain the main concern in most countries, rather than dangers that lower inequality would hold back growth and so the real incomes of those in poverty.

Given that the evidence does suggest that higher inequality *is* often associated with higher poverty, we therefore examine why there should be such a relationship, examining evidence put forward in the literatures from different fields. We find a variety of proposed mechanisms, which we explore under seven headings:

- a. Linked drivers: especially in the labour market, including discrimination: the same factors may lead to both poverty and inequality, even though the relationship is not causal.
- b. Inequality at one time – and especially in one generation – may reinforce both inequality and poverty in the next, as unequal life chances make it harder for some to build their livelihoods than others. If higher income inequality leads to lower income mobility, poverty becomes more entrenched and persistent.
- c. Limits to redistribution: even if market incomes, before state transfers, are unequal, tax-financed welfare states can break the link between that and poverty, but there may be limits to what redistribution can achieve.
- d. Perceptions and attitudes: what drives policy responses to poverty and inequality will ultimately depend on the public's perceptions and knowledge of them. If inequality is associated with less knowledge of how others live, popular demands for something to be done about poverty may be reduced.
- e. Geographical polarisation may reinforce all three of the previous mechanisms. Opportunities for poor people will be reduced, if they are distant from work or have access to lower-quality education. Local resources in part determine the quality of local public services, and the more so as national equalisation systems are reduced. Geographical polarisation or even segregation between groups will further limit knowledge of how others are living, increasing stigma and reducing empathy.

- f. Politics and the influence of the affluent: both media control and political party funding are often dominated by those with the greatest resources; the greater the resources of the richest, the more the political agenda may reflect their interests, acting against effective action to reduce poverty. High inequality and feelings of lack of involvement and connection may lead to lower turnout amongst those who have most to gain from redistributive policies. Also important will be who sets the agenda for the legal institutions that constrain markets, and people's ability to exercise the rights that such institutions give them.
- g. Crime, punishment and criminal justice have also been put forward as routes through which inequality may worsen problems of poverty and its persistence. Increased inequality affects incentives to commit crimes, and punitive preferences of the public and politicians, with reduced resources for rehabilitation.

The range of potential drivers of the observed relationship imply that public policies matter and that this is not just the obvious ones, such as social security, taxation and within the labour market including anti-discrimination legislation. What happens across education, housing, regional investment, policy rhetoric, and factors that affect culture and social norms, and democratic safeguards will also be important. However, the relative importance of different items within such an agenda for tackling poverty would reflect what we have seen empirically, notably the apparent importance of inequalities across the income distribution as a whole, rather than specifically inequalities right at the top (although there may, of course, be other reasons for worrying about them).

**The evidence we present suggests that for those whose primary concern is with tackling poverty, it is hard to do this in countries such as the UK without simultaneously reducing inequalities, given the strong associations we see between them empirically, and the ways in which inequality can itself act as driver of poverty. At the same time, for those for whom both poverty and inequality are concerns, the links between them suggest that policies to tackle either can have a double dividend.**





## 1 INTRODUCTION: WHAT'S THE ISSUE?

If we are concerned to reduce, or even end, poverty, does that also require income inequality to be reduced? Or are they two separate issues? Philosophically, can one separate the two, so that it is possible to be deeply concerned about poverty but unconcerned about inequalities at the top of society?

Tony Blair, when UK Prime Minister, certainly seemed to think so. He set a target for eliminating child poverty within twenty years in his 1998 Beveridge lecture, and his governments successfully put considerable resources and effort into reducing both child and pensioner poverty.<sup>1</sup> But as far as the top was concerned, he argued that it was, “not a burning ambition for me to make sure David Beckham earns less money”<sup>2</sup> and his close colleague and Cabinet Minister Peter Mandelson declared himself “intensely relaxed” about “people becoming filthy rich” – so long as they paid their taxes.<sup>3</sup> More starkly, former LSE Economics Professor and current Chief Economist for Citigroup, Willem Buiter said that, “Poverty bothers me. Inequality does not. I just don’t care.”<sup>4</sup>

**Section 2** of this report examines the position of different philosophical traditions on whether the two issues can and should be separated like this.

But even if someone’s prime concern is with poverty, with inequality a second-order concern, or even no concern at all in itself, they might still want to see income inequality reduced because they believe that it leads to or worsens poverty. If this is the case, then, instrumentally, policies are needed to reduce inequality with the ultimate aim of reducing poverty. **Section 8** looks at a series of mechanisms that potentially create those links between wider societal inequalities and poverty, including both underlying mechanisms affecting people’s economic resources and the politics of policy within unequal societies.

1 Hills, De Agostini and Sutherland (2016).

2 BBC Newsnight, 4 June 2001.

3 Speaking in 1998; he later revised his views (*The Guardian*, 26 January 2012).

4 *Financial Times*, 14 February, 2007 (quoted in Wade, 2013).

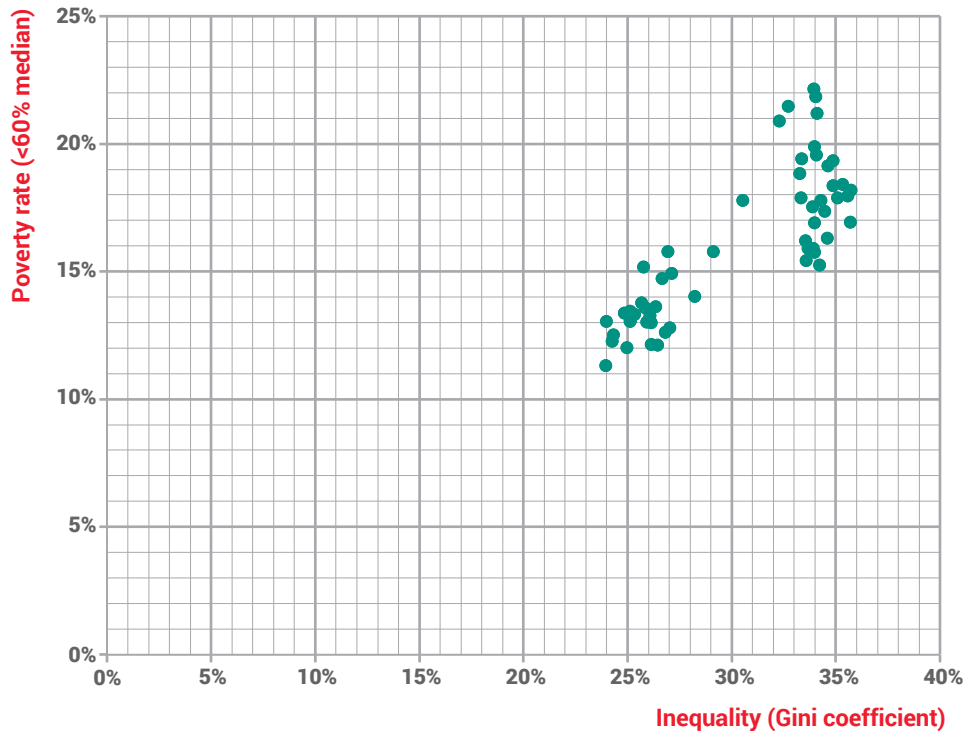
Less strongly, it may be that policies that reduce poverty, such as boosting the earning capacity of, or state benefits for, the otherwise poor, may as a *by-product* reduce income inequality, depending on where and how it is measured. At its simplest, it may just be that action to reduce poverty requires society's resources to be mobilised through taxation. Because more of those taxes will come from the better off, the effect may well be to reduce inequality not just at the bottom, but also at the top. We may have no particular ambition to make David Beckham poorer, but if he has the greatest capacity to contribute taxes we may end up doing so – for the same reason that US bank robber Willie Sutton allegedly replied when asked by a reporter why he robbed banks: “because that’s where the money is”. More bluntly, as Paul Segal put it, “inequality is a wasted opportunity for poverty reduction”.<sup>5</sup>

But there is an opposite possible link between the two, which has formed the basis of policy – at least rhetorically – in many countries at times. That is the argument that inequality can be useful for *reducing* poverty. People need incentives to work, invest and take the risks that lead to economic growth. In turn growth increases opportunities, employment and incomes at the bottom, reducing poverty (if measured against a fixed standard), even if overall inequalities are growing at the top. What has happened in China in recent decades could be advanced as an example of this, and the stagnation of the Soviet Union before its demise as an example of what happens without incentives and the inequalities they can create.

There are two competing propositions here, that inequality worsens poverty (a positive link) or that it reduces it, at least against a fixed real standard (a negative link). Some *prima facie* case that the two are positively linked – high income poverty is seen when income inequality is also high – can be seen in Figure 1.1. This shows the experience in Britain since 1961. At times when the Gini coefficient measure of income inequality (see **Section 3** for discussion of measurement concepts and issues) has been low, so has the official measure of (relative) poverty been. When the Gini coefficient was below 30 per cent, the poverty rate was between 11 and 16 per cent. When it was above 30 per cent, the poverty rate was between 15 and 23 per cent. We simply haven't seen times when inequality was high, but relative poverty was low (below 15 per cent). In **Section 4** we discuss in more detail the timing of these observations, including a discussion of the difference in relationship between top income shares and poverty rates before and since 1990 (see Figures 4.5 and 4.6).



**Figure 1.1: Relationship between relative income poverty and income inequality, 1961 to 2016-17, GB/UK**



**Source:** McKnight, Duque and Rucci (2017), figure 18 updated from IFS poverty and inequality spreadsheet.

**Notes:** See Figure 4.1. Incomes are before housing costs. These data are for GB up to 2001-02 and the UK thereafter. Gini coefficients are expressed as a percentage here and elsewhere.

In **Sections 4 to 6** we explore the empirical relationship between poverty and income inequality in much more detail, using different measures of both income inequality and of poverty. We examine whether the observed relationship simply an artefact of how we measure poverty and inequality, so that different ways of looking at them would produce a different picture? For instance, the official poverty measure is a count of what proportion of the population has incomes less than 60 per cent of the overall median (middle) income – it is in one sense a measure of inequality between the middle and bottom of the income distribution. Does this make a relationship like the one shown in Figure 1.1 unsurprising, even inevitable? In order to examine this question we look at what the relationship looks like using different poverty and inequality measures.

The recent UK experience is just one example, however. An association of the kind shown in Figure 1.1 may just be a single-country coincidence, driven by the differences between the 1960s and 1970s on the one hand, and 2000s and 2010s on the other. Here it is helpful to look internationally. Are there countries that achieve low poverty without also having low inequality? If there are none that have achieved

this trick, it begins to suggest that it has eluded policy-makers, even in countries with more effective policies and more constructive politics than Britain. Again, at first sight, Figure 1.2 suggests they are hard to find within Europe, at least. In 2014, none of the 26 European countries shown had inequality with a Gini coefficient of above 30 per cent at the same time as having a relative poverty rate below 14 per cent. With the exception of Cyprus, all the high inequality countries have higher relative poverty rates. All of the countries with poverty below 14 per cent had a Gini coefficient below 30 per cent (although there are a few countries with below average inequality that fail to achieve low poverty, including by this date, Sweden, marked SE in the figure).

**Figure 1.2: Relationship between relative income poverty and income inequality, European countries, 2014**



Source: Karagiannaki (2017), figure 1, based on data from EU-SILC. Relative poverty rate is proportion of population with incomes below 60 per cent of median.

Again, though, is that just an artefact of the way in which we are measuring income inequality? If we look, for instance, at inequality at the very top (which may be important for some of the political mechanisms advanced as linking inequality to failure to act against poverty), is that also linked to relative income poverty risk? And what are the associations between income inequality and income poverty measured using anchored (fixed real) standards, as opposed to relative standards? We examine the evidence in **Section 5**. We also look at a much stricter test, beyond the cross-sectional, snapshot association shown in the figure. When inequality rises between two years, does poverty rise, and when inequality falls, does poverty fall? Does the international evidence support the idea that growing inequality is associated with growing poverty and the reverse? That sort of link would strongly suggest

that the relationship was in some way causal – although even if there was a causal link, it could operate over shorter or longer time periods, which makes it harder to investigate. The kinds of mechanisms discussed in **Section 8** would operate over varying time periods, some of them possibly with long lags.

Reliance on measures of poverty that describe low incomes and their relationship with income inequality may still be too partial a test of the links between inequality and poverty. In **Section 6** we therefore look at how *non-monetary* measures of poverty and deprivation are related to income inequality internationally. Do we, for instance, find examples of countries where material deprivation – representing a fixed standard across countries – is low, but income inequality is high? Similarly, using a much wider perspective for what constitutes disadvantage – including factors such as health status, education, unemployment, and living conditions – are levels of ‘multidimensional poverty’ low in some high inequality countries? If so, they may have found a way of meeting their citizens’ needs effectively, despite some having very much higher inequality than others.

In **Section 7** we investigate the alternative proposition set out above, that inequality promotes economic growth, and boosts the real incomes of the poor, and so reduces poverty against a fixed standard. If people’s concerns were with some form of ‘absolute’ deprivation, then this would be seen as a positive outcome, even if relative poverty was higher, alongside other kinds of inequality. On the other hand, if greater inequality reduces growth, the poor are then likely to lose doubly – both from being in a smaller economy, but also from getting a smaller share of it.

Given that most of the more detailed evidence we review below generally confirms the kinds of positive relationship between poverty and inequality illustrated by the two figures above, rather than the alternative negative link, we then look in **Section 8** at why this might be. The mechanisms we explore include:

- a. **Linked drivers:** especially in the labour market, including discrimination: the same factors may lead to both poverty and inequality, so the two will be associated, even though the relationship is not causal.
- b. Inequality at one time – and especially in one generation – may reinforce both inequality and poverty in the next, as **unequal life chances** (for instance through location or wealth) make it harder for some to build their livelihoods than others.
- c. **Limits to redistribution:** even if *market* incomes, before state transfers, are unequal, tax-financed welfare states can break the link between that and poverty, but redistribution is not costless or always effective, so there may be limits to what it can achieve.
- d. **Perceptions and attitudes:** what drives policy responses to poverty and inequality will ultimately depend on the public’s perceptions and knowledge of them. If inequality is associated with less knowledge of how others are living, and less mixing between groups, lower awareness of its extent and nature may mean that

popular demands for something to be done about poverty may be reduced as a result of reduced empathy or ignorance.

- e. **Geographical polarisation** may reinforce all three of the previous mechanisms. Opportunities for poor people will be reduced, if they are distant from work or have access to lower-quality education. Local resources in part determine the quality of local public services (which they will do, if they are not fully 'equalised' between areas through national sharing arrangements). Geographical polarisation or even segregation between groups will further limit knowledge of how others are living, increasing stigma and reducing empathy.
- f. **Politics and the influence of the affluent:** both media control and political party funding are often dominated by those with the greatest resources; the greater the resources of the richest, the more the political agenda may reflect their interests, acting against effective mobilisation of tax resources, redistribution and public action to reduce poverty. Also important will be who sets the agenda for the legal institutions that constrain markets, and people's ability to exercise the rights that such institutions given them. In recent times, the choices made in austerity – between increased taxes and spending cuts (and how those cuts fall) – offer potential case studies of the consequences.
- g. **Crime, punishment and criminal justice** have also been put forward as routes through which inequality may worsen problems of poverty.

Our overall findings are brought together in the initial **Summary**.

This report brings together the findings and conclusions of a series of working papers written by the authors as part of the overall programme on relationships between poverty and inequality carried out by the Centre for Analysis of Social Exclusion (CASE) for the Joseph Rowntree Foundation, as well as those from parallel research carried out for CASE for Oxfam. In places, therefore, the text is taken directly from the relevant working paper or from the separately funded Oxfam publication, *Double Trouble*, also written by members of the team. We indicate at the start of each section which of the more detailed papers underlies it.

Our focus is on the United Kingdom and where appropriate comparable countries in the European Union or industrialised countries that are members of the Organisation for Economic Co-operation and Development (OECD), rather than the situation in low- or middle-income countries, where the economic and social contexts are very different.





## 2 WHY SHOULD WE CARE? PHILOSOPHICAL CONCERNS FOR POVERTY AND INEQUALITY<sup>6</sup>

Policy debates surrounding poverty and inequality often focus on trying to find practical solutions to them. But, more fundamentally, why should we care about poverty, or about inequality? Do our reasons for caring about one contrast with our reasons for caring about the other? Identifying these different ethical reasons can lead claim that one issue should have priority over the other and can justify a particular focus for policy.

**This section summarises different ethical and philosophical positions and theories that underlie claims that we have a moral duty to care about poverty and inequality and explores the extent to which these are compatible and can, in fact, overlap.**

### **Giving priority to inequality**

A rich tradition in philosophy focuses on inequality: the basic idea this tradition supports is that inequality constitutes injustice. For John Rawls, a 'just' society not only affirms and secures basic rights and liberties for all citizens; but it also requires (a) equality of opportunity and (b) that social and economic inequalities should always benefit the worst-off, for example by increasing the overall size of the 'cake' available to be divided. In practice, tackling poverty may be necessary to move towards a just society but poverty is thought to "follow from political injustice... once the gravest forms of political injustice are eliminated by following just (or at least decent) social policies and establishing just (or at least decent) basic institutions, these great evils will eventually disappear".<sup>7</sup> This reverses some of the logic discussed in the Introduction: reducing inequalities comes first, and then lower poverty would follow.

<sup>6</sup> This section summarises the detailed discussion and review of the literature in *Inequality, poverty and the grounds of our normative concerns* by Irene Bucelli (2017). That paper provides a more complete overview of normative approaches (eg. libertarian or utilitarian perspectives) which are not fully addressed here.

<sup>7</sup> Rawls (1999), pp. 6-7.

But if we are concerned about equality, *what* equality should be our focus?<sup>8</sup> This question has generated a long-running debate in philosophy<sup>9</sup> arguing about whether social justice obliges us to go beyond focusing on resources, and wealth and income.<sup>10</sup> The distribution of resources is seen as connected to wider asymmetrical relationships of political power, of status, and also of exclusion and discrimination. Inequalities of wealth and income are important (but not the only) determinants of these social inequalities, but overcoming distributional inequalities is not sufficient to achieve social equality, because, for example, certain forms of exclusion can be rooted in reasons other than the possession of material resources (e.g. gender, race or disability).

## Giving priority to poverty

### Sufficiency views

By contrast, other traditions prioritise poverty. First, so called “sufficiency” views stress that “what is important from the point of view of morality *is not* that everyone should have *the same* but that each should have *enough*”.<sup>11</sup> We should care about whether people have good lives, not how their lives compare to others. This position can support redistributive policies, but only because they might be instrumentally necessary to reach sufficiency. Given the choice between (a) achieving sufficiency through redistribution of income and wealth inequalities and (b) reaching identical gains for the worst-off with equal or greater gains for the better-off, there is no reason to favour the former solution over the latter. Sufficiency positions thus justify being concerned about poverty in resource terms, but distinguish this sharply from any need to be concerned about inequality.

### Humanitarian approaches

A perspective that is uniquely related to poverty stresses humanitarian reasons to help the poor, putting “humanity before justice”.<sup>12</sup> According to these views, our moral reason to care about poverty springs from the sheer horrible suffering that is associated with it. This approach has some important implications:

1. Humanitarian aid is not sensitive to how a certain state of affairs came to be.
2. This position can lead to rather radical conclusions because it holds that the duty to give aid is demanded from all of us, as individuals, in accordance to our capacity and irrespective to proximity. This calls into question prioritising domestic poverty over global poverty.<sup>13</sup>

8 Section 7 explores the issue of *how much* inequality might have positive or negative effects, if the relationship between the two is not linear.

9 Cohen (1989); Sen (1980).

10 Anderson (1999), Wolff et al. (2015); Fraser (1998; 2007).

11 Frankfurt (1987), pp. 21-22.

12 Campbell (2007); Singer (1972).

13 Singer (1972), p. 232.



3. While it might be that extreme experiences in the context of global and absolute poverty elicit this “elemental response of aiding”, the strength of this motivation is not always clear in relation to domestic and relative poverty in more developed countries.

## Human rights approaches

Freedom from poverty can also be considered as a fundamental human right. Rights-based views generally consider poverty as a harm that is possible to foresee and avoid and that infringes on human rights (entitlements people have simply by virtue of being human). These approaches offer strong justifications for policies intended to eliminate poverty. At the same time, especially since they focus on ‘subsistence rights’ and on extreme and absolute poverty, it might seem that such views do not in turn justify concerns with relative poverty or inequality.<sup>14</sup>

Some authors such as Thomas Pogge (2002; 2007) also stress that the causes of poverty are of moral significance: we care about the reasons why there is persistent poverty in the face of material abundance. According to Pogge, “severe poverty today, while no less horrific than that experienced by the early American settlers, is fundamentally different in context and causation. Its persistence is not forced on us by natural contingencies of soil, seeds, or climate. Rather, its persistence is driven by the ways that economic interactions are structured” (2007, 3). Instead of solely caring about the consequences, such as the suffering experienced by the poor, this view focuses on the relations that brought these consequences about.

## How reasons for caring about poverty and inequality overlap

### Instrumental reasons

We can also have instrumental reasons to care about poverty and inequality: we care because they are obstacles to *other* social, economic and political goals. In this sense, our interest in tackling them follows from the fact that poverty and inequality are associated with certain consequences. For example, some current research suggests that inequality has negative effects on: social cohesion;<sup>15</sup> political stability;<sup>16</sup> and democratic participation.<sup>17</sup> We can also care about inequality because it is economically inefficient<sup>18</sup>, or because it slows down growth and development<sup>19</sup> or because it has a negative effect on social mobility.<sup>20</sup> Richard Wilkinson and Kate Pickett’s well-known 2009 book, *The Spirit Level: Why equality is better for everyone* shows a series of strong associations between income inequality and adverse social

14 Gewirth (1996), pp. 72-73, 110.

15 Bridstall (2007).

16 Stewart (2013); Salomon (2011).

17 Solt (2008; 2010).

18 Stewart (2013); Salomon (2011); Wade (2005).

19 World Bank (2006); Bénabou (1996); Berg and Ostry (2011); Stiglitz (2012; 2015).

20 Corak (2013).

outcomes, making the claim that the associations are causal. This evidence needs to be balanced against classic claims that inequality has a positive effect on growth<sup>21</sup> as well as cases where, for instance, inequality and poverty trends appear to move in different directions. We examine some of this evidence in the sections that follow.

Generally, in order to claim instrumental reasons to avoid generating or exacerbating inequalities, we need empirical evidence that supports the links that connect inequality to these different social and political phenomena. Notably, even someone who gives priority to poverty can hold that there are instrumental reasons to care about inequality, recognising the mechanisms through which inequality contributes to poverty (see **Section 8**).

## Human Dignity

Some of the approaches discussed above can support a view for which tackling poverty, especially extreme poverty, takes priority over tackling distribution gaps and inequality. But that does not necessarily follow. Recognizing the priority of poverty, “need not commit us to the very different assertion that this is *all* that justice requires”.<sup>22</sup> *Both poverty and inequality* can be seen as violations of human dignity. As such, the two are inextricably linked: what is wrong about both is the kind of distortion they introduce in economic, social and political relationships and which counts as a violation of human dignity.<sup>23</sup> We can thus have an overlapping concern with poverty and inequality that originates from a common commitment to respecting human dignity.

## Deprivation and capabilities

A broader concern with deprivation can lead us to care about both poverty and inequality. In fact, the social exclusion, material deprivation and disadvantage that result from these are mutually reinforcing. ‘Capability’ approaches<sup>24</sup> can be understood as supporting this kind of view: poverty and inequality are both barriers to people’s capabilities to function in ways that are elemental to human life within society. They are barriers to what people can be and do, and so both of concern.

Notably, capability approaches connect this broader consideration for deprivation to the reflections about human dignity and integrity mentioned above. In responding to Townsend’s treatment of relative poverty, Sen analyses Adam Smith’s classic example of commodities that, “any creditable person would be ashamed to appear in public without”<sup>25</sup>: he points to how failures to meet basic capabilities – such as avoiding shame within one’s society, participating social activities and retaining self-respect – count as absolute deprivations, even if one holds a relative approach in terms of the

21 Lazear and Rosen (1981); Kaldor (1957).

22 De Vita (2007), p.108; Beitz (2001).

23 Fleurbaey (2007).

24 Sen (1995); Nussbaum (2006).

25 Smith (1776), pp.351-352; Sen (1983), p.159.

commodities necessary to achieve them. The absolute character of these capabilities also potentially stems from a core commitment to human dignity, which defines human life and activities<sup>26</sup>. This amounts to a pluralist approach in as much as one can hold that material deprivation is probably the most important barrier to functioning in ways that are elemental to human life. At the same time, material inequalities are important, broadly understood. These aspects of social inequality are necessary for one's capability to function within societies, but mechanisms of redistribution are also likely to be needed to meet the thresholds set by capability approaches.

### Does responsibility matter in relation to poverty and inequality?

Policy discourses about poverty and inequality differ according to the extent to which responsibility, or blame, is attributed to individuals and families, or to institutions and economic structures. Putting this more crudely, are the poor responsible for their own poverty due to lack of effort or moral failings, or are they poor because despite their own efforts they are denied access to good jobs, services and opportunities? In some cases, this is the line of argument used to distinguish between the 'deserving' and 'undeserving' poor. This debate is mirrored in philosophical discussions as well, with some arguing that issues of responsibility are irrelevant to the extent to which we should be concerned about poverty, and others regarding it as critical to the moral significance of both poverty and inequality. Arguments about deservingness are also often prominent in discussion of the appropriate tax treatment of the affluent: people may think differently about resources people have that result from 'luck' as opposed to 'effort', although even here there can be disagreement as to whether it is possible to draw a meaningful distinction, in practice, between choice and luck.<sup>27</sup> The approaches can be divided into three positions.

- **Responsibility is irrelevant:** We can have humanitarian concerns or reasons based on human rights to care about poverty. From these standpoints, issues of responsibility are less relevant.
- **Responsibility may be attributed to some of the poor or to the worst off:** However, in relation to both poverty and inequality, many ethical theories think that there is a significant moral difference between those who are worst off through no fault of their own and those who are responsible for their condition.<sup>28</sup>
- **Attributing collective responsibility for the causes of poverty and inequality:** Responsibility is discussed not just in relation to individuals but also in terms of our collective responsibility for structures and institutions.<sup>29</sup> We can see how structural responsibility is particularly central for rights-based views: the

26 See Nussbaum (2008) for an exploration of this idea.

27 Cohen (1989); Barry (2006).

28 Dworkin (1981); Arneson (1989).

29 Cruft, et al. (2015); Tasioulas (2015).

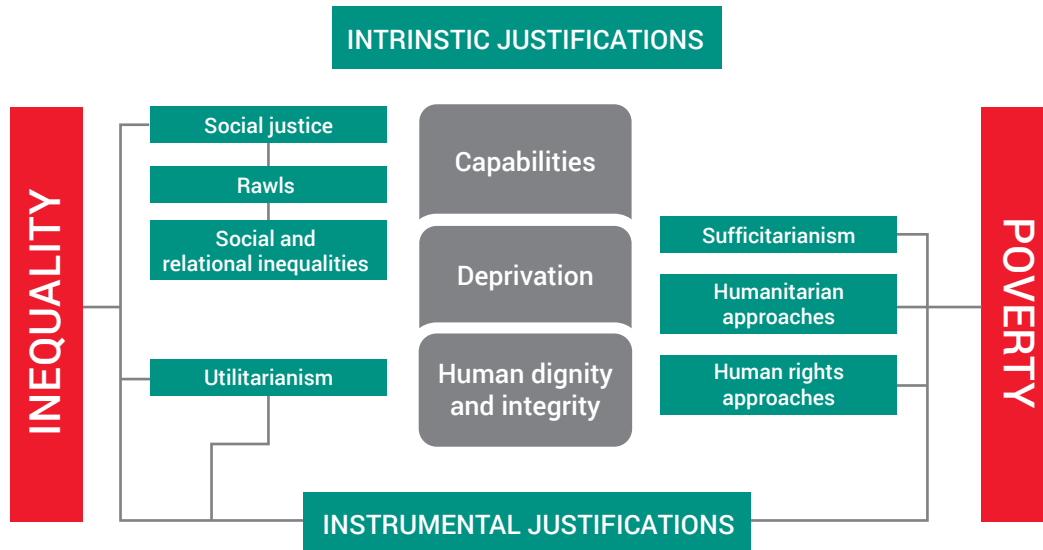
legitimacy of institutions is dependent on their fairness and on their ability to respect moral rights.

Both at the individual and structural level, we also find problems in establishing how certain states of affairs came to be and how an ethically useful idea of responsibility should be defined.<sup>30</sup> While the discourse of responsibility and deservingness or just reward is prominent in the way our own society approaches poverty and inequality, these difficulties invite us to consider the limits of our intuitions, and require us to focus on the causes and processes underlying both poverty and inequality. This is especially in respect of the mechanisms underlying inequality of opportunity, underscoring its relation to income inequality and inequality of outcomes, but also to social mobility and development.

### Conclusions

Different philosophical theories provide different reasons why we should care about poverty and inequality, summarised in Figure 2.1, and readers will take their own views on which are most appropriate. For some authors these appear to be in conflict, inviting us to prioritise one issue over the other. These different theories also lead us to focus on different aspects of inequality (e.g. one can focus solely on differences of wealth and income or on the inequalities that characterise social relationships) and on different aspects of poverty (one can focus on global poverty over domestic poverty; or focus on absolute rather than relative poverty; or care about how the poor came to be in this position or not).

Figure 2.1: A map of the normative debates surrounding poverty and inequality



*Note: The map represents the normative positions that separate or contrast our reasons for caring about poverty and inequality. It also shows a space for considering these normative considerations as not being mutually exclusive. We can hold that both poverty and inequality are relevant for human deprivation, with capability approaches pointing in this direction. We can also hold that both poverty and inequality violate human dignity, or that they are instrumentally connected, standing in mutually reinforcing relationships and hindering other social goals. For further discussion, see Bucelli (2017).*

Nevertheless, this review suggests that it is possible to argue that our concerns with poverty and inequality are not mutually exclusive. We can plausibly hold, for instance, that both poverty and inequality are relevant for human deprivation, or that they are both violating human dignity, or that they stand in mutually reinforcing relationships and hinder other social goals.

A 'pluralist' view can incorporate different justifications: one can prioritise poverty (seeing it as the most important determinant of deprivation, or acknowledging human rights and humanitarian concerns) while also allowing that inequality matters, *both* in itself and instrumentally. In this context, the empirical evidence explored in the sections that follow is highly relevant to the policy implications that follow from our concerns.





### 3 MEASUREMENT ISSUES<sup>31</sup>

The previous section discussed concerns with ‘poverty’ and ‘inequality’ in principle without using precise definitions. But for investigation of the empirical relationships between them we need to be clear on what definitions we are using, and why. Given that there are different aspects to and dimensions of both poverty and inequality there are many combinations of relationship that could be investigated, and which will be appropriate for particular purposes.

In this report we focus on measures of overall *income* inequality, although there are of course other aspects of inequality even focussing only on economic resources (such as those in personal wealth), and there are other important inequalities beyond those between richer and poorer that we look at here.<sup>32</sup>

There is also a very long-standing debate on what is meant by ‘poverty’ and responses to it dating back a century or more.<sup>33</sup> In this report, as well as measures of income poverty we also look at material deprivation and indicators of multidimensional poverty, taking account of other aspects of people’s lives beyond their immediate monetary resources.

<sup>31</sup> See Yang (2017b) for more detailed discussion of some of the issues summarised here, and Yang and Vizard (2017) for discussion of the measurement of multidimensional poverty in particular. We do not attempt here to do justice to the huge literature on the definition and measurement of poverty and inequality. See Atkinson (2015) and Commission on Global Poverty (2016), which he chaired, for discussion of different approaches to measuring inequality and poverty respectively.

<sup>32</sup> See Hills, et al. (2010) for an investigation of inequalities in different aspects of economic inequality both overall and within and between different population groups.

<sup>33</sup> See, for instance, Glennerster et al. (2004) for the debate over that period.

## Income inequality measures

Even focussing on a single way of measuring economic resources, there are many ways of measuring how unequally they are distributed. This is because we may be most interested in inequalities in particular parts of the distribution – such as between those with low incomes and those with middle incomes, or between those with very high incomes and the rest of the population. Or we may want to summarise inequality across the distribution as a whole, but to do so in a way that puts particular weight on inequalities in parts of it. In this report we use five measures in particular, which allow us to examine which aspects of inequality appear more or less closely related to poverty measures:

- **The '90:10 ratio'**. This gives a measure of inequality across the broad mass of the population, by comparing the incomes of those near the top (the cut-off with just ten per cent of people above it) and those near the bottom (the cut-off with ten per cent below it). It is unaffected by incomes right at the top or right at the bottom.
- **The '50:10 ratio'**. This measures inequality between those in the middle (that is, the 'median' income, which half have more than and half less than) and those near the bottom, so giving a measure of inequality in the bottom half.
- **The '90:50 ratio'**, which measures inequality between those near the top and those with middle incomes. Note that multiplying the 90:50 and 50:10 ratios together gives the 90:10 ratio.
- **The share of income going to the top 1 per cent** provides an estimate of concentration of income amongst a small number of those with the highest incomes. This fraction gives a measure of inequality between the top and the rest of the population – the '99 per cent'. Note that this could be a high share, even if inequality amongst the rest of the population, as measured by the 90:10 ratio was comparatively low.
- **The 'Gini coefficient'**. This is a convenient and popular summary measure of inequality across the whole distribution, affected by inequalities in all parts of it (although it is most sensitive to inequalities in the middle of the distribution). A society where everyone had the same income would have a Gini coefficient of zero; one where a single person had all the income and everyone else zero would have a Gini coefficient of 1 (or 100 per cent). There are many other ways to summarise the whole distribution depending on the qualities needed in the measure, but for comparability and data availability reasons we use the Gini coefficient here.



There are also different ways in which income itself can be measured – before or after tax and before or after government transfers, for instance, or focussing on particular elements – such as earnings from paid work – or total income from all sources. We may also be interested in income received by an individual in their own right or family or household income as a whole. And if the latter, we have to face the question of how to compare families or households of different sizes.

In the data used here we use the definitions used by the UK Department for Work and Pensions in the ‘Households Below Average Income’ (HBAI) analysis and by international organisations, the Organisation for Economic Co-operation and Development (OECD) and the European Union for the EU-Statistics on Income and Living Conditions (EU-SILC). These provide a measure of income from all sources (not including capital gains but including benefits and tax credits) after all direct taxes (such as income tax or National Insurance Contributions). These income measures use total household income but adjust it to take into account differences in the size and composition of the household in a way that assumes that there are ‘economies of scale’ from several people living together (so a couple does not need twice the income to have the same standard of living as a single person) and that children’s needs are not as large as those of adults.<sup>34</sup> All the individuals living in the same household are then allocated the same ‘equivalised household income’, which implicitly assumes that resources are used to the equal benefit of all household members. This will not always be the case, but there is no straightforward way of taking account of unequal sharing from the available data. Note also that the data from *household* surveys of the kind used here exclude members of the *non-household* population, including some who have very low incomes, such as those who are homeless and some of those living in institutions, but also some more affluent groups, such as members of the armed forces in bases.<sup>35</sup>

When we are looking at data from the UK, as in **Section 4**, we are also able to compare income inequality before or after deducting housing costs (BHC or AHC). The former corresponds to the most commonly used international definitions, but there are occasions when it can be useful looking at incomes after allowing for housing costs, which may change differentially for rich owner-occupiers and poorer tenants for instance.<sup>36</sup>

34 They all use the ‘modified OECD equivalence scale’ to do this (although the calculations of top income shares from the World Income and Wealth database are not equivalised). See <https://www.gov.uk/government/publications/how-low-income-is-measured> for how equivalisation is applied in the HBAI analysis produced by DWP.

35 See Hills, et al. (2010), Appendix 3 for more discussion.

36 There are, however, arguments that neither BHC incomes nor AHC incomes fully capture differences in living standards when some households may be benefiting from subsidised rents or from the value of living in an owner-occupied home without having to pay rent, neither of which generates a flow of cash income. See Yang (2018b) for an examination of the effects of allowing for these to create a measure of ‘With Housing Income’ and Stephens and van Steen (2011) on the poverty-reducing effects of allowing for housing income, reflecting its accrual to some with low cash incomes (older owner-occupiers and social tenants).

## Income poverty measures

As with inequality measurement, there are many ways of setting a threshold below which people are counted as having such an inadequate income that they count as ‘poor’. This could be a convenient, if arbitrary, amount such as the ‘dollar a day’ measure sometimes used to set a constant international threshold to assess global poverty. Or it could be a threshold set by the researcher, as in Seebom Rowntree’s original survey of poverty in York in 1899. Or it could be a threshold (or series of thresholds for different kinds of family) constructed by members of the public as constituting a minimum acceptable income level as in the ‘Minimum Income Standards’ published by the Joseph Rowntree Foundation (JRF)<sup>37</sup> or thresholds derived from those as used in the Foundation’s Anti-Poverty Strategy.<sup>38</sup>

However, to make comparisons between countries and to look at change over time we use measures based on the data we have on incomes within each country at each time. These allow us to measure how many people fall below thresholds derived from median (middle) incomes in the population as a whole. This gives a *headcount* measure of the extent of poverty. Conventionally the thresholds used are 60 per cent (or sometimes 50 per cent) of the median, taken as indicating that people have resources so far below the mainstream that they would not be able to fully participate in the society in which they live. While the precise percentages used are to some extent arbitrary, the amounts such measures generate are not obviously more generous than those generated by the public in, for instance, the discussions used to generate the JRF’s Minimum Income Standards. They have the advantage that the required data are available across time and on a similar basis across countries, as we require, and can be measured using the same sources as the income inequality measures (so that consistent populations are being compared).

When the threshold used is based on *current* median incomes, the threshold derived is one for *relative* income poverty. But the approach can also be used to examine trends in numbers with incomes below a fixed or *anchored* threshold, based on an initial threshold, but then only adjusted for price increases, rather than changes in other incomes or general living standards.<sup>39</sup> In the UK case, we can also compare measures for the extent of poverty looking at incomes measured both before and after allowing for housing costs.<sup>40</sup>

37 See <https://www.jrf.org.uk/income-benefits/minimum-income-standards>.

38 See <https://www.jrf.org.uk/report/we-can-solve-poverty-uk>. The estimates of the extent of ‘destitution’ published by the Foundation draw on a composite of lacking essential items (as in the deprivation measures discussed below) and low income threshold based on the average of 80 per cent of MIS standards, what members of the public say is needed to avoid destitution, and the spending on essentials of the poorest tenth of the population. See Fitzpatrick et al. (2018), section 2.

39 This is sometimes referred to as an ‘absolute’ poverty measure, but we do not use that here, as it can lead to confusion with measures such as the World Bank’s ‘dollar a day’ line, which is often described in that way.

40 For the UK series, we use the data and definitions analysed by the Department for Work and Pensions and Institute for Fiscal Studies in the Households Below Average Income (HBAI) series. All such analysis makes specific assumptions that can affect the results. See, for instance, Corlett, et al. (2018) for the (equalising) effects of correcting for under-reporting of benefit incomes in the FRS, or the Social Metrics Commission (2018) for the (sometimes disequalising) effects of allowing for a wider range of needs adjustments than embodied in HBAI.

As well as providing estimates of the proportions of the population with incomes below a threshold, the approach also allows us to look at how far below the threshold people in poverty fall – the *poverty gap*.

Given that these measures are based on comparing incomes at the bottom in relation to median incomes they are in one sense a measure of inequality within the bottom half of the distribution. One would expect them often to be related to other measures such as the 50:10 ratio described above.<sup>41</sup> However, the correspondence is not one to one, so even in that case the measures could move in different directions, and there is no necessity for inequality in the top half of the distribution, and therefore inequality across the whole population, to be directly related to relative poverty measures of this kind. It should also be noted that it is not the case that poverty ‘always exists’ using a relative measure of this kind: it is perfectly possible for there to be no-one with an income below 60 per cent of the median, even though there is always half of the population below 100 per cent of the median. The range between relative poverty rates shown in Figure 1.2 in the **Introduction** (from 8 to 23 per cent) already shows that they can vary considerably.

<sup>41</sup> For instance, if the 50:10 ratio is below 1.66, no more than 10 per cent of the population can arithmetically be below a poverty line calculated as 60 per cent of median income (1 divided by 1.66).

## Material deprivation and multidimensional poverty

None-the-less there clearly are ways in which one might expect income poverty measures and income inequality measures to be related to some degree as a result of the way they are constructed. It has also been argued that lack of income is only one manifestation of the ways in which people's lives can be impoverished. In **Section 5** we therefore present a summary of our investigation between levels of income inequality and of poverty measured in a multidimensional framework, which goes beyond simply looking at incomes. The data we use are from the European Quality of Life Survey (EQLS) for the years 2007 and 2011. These cover 27 European Union countries and Turkey.

We use three measures.<sup>42</sup> The first is a measure of *material deprivation*, based on that used by the European Commission. The Commission looks at the proportion of the population who are unable to afford nine sets of items, counting people as materially deprived if they lack three of the nine (and severely deprived if they lack four of them).

For data reasons, we cannot use all of the Commission's indicators, so have to use a restricted set of indicators including: arrears on rent, utility bills or loan payments; ability to afford one week's annual holiday away from home; capacity to afford a meal with meat or vegetarian alternative every second day; and ability to keep the home adequately warm (the other five indicators used by the Commission are not within the EQLS dataset).<sup>43</sup> Those failing the thresholds on two or more the indicators are counted as deprived.

We also present analysis using two indices looking at dimensions beyond material deprivation:

- A first **multi-dimensional poverty index (MPI1)** is based on the methodology of Alkire and Foster<sup>44</sup>, which looks at households that experience deprivation in several dimensions. This uses six dimensions of deprivation: relative income poverty, unemployment, material deprivation, education, living environment, and health. The six dimensions are equally weighted, but those for material deprivation, environment, and health are composites based on a number of indicators.<sup>45</sup>
- A second **multi-dimensional poverty index (MPI2)** is based on operationalisation of the capability approach suggested by Burchardt and Vizard<sup>46</sup> in their work on the Equality Measurement Framework. This uses a wider range of variables for deprivation within each of five domains: standard of living; productive and

42 See Yang and Vizard (2017).

43 Note that four of these five indicators are also used by the Department for Work and Pensions in the wider set used in its assessment of child material deprivation within the Households Below Average Income (HBAI) statistics, although it uses 'fresh fruit or vegetables eaten by children every day', rather than the meal with meat or vegetarian alternative every other day. See McKay (2011) for discussion of the validity of different items.

44 Alkire and Foster (2011).

45 See Yang and Vizard (2017), table 1 for detailed specification of the variables used and the deprivation cut-offs applied.

46 Burchardt and Vizard (2011).

valued activities; health; education; and individual life. The five dimensions are equally weighted, but apart from education are composites based on a number of indicators.<sup>47</sup>

## SUMMARY

There are many ways of measuring both inequality and 'poverty' depending on which aspect of either one is most interested in and the available data. In this report we focus on a variety of measures of income inequality which are sensitive to inequalities in different parts of the distribution. We look at a variety of poverty measures including those presenting numbers with incomes below both relative and anchored thresholds, and poverty gap measures, which suggest how far below a threshold the incomes of poor people fall. We also use data which allow us to look at the relationships between income inequality and material deprivation (enforced lack of items seen as necessities) and wider indices of multidimensional poverty, including indicators for: material deprivation; unemployment or lack of other kinds of valued and productive activities; health; education; and living environment.

47 See Yang and Vizard (2017), table 1.





## 4 RELATIVE POVERTY AND INCOME INEQUALITY IN THE UK<sup>48</sup>

Although, as Tony Atkinson (2015) notes, in general societies with low levels of relative income poverty tend to be those with low levels of income inequality, there are cases in which trends in inequality and poverty have diverged<sup>49</sup>. The literature on poverty and the development of anti-poverty policies have tended to evolve in parallel to those on inequality. There are a few exceptions,<sup>50</sup> but there is a tendency for these studies to focus on middle- or low-income countries rather than rich countries such as the UK. Here we explore the empirical relationship between relative income poverty and income inequality in the UK.

In **Section 5** we examine the international position, while in **Section 8** we examine possible explanations for what drives any observed relationships between inequality and poverty.

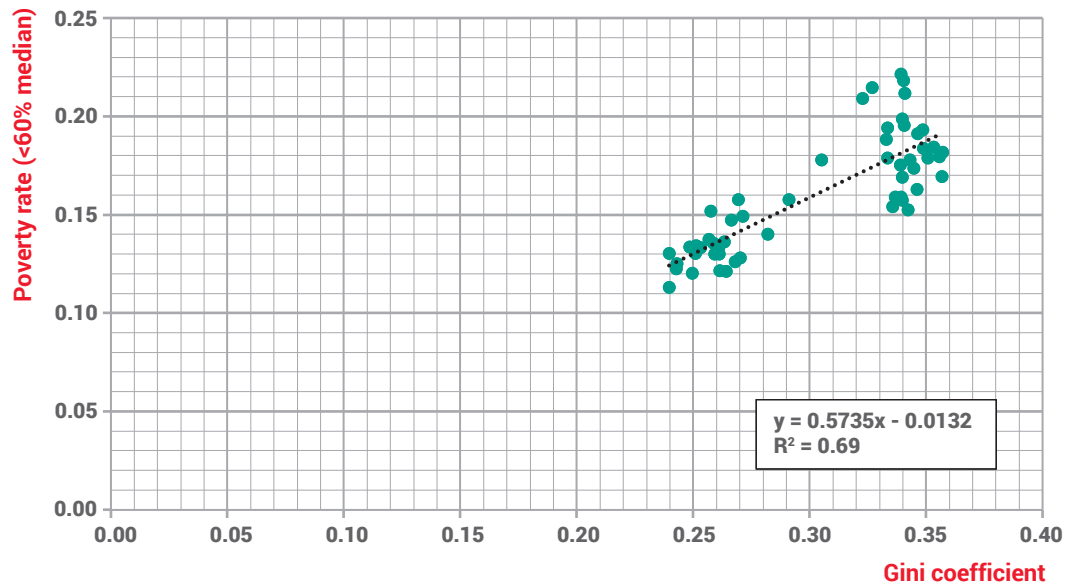
As we described in the previous section, income inequality can be measured in a number of ways. In the following four figures we plot the empirical relationship between income inequality measured in different ways and relative poverty (using the proportion of the population living in households with incomes less than 60 per cent of the median). Figure 4.1 (using the same data as Figure 1.1) shows the relationship between relative income poverty and income inequality measured by the Gini coefficient using a before housing costs measure of income over the period 1961 to 2015-16. It shows a positive relationship between inequality and poverty. The regression line included indicates that an increase in the Gini coefficient of 1 percentage point is associated with an increase in the rate of poverty of 0.6 percentage points. This appears to be mainly determined by two clusters of lower and then higher income inequality and poverty rates. Where inequality rates are higher, there appears to be a greater dispersion in poverty rates.

48 This section is largely drawn from section 6 of McKnight, Duque and Rucci (2017).

49 Tóth (2014); Forster and Vleminckx (2004).

50 See for example Bételle (2003); Adams, (2002).

**Figure 4.1 Relationship between relative income poverty and income inequality (Gini coefficient) – before housing costs measure of disposable income (1961-2015/16, GB/UK)**



**Source:** McKnight, Duque and Rucci (2017), based on data from Institute for Fiscal Studies: Living Standards, Inequality and Poverty Spreadsheet 2017.

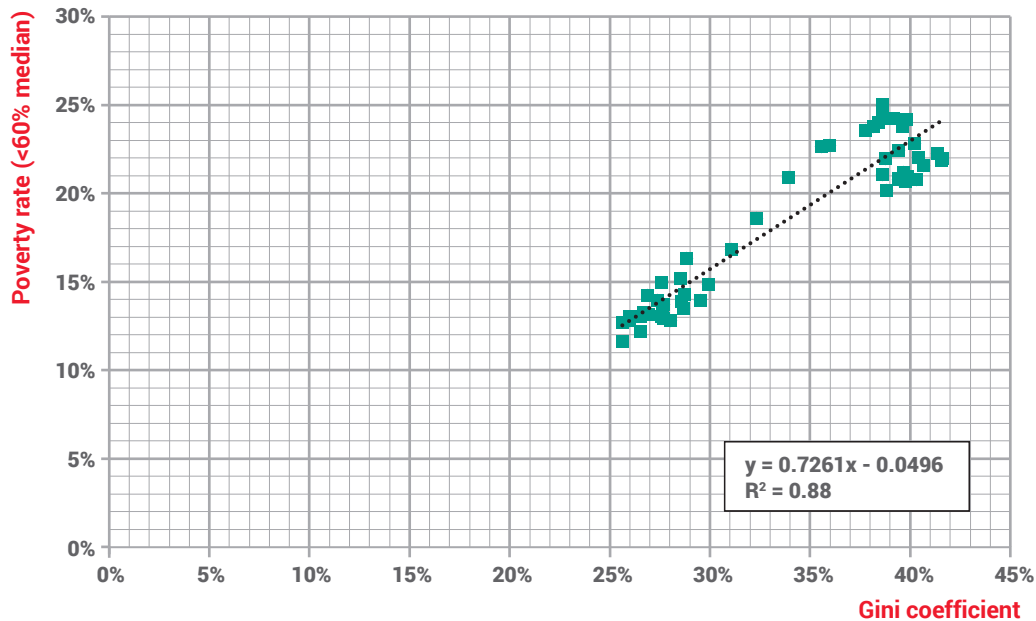
**Notes:** Derived from data in the Family Expenditure Survey (FES) up to and including 1993-94, and the Family Resources Survey (FRS) thereafter. Incomes are measured net of direct taxes and inclusive of state benefits and tax credits, and at the household level. Income is equivalised using the OECD modified scale. These data are for GB up to 2001-02 and the UK thereafter. Before housing costs (BHC) and after housing costs (AHC) incomes (in later figures) are adjusted for inflation using variants of the Consumer Price Index that include and exclude all housing costs, respectively.

Figure 4.2 shows the relationship using incomes measured after deducting housing costs. This shows a closer association between income inequality and relative income poverty – an increase in the Gini coefficient of 1 percentage point is associated with an increase in the rate of poverty of 0.7 percentage points. Interestingly, there is a closer correlation between the two series than before allowing for housing costs (evident from visual inspection, confirmed by the larger  $R^2$  correlation coefficient). Housing plays an important role not just in affecting the shape of the income distribution in the short-term,<sup>51</sup> but through its contribution to inheritance and people's options for way to live may be one of the important links between inequality and poverty in the longer-term (see **Section 8**).

<sup>51</sup> Yang (2018b) looks at this relationship in more detail.



**Figure 4.2: Relationship between relative income poverty and income inequality (Gini coefficient) – after housing costs measure of income (1961–2015/16, GB/UK)**

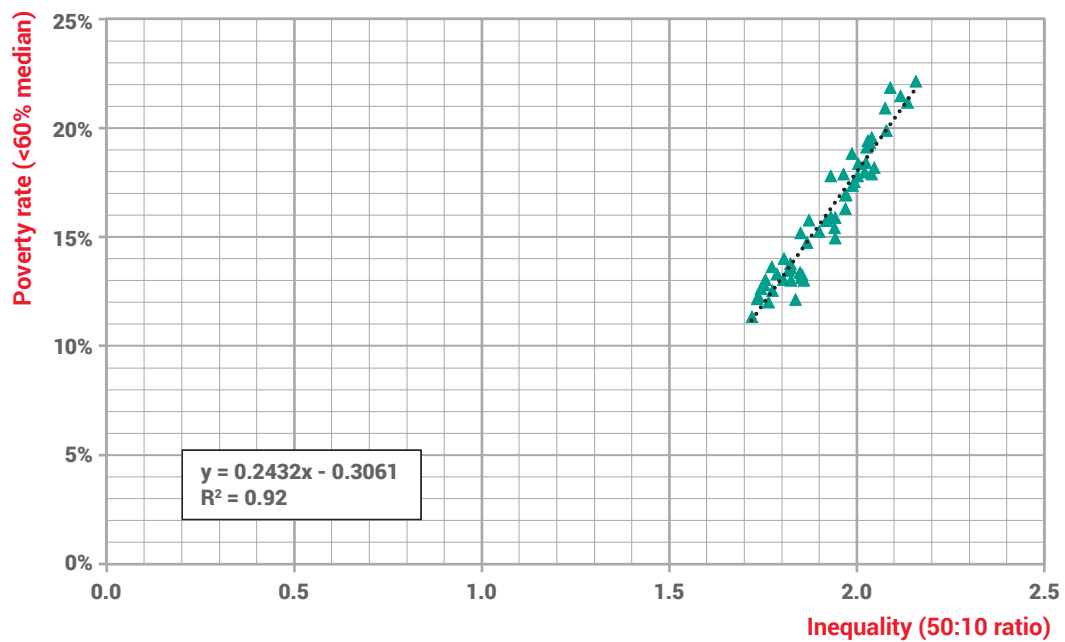


*Source and notes: See Figure 4.1 notes.*

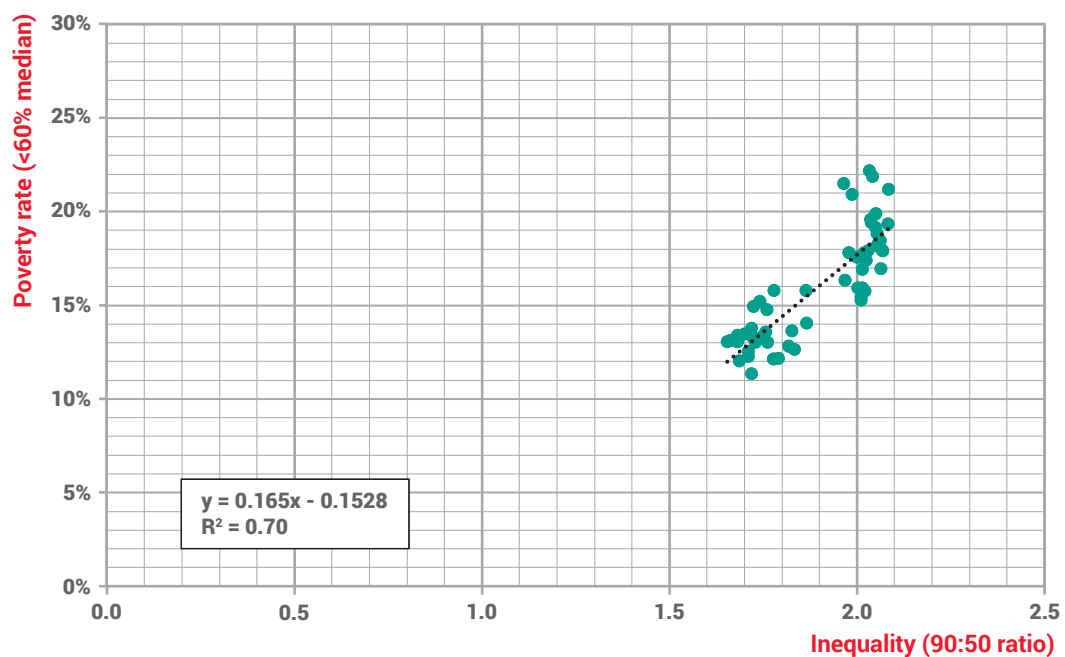
As we discussed in **Section 3**, the Gini coefficient is particularly affected by inequalities in the middle, rather than the extremes of a distribution. From that point of view, it is a helpful measure to look at overall levels of inequality and poverty rates. In a purely mechanical sense we would expect greater inequality in the bottom half of the income distribution to have a stronger correlation with relative income poverty rates than inequality in the upper half. Figure 4.3 confirms this, looking at incomes measured before allowing for housing costs. The positive relationship between poverty rates and inequality in the lower half of the income distribution (measured by the 50:10 ratio) is stronger than for inequality in the top half (measured by the 90:50 ratio and looking at the degree of association measured by the  $R^2$  coefficients). However, for the after housing costs measure shown in Figure 4.4 there is as strong a positive relationship between UK poverty rates and inequality in the top half of the income distribution as for inequality in the lower half. This suggests both that what we are seeing is not just an artefact of measurement, and again that housing may be an important factor in behind the relationship between inequality and poverty.

Figure 4.3: Relationship between relative income poverty and income inequality (decile ratios) – before housing costs (1961 to 2015-16, GB/UK)

(a) Inequality 50:10 ratio



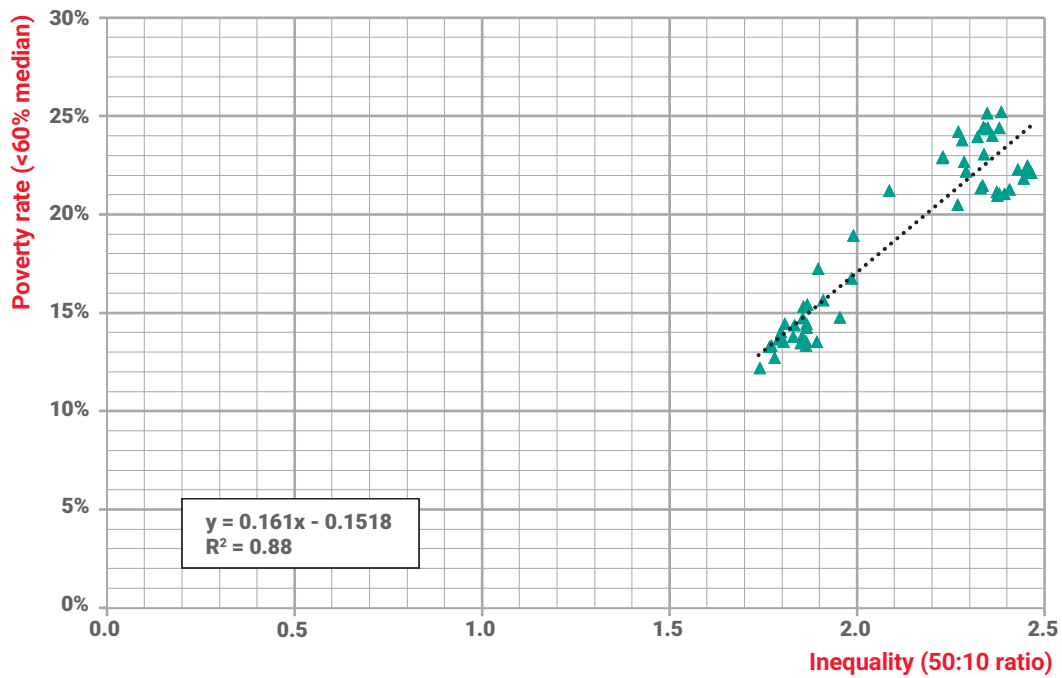
(b) Inequality 90:50 ratio



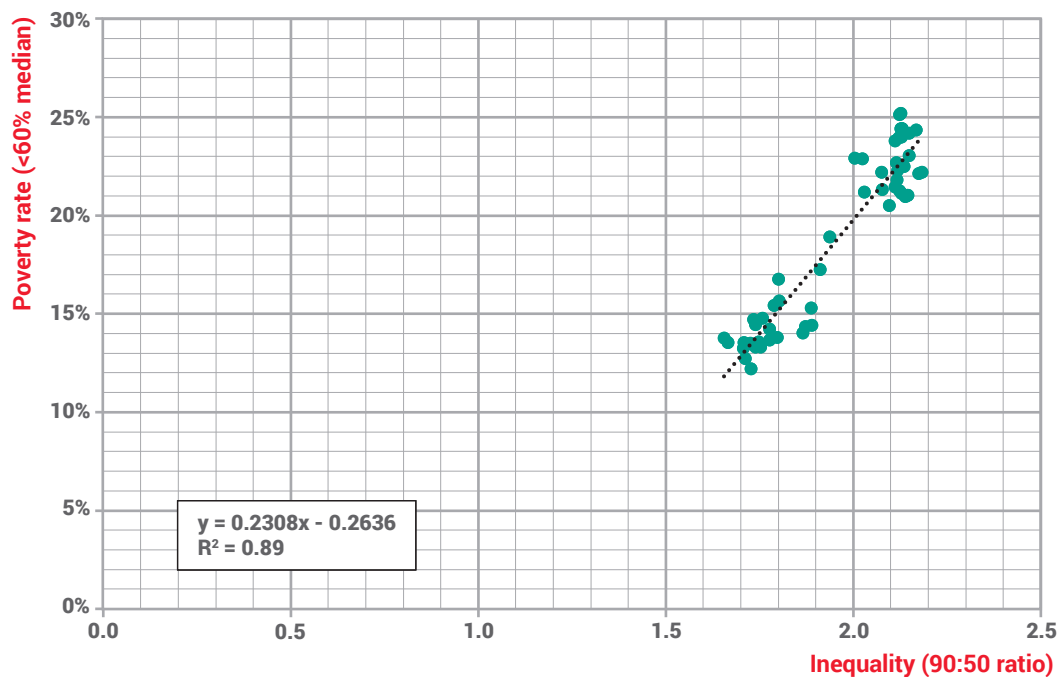
Source and notes: See Figure 4.1 notes.

Figure 4.4: Relationship between relative income poverty and income inequality (decile ratios) – after housing costs (1961 to 2015-16, GB/UK)

(a) Inequality 50:10 ratio



(b) Inequality 90:50 ratio



Source and notes: See Figure 4.1 notes.

What about inequality at the very top? Much of the attention given to inequality growth in recent years has surrounded the rapid increases in the shares of income going to those at the very top over the last few decades, especially in the USA, but also in other English-speaking countries such as the UK. Part of the debate about links between income inequality and poverty reviewed in **Section 8** involves the idea that the rising share of the very rich has increased their political influence, and therefore possibly a reduced political priority towards poverty reduction.

Figure 4.5 shows that over the whole period between 1962 and 2014-15 there was indeed a positive association between poverty and the share of the top 1 per cent, although one that was weaker than for the other inequality measures used above).<sup>52</sup> The data points marked as red diamonds are for years from 1990 onwards (when the series moves from couple to individual tax units). The dotted line shows that there was a statistically significant relationship over the period as a whole, indicating that a 10 percentage point higher share of the top 1 per cent was associated with a 6 percentage point higher level of relative poverty. However, this also shows that there are two main clusters. In the period up to 1986 both relative poverty and the top income share were comparatively low. After 1990 both were higher. In addition, while the top income share continued to rise until the financial crisis started in 2007, relative income poverty rates tended to fall back.

**Figure 4.5: Relationship between relative income poverty and income inequality (top 1% income share) – before housing costs measure of income (1962 to 2014-15, GB/UK)**



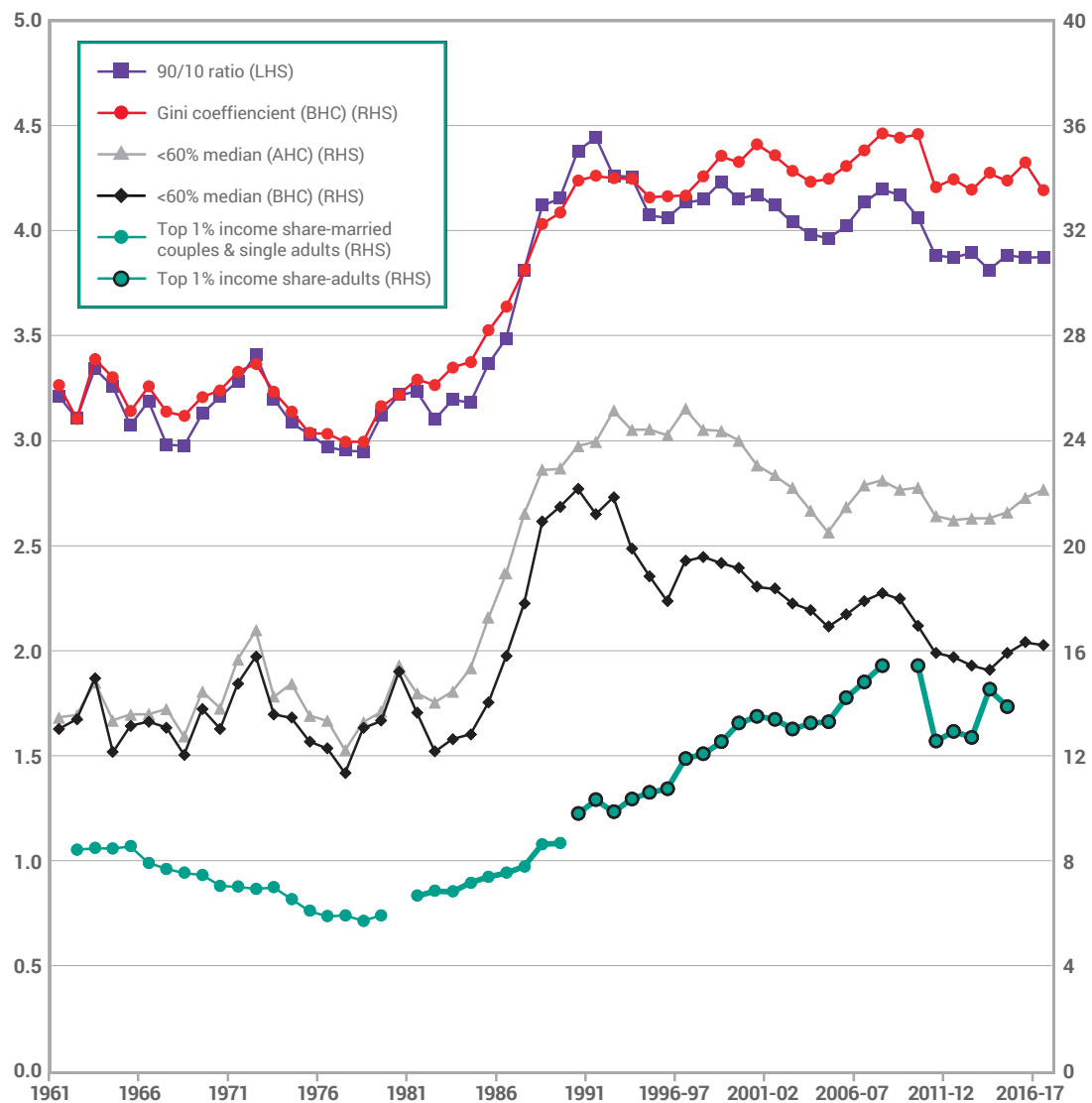
**Source and notes:** For poverty series see Figure 4.1 notes. The top income share series is from the World Wealth and Income Database. The authors would like to thank Facundo Alvaredo for supplying updated top income shares series for the UK.

52 The top income share is derived from taxation data. We are therefore only able to examine before housing costs measures as the series is not available for income measured after-housing costs. Top income shares between 2010 and 2012 are likely to be affected by the temporarily higher top rate of income tax, and measures taken to move reported incomes between years to avoid it.

## Trends over time

That observation suggests that some of the relationships we are seeing are linked to changes over time, between a lower inequality-lower poverty era before the 1980s and a higher inequality-higher poverty since the 1990s, with possibly weaker relationships between the two within those two eras, effectively before and after Mrs Thatcher's period as UK Prime Minister. That can be seen in Figure 4.6, showing trends in three measures of different aspects of income inequality – the Gini coefficient, the 90:10 ratio, and the top 1 per cent income share – compared with relative income poverty before and after housing costs.

**Figure 4.6: GB/UK Income inequality and poverty trends 1961 to 2016-17**



Sources and notes: McKnight, Duque and Rucci (2017); Figures 4.1 and 4.6 updated.

Looked at in this way, several periods emerge:

- In the late 1960s inequality as measured by the Gini coefficient and the 90:10 ratio rose at the same time as relative poverty, but the top 1 per cent share fell.
- For much of the 1970s both inequality (on all three measures) and relative poverty fell together, all reaching historic low points in 1977 or 1978.
- There then followed dramatic increases in overall inequality and relative poverty until the early 1990s, accompanied by a reversal of the long-term decline in the top 1 per cent share.
- From the early 1990s until 2007 the pattern was different again. The poverty measures fell, especially up to 2004 and before allowing for housing costs. Inequality measured by the 90:10 ratio also fell, but there was no clear trend in the Gini coefficient, and the top 1 per cent share continued to rise.
- Since the crisis, the pattern has been less clear. There was a rise in all of the series shown between 2012-13 and 2015-16 (apart from the 90:10 ratio, which was flat), but this was reversed for the Gini coefficient in the most recent figures for 2016-17.

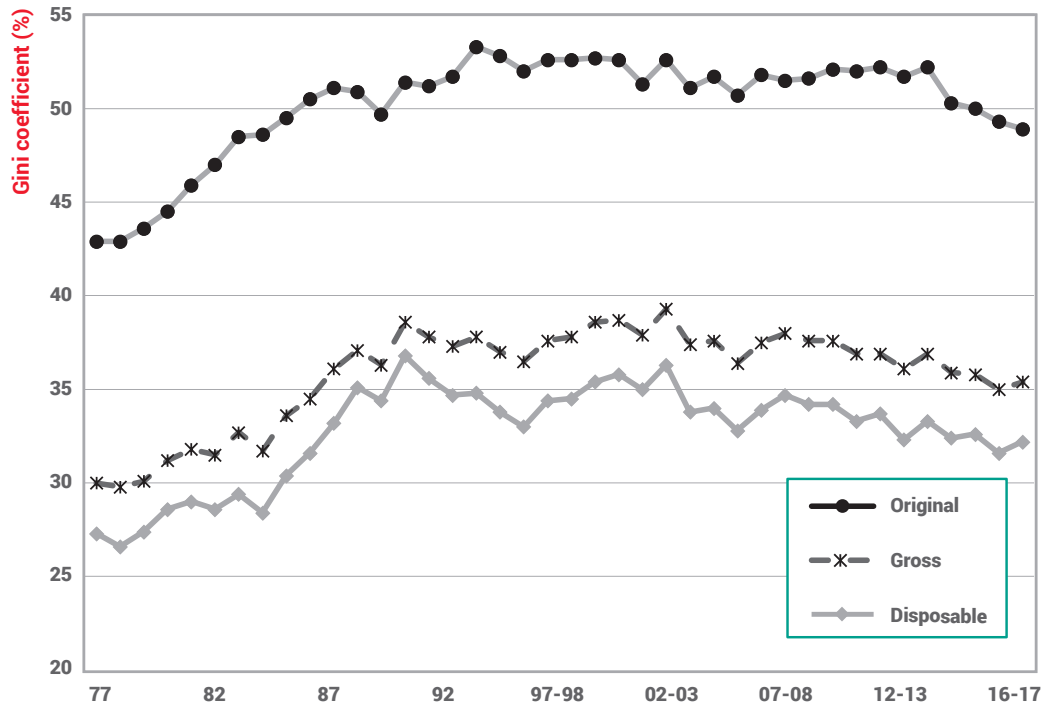
Bearing in mind the well-known policy changes of the last forty years,<sup>53</sup> all this suggests that, whatever the underlying relationship between market levels of inequality and poverty over the longer term, policies *can* and *do* intervene in this relationship from year to year, especially when we are looking as here at incomes after allowing for direct taxes and benefits.

A reminder of the way in which policy can affect trends in inequality, and by implication those in poverty, can be seen in the UK case in Figure 4.7, which compares inequality trends for three different definitions of income: 'original' or market incomes, before allowing for taxes and benefits; gross incomes, including cash benefits; and disposable incomes after allowing for both benefits and direct taxes. It is drawn from a different source from those in Figure 4.6 and elsewhere in this chapter, with different definitions, so levels shown and year-to-year variations are not precisely the same as those in Figure 4.6, but broad patterns are similar. Looking broadly, four particular periods are notable:

- 1977 to 1985, when inequality in market incomes rose twice as fast as that in disposable incomes – taxes and benefits **slowed** inequality growth.
- 1985 to 1990, when disposable income inequality grew much faster than that in market incomes – tax and benefit changes **accelerated** inequality growth.
- A twenty-year period from 1992 to 2011-12, when over the period as a whole market income inequality was unchanged, but disposable income inequality fell. Tax and benefit changes were **reducing** income inequality.
- 2011-12 to 2016-17, where market income inequality fell, but that in disposable income did not. Tax and benefit changes **offset** a fall in market income inequality.

Policies, and the things that influence them, matter, not just what happens within the market (which is itself affected by government policy, for instance through interventions such as minimum wages).

Figure 4.7: Inequality in original (market), gross and disposable income, 1977 to 2016-17



**Source:** Office for National Statistics (2018). The figures are for inequalities measured between households, rather than between individuals as in other analysis in this report.

Policy differences also mediate the relationship between poverty and inequality at a national level, which we turn to in the next section. As the EU-funded GINI (Growing Inequalities Impacts) research programme examining the experience of thirty countries over thirty years, concluded,

“The best performers among the rich countries in terms of employment and economic and social cohesion have one thing in common: a large welfare state that invests in people, stimulating them and supporting them to be active and adequately supporting them when everything else fails. This continues to offer the best prospect for rich countries pursuing growth with equality.”<sup>54</sup>

54 Salverda, et al. (2014), p.349.



## SUMMARY

Looking at UK data over the last fifty years there is a clear positive empirical association between income inequality and relative income poverty. Years with comparatively low inequality had lower relative poverty, and those with high inequality had high poverty rates. On average over the period 1961 to 2015-16 a Gini coefficient for income inequality (before housing costs) of 1 percentage point higher was associated with a relative income poverty rate 0.6 percentage points higher; after housing costs, the poverty rate was 0.7 percentage points higher.

We also examined the relationship between poverty and inequality in the top and bottom halves of the income distribution. As one might expect, poverty before allowing for housing costs had a stronger correlation with inequality in the bottom half of the distribution than in the top half of the distribution (in both cases statistically significant). However, when income is measured after housing costs the correlation with relative income poverty is actually similar for inequality in the top half of the distribution. We even find a positive correlation (albeit a weaker one) between inequality at the very top of the income distribution, measured by the share of income received by the top 1 per cent, and relative income poverty.

Parts of these relationships come from the differences between broad clusters of years, and the changes from year to year do not always move in the same direction. During the 1970s and the 1980s the different series for income inequality and relative poverty did move closely together. But the falls in relative poverty from the early 1990s to 2010 were not matched by similar falls in income inequality – indeed, inequality at the very top continued to rise until 2007. This reminds us that whatever the underlying long-term relationships between market inequality and poverty rates, other factors – notably the emphasis in that period on policies that were aimed at reducing poverty for children and pensioners, rather than reducing inequalities at the top of the income distribution – can make a difference from year to year, something we have explored in detail in other work.<sup>55</sup>

55 For more detailed discussion of policies in this period, see Hills, Sefton and Stewart (2009) and Lupton et al. (2016).





## 5 EVIDENCE ON THE RELATIONSHIP BETWEEN INCOME POVERTY AND INEQUALITY INTERNATIONALLY<sup>56</sup>

The previous section showed that over time in the UK for the last fifty years relative income poverty and income inequality measured in different ways have been quite closely related. There have been no years when poverty has been low and inequality high, or *vice versa*. For much of the period changes over time have also moved in the same direction, although that was not true between the early 1990s and the onset of the economic crisis, when relative poverty fell but, for instance, the share of the top 1 per cent in income continued to increase.

This association has also been seen comparing countries.<sup>57</sup> The OECD finds that, “countries with a wider distribution of income also have higher relative income poverty, with only a few exceptions” (2008, p.17). This section looks in detail at recent patterns, comparing countries. It draws on inequality and poverty statistics from various databases including the European Union Statistics on Incomes and Living Conditions (EU-SILC), the OECD Income Distribution Database and the World Wealth and Income Database (WID) to examine the relationship between inequality and poverty in rich and middle income countries.

### Cross-country comparisons at a point in time

First, analysis of cross-country differences in the level of relative poverty and inequality suggests that there is very strong positive cross-country correlation between levels of poverty and inequality. This can be seen in Figure 5.1. The top left panel shows the relationship using the Gini coefficient (as already shown in Figure 1.2). The other panels use different inequality measures. In all four cases, levels of inequality and poverty are highly correlated: countries with higher levels of inequality tend to have higher relative poverty and *vice versa*. The relationship is strongest using inequality measures that capture the degree of dispersion at below the median

<sup>56</sup> This section summarises results presented and analysed in more detail in Karagiannaki (2017).

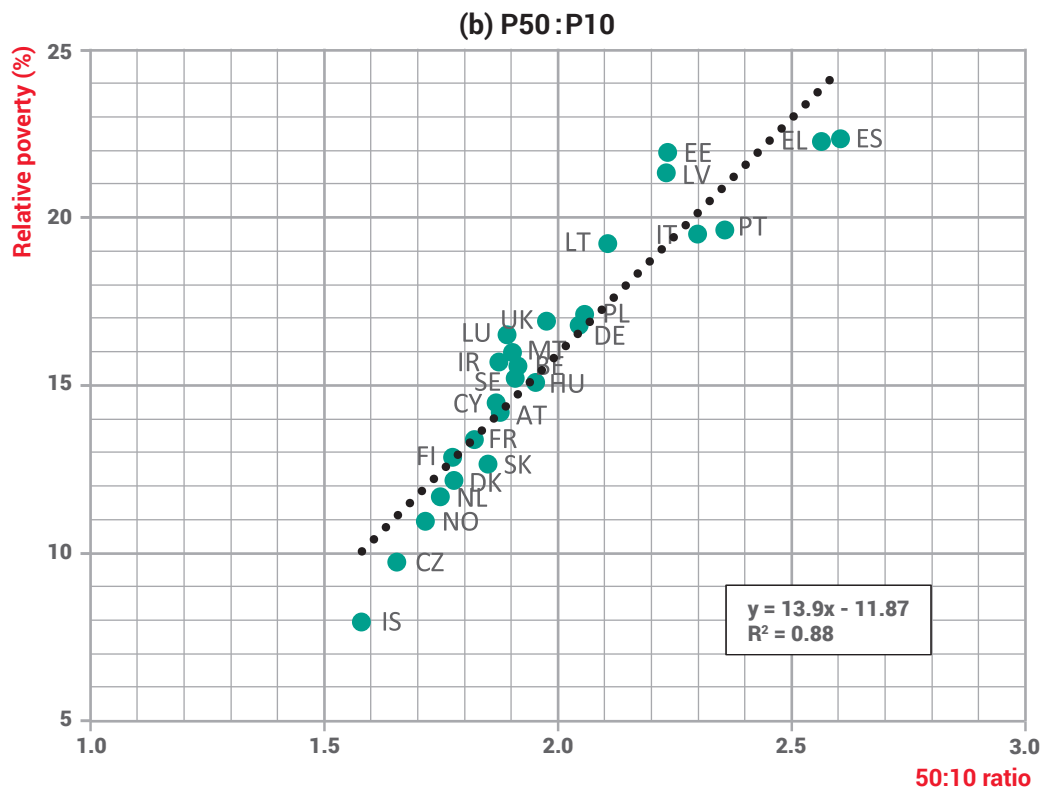
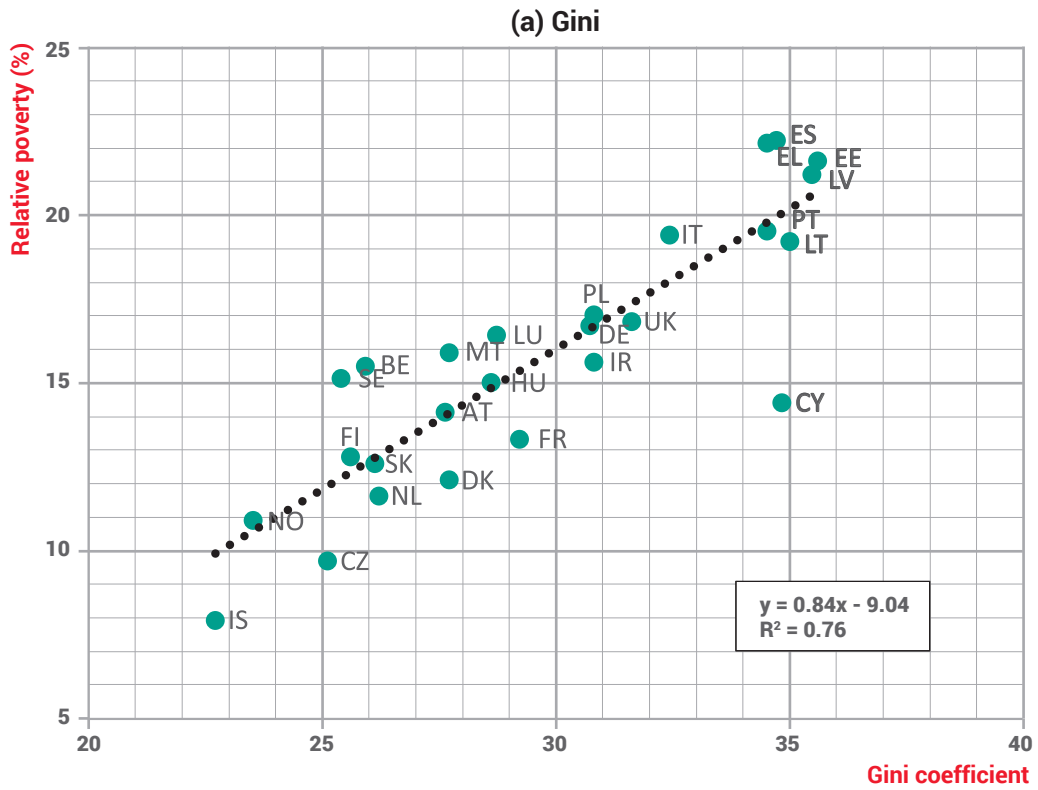
<sup>57</sup> Atkinson (2015).

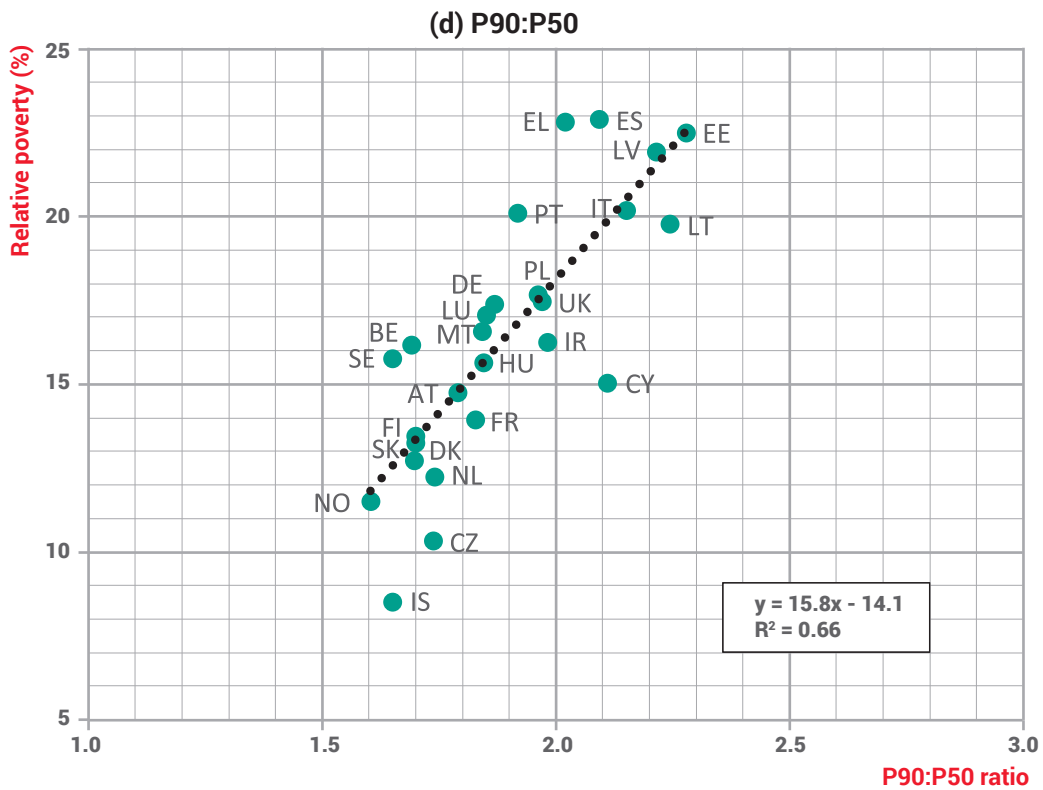
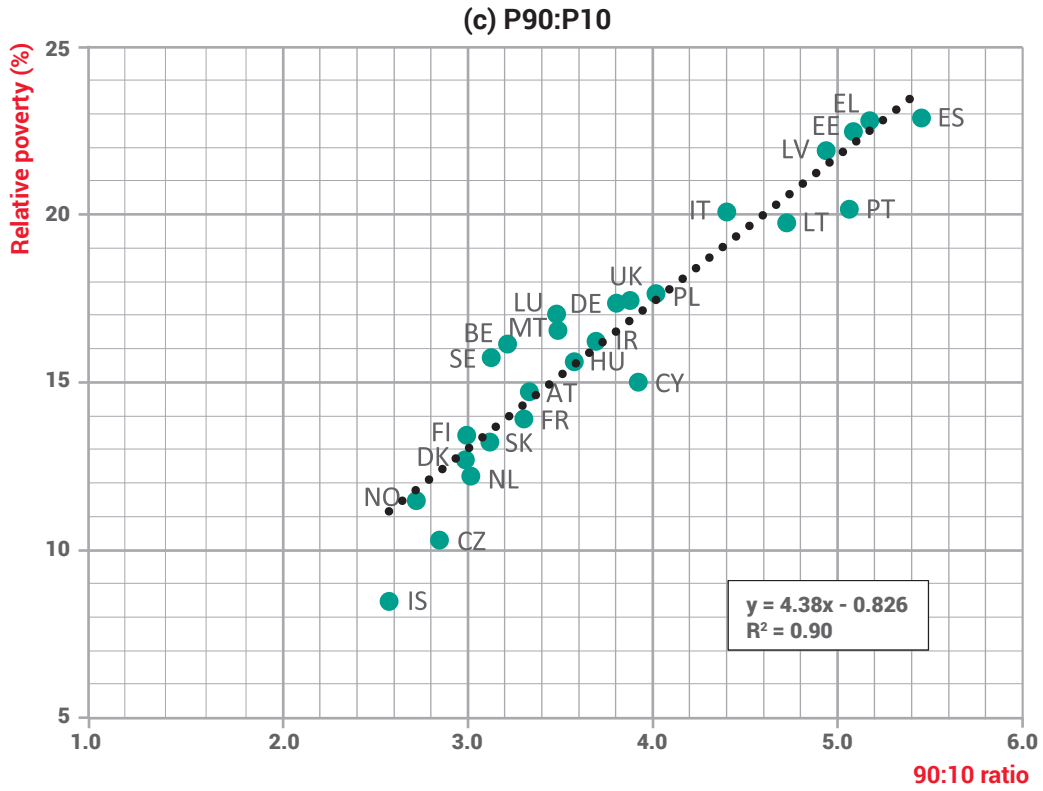
income levels (the 50:10 and the 90:10 ratios) and somewhat weaker for measures that capture dispersion at above the median income levels (e.g. the 90:50 ratio, although even here the degree of correlation as measured by the  $R^2$  coefficient is 0.66).

These correlations are also statistically significant, although somewhat weaker when poverty is measured in terms of poverty *gaps*, which measure the depth of poverty, rather than poverty *rates*, which simply count the proportion of the population below a line (see **Section 3** for a description of how these are calculated). For instance, the  $R^2$  correlation coefficient linking the mean poverty gap with the Gini coefficient is 0.29, compared to 0.76 for the poverty rate.<sup>58</sup> However, for all the inequality measures used in Figure 5.1, countries with higher inequality tend to have higher poverty gaps as well as poverty rates, and the relationships remain statistically significant.

58 Karagiannaki (2017), figure 2. The weaker, but significant, relationship between inequality measures of this kind and poverty gaps may in part be explained by the quality of data for those with the very lowest reported incomes (in the bottom percentiles), which can be affected by misreporting.

Figure 5.1: The cross-sectional relationship between relative income poverty and income inequality measured in different ways in European countries in 2014





Source: Karagiannaki (2017), figure 1, based on statistics from EU-SILC as published in EUROSTAT Income and Living Conditions database

## Changes over time

Another way of looking at the relationship between poverty and inequality, and a test of the robustness of any relationship, is to examine the associations between *changes* in inequality and poverty within countries over time. Figure 5.2 plots the relationship between percentage changes in relative poverty risk and percentage changes in inequality for a number of European countries over two periods, comparing 2001 with 1996 and, using a different source, comparing 2014 with 2005, in terms of the Gini coefficient and the 90:10 ratio.<sup>59</sup> Fourteen countries have data for the 1996-2001 period and 26 for the 2005-2014 period.

The figure (and more detailed analysis) show that the positive correlation between changes in poverty and inequality remains strong (and in most cases statistically significant, including all those we present in the figure) when one considers *changes* in inequality and poverty across countries over time although it is weaker than the one between *levels* of poverty and inequality.<sup>60</sup>

Both inequality and relative poverty fell in the majority of the fourteen countries covered, comparing 2001 with 1996-97. Where inequality rose, poverty also rose. For instance, a 10 per cent increase in the Gini coefficient was associated with a slightly larger (10.2 per cent) increase in the relative poverty rate. As an exception, in Ireland, where poverty increased, inequality measured by the Gini coefficient fell, although there was a small rise in the 90:10 ratio. In the UK, according to the data source used, poverty remained unchanged while inequality increased in terms of the Gini coefficient, but fell in terms of the 90:10 ratio.<sup>61</sup>

59 See Karagiannaki (2017), figure 3 for the associations between changes in relative poverty and changes inequality measured by the 90:10 and 50:10 ratios. Note that the associations are between the *percentage* changes in the measures, not the *percentage point* changes. Data for the earlier period are drawn from the European Community Household Panel (ECHP), 1996-2001. Those for the later period are drawn from the EU Survey of Incomes and Living Conditions (EU-SILC). There are some important differences between the two sources (such as improvements in the quality of the income variable within EU-SILC). Issues around the quality and reliability of ECHP data are more important for some countries than others. The relationship between measures of inequality and poverty within these data sources may produce different estimates than those obtained from other sources.

60 One reason for weaker correlations, even if there is an underlying causal relationship, in analysis of this kind is that we are using a relatively small number of data-points, and in looking at first differences (changes) there is inevitably a great deal of noise within the data.

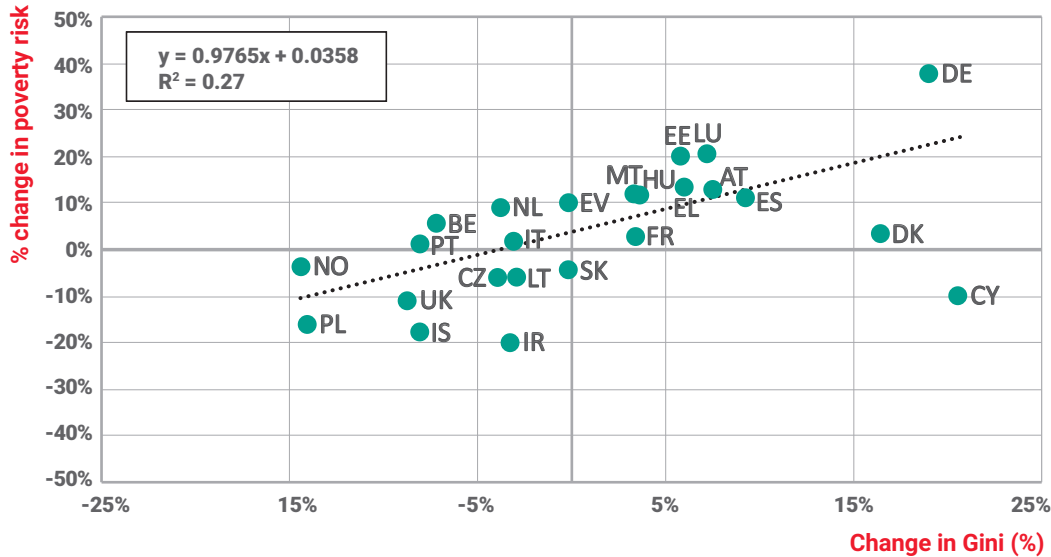
61 This contrasts with the pattern shown in Figure 4.7 using data from the UK's more detailed Family Resources Survey, where relative poverty (before housing costs) fell over this period, while inequality followed the same pattern as shown by ECHP.

Figure 5.2: Relationships between percentage changes in the relative poverty risk and in inequality (Gini coefficient and 90:10 ratio) in different European countries between 1996 and 2001 and between 2005 and 2014

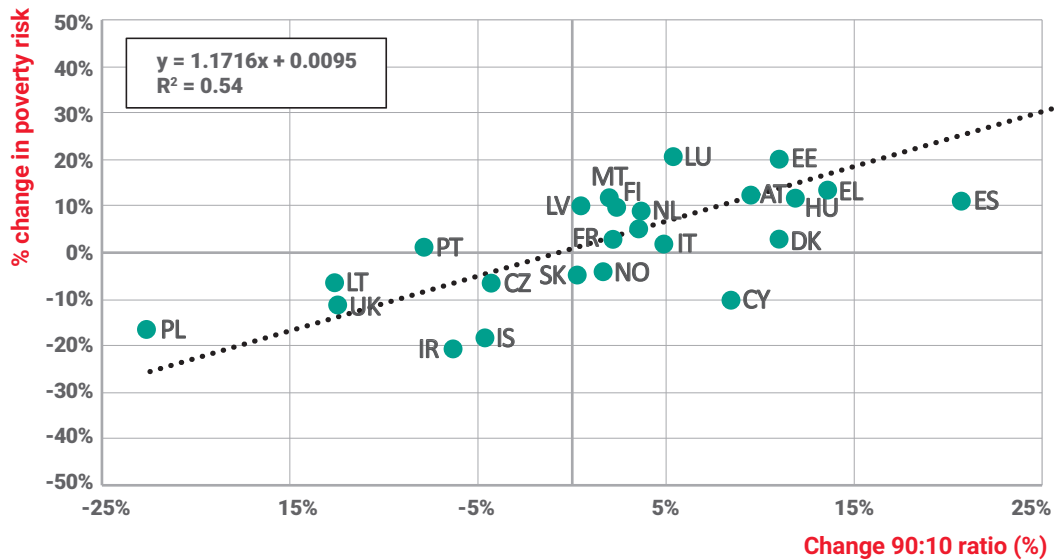




(c) 2005-2014: Gini coefficient



(d) 2005-2014: 90:10 ratio



**Source:** Karagiannaki (2017), figure 3, based on statistics from the ECHP for 1996/97 to 2001 and EU-SILC for 2005 to 2014 (as published in EUROSTAT Income and Living Conditions database). Note that different countries are covered in the two time periods. All available observations in each time period. For Sweden 1996-97 to 2001 change is from 1997; for other countries from 1996.

By contrast, over the longer period from 2005 to 2014 (a period that spans the financial and economic crisis) rising inequality was the dominant trend across Europe, with the Gini coefficient rising in nearly half of them and the 90:10 ratio

in three-quarters of them. In most of the countries with rising inequality, relative poverty also rose – as can be seen for instance in the top-right quadrant of the graph for poverty and the 90:10 ratio.<sup>62</sup> There was, however, quite a large degree of variation in the magnitude of the change in the two statistics and even countries such as Cyprus where relative poverty fell while inequality increased. Conversely, in the large majority of countries where inequality fell, poverty also fell (countries in the bottom left quadrants). In a few countries, however, falling inequality was accompanied by a limited increase in relative poverty (Belgium and the Netherlands).<sup>63</sup>

Karagiannaki (2017, section 4.1) examines the possibility that the relationship between poverty and inequality may have weakened during the Great Recession. She breaks down the period into pre-recession, recession and post-recession sub-periods (2005 to 2008, 2008 to 2012, and 2012 to 2014). The analysis shows that the relationship between the changes in relative poverty risk and inequality did indeed weaken for most measures of inequality, particularly the Gini coefficient and the P50:P10 ratio.<sup>64</sup>

In more detailed regression analysis, which controls for the initial level of inequality, initial income and income growth, the positive correlation between changes in poverty and inequality remains strong and significant.<sup>65</sup> Results from the modelling suggest that none of these three controls has any significant impact on the change in the relative poverty risk once we account for inequality growth. It is only the change in inequality that matters.<sup>66</sup>

These are striking findings – they suggest that the correlations that we saw between poverty and inequality over time in the UK are not confined to one country. We not only see something similar comparing European countries in a particular year, but also see that changes in each of them are associated – a stronger test of the relationship.

62 This pattern is weaker when inequality in the top half of the distribution is measured using the 90:50 ratio.

63 Note that these results refer to changes over the period as a whole.

64 Karagiannaki (2017), appendix figure A4.

65 See Karagiannaki (2017), section 4.4.

66 This is in line with the findings of Bourguignon (2004).

## Poverty against a fixed standard

So far we have been looking at the links between *relative* poverty and inequality. But, as discussed in **Section 2**, from some viewpoints what matters is what happens to the *real* incomes of the poor (measuring their purchasing power after allowing for inflation). If these are increasing faster than they would otherwise do so, then rising inequality might be a price worth paying. On the other hand, if real incomes at the bottom are failing to grow while those of others do, poor people are facing a double loss.

We look in **Section 7** at one component of this, the relationship between inequality and growth. But we can use the same data analysed for European countries above to look at changes in the proportion of their populations with incomes below poverty lines that are fixed ('anchored') in real, inflation-adjusted, terms. We present some results from this analysis in Figure 5.3, looking at the relationship between changes in income inequality measured by the Gini coefficient and changes in poverty rates against a fixed real poverty line.<sup>67</sup>

First, unlike the relative poverty measures presented in the previous two figures, poverty fell against anchored lines in more countries than it rose in, during both periods, although it did rise in seven of the countries between 2005 and 2014. Second, between 1998 and 2001 there was no significant association between changes in inequality and the change in anchored poverty.<sup>68</sup>

On the other hand, over the longer period between 2005 and 2014, there was a clear and significant association between the change in a country's inequality as measured by the Gini coefficient, and the anchored poverty rate. This was also true for sub-periods before and after the economic crisis.<sup>69</sup> Countries where inequality *fell* had the greatest fall in anchored poverty rates, although the picture was very mixed for those that had rising inequality, with some such as Estonia having rising inequality, but a quite rapid fall in anchored poverty. Overall, both the fitted regression line and the correlation coefficients show that the growth in the anchored poverty risk was *positively* (and statistically significantly) correlated with the growth in inequality measured by the Gini coefficient in the 2005-14 time period.<sup>70</sup> A 10 per cent increase in the Gini coefficient was associated with a 19 per cent increase in the anchored poverty rate. Note that, strikingly, this is the exact *reverse* of the proposed relationship that growing inequality could mean faster growth, including in the real incomes of the poorest, and so falling poverty against a fixed standard.

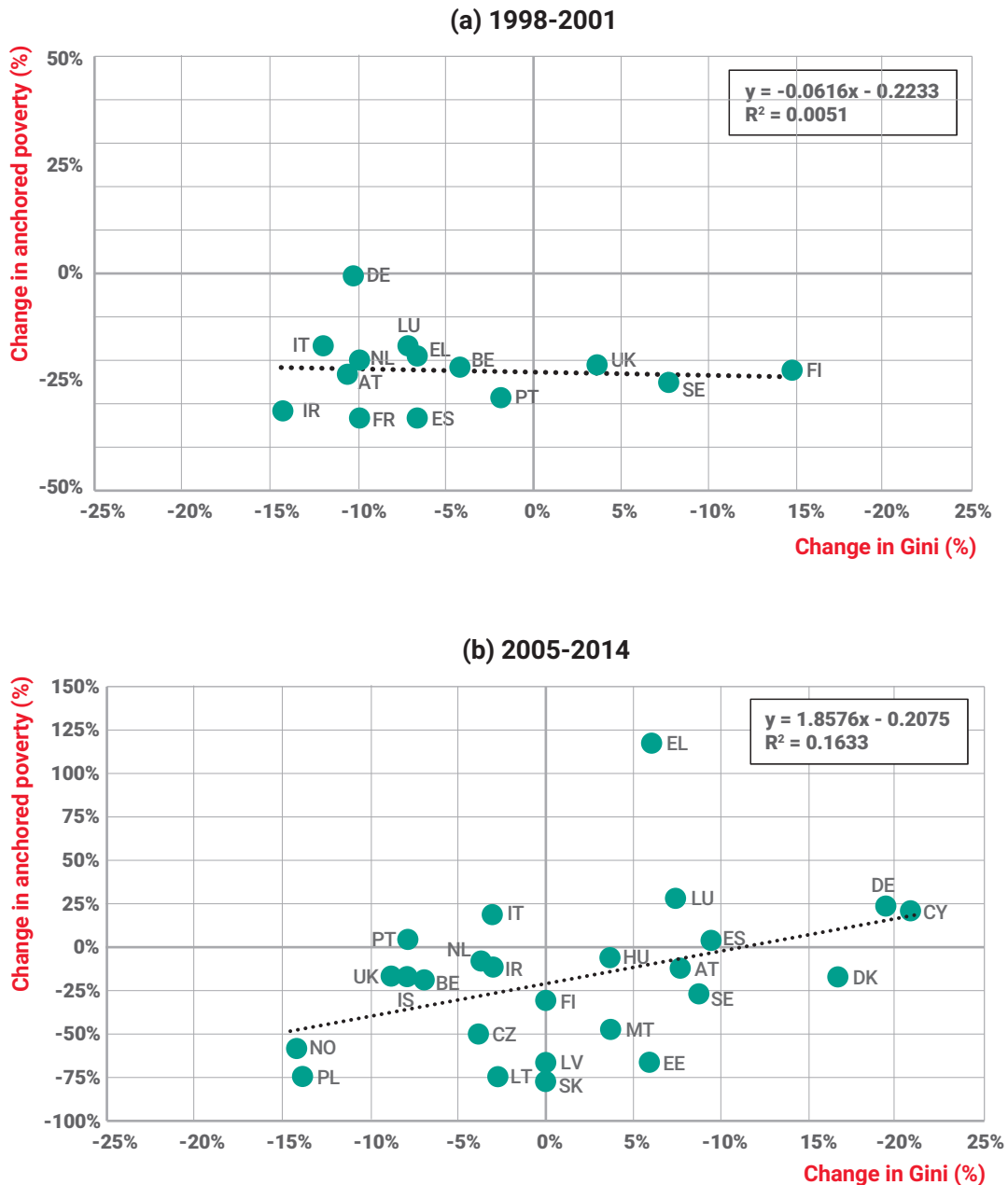
67 For further analysis against other inequality measures, see Karagiannaki (2017), figure 3. The fixed lines used here are based on the 1998 poverty line (fixed in real terms) for changes between 1998 and 2001 and the 2005 poverty line for the changes between 2005 and 2014.

68 This was also true for inequality measured by the 90:10, 90:50 and 50:10 ratios.

69 The picture was less clear over the sub-period spanning the crisis itself from 2008 to 2012; Karagiannaki (2017), figure A.6.

70 This was also true for inequality measured by the 90:10 and 50:10 ratios. Using the 90:50 ratio, the association was also positive, that is in the opposite direction to that predicted if higher inequality was associated with faster growth in anchored poverty, but was not statistically significant (see Karagiannaki, 2017, figure 5).

Figure 5.3: Relationships between percentage changes in poverty risk against lines anchored in real terms and in inequality (Gini coefficient) in different European countries between 1998 and 2001 and between 2005 and 2014



**Source:** Karagiannaki (2017), figure 5 (see Figure 5.2 for sources for the different time periods). Note that to show detail the vertical scales differ between the two panels. The anchored poverty rate indicator for the period 1998-2001 is calculated using the 1998 poverty line as a fixed poverty threshold. For the period 2005-14 the anchored poverty rate is calculated based on the 2005 poverty line threshold. The figure shows percentage changes in the outcome variables (not percentage point changes).

More detailed multivariate analysis of the EU-SILC data suggests that both the initial level of inequality and the rate of income growth have significant effects on the change in the anchored poverty rate. Countries with higher *initial* inequality reduced anchored poverty more slowly, while – perhaps unsurprising – those whose household income growth was faster reduced it more rapidly. Controlling for these variables, over four sub-periods (1998 to 2001, 2005 to 2008, 2008 to 2012, and 2012 to 2014), an increase in inequality was significantly associated with a greater increase (or smaller fall) in the anchored poverty rate (although this relationship is weaker than for the relative poverty rate).<sup>71</sup> The models also imply that over this period average incomes grew more slowly in countries within this group with higher levels of inequality. This suggests that high initial inequality and growing inequality hold back reductions in poverty rates against a fixed line, with part of this effect coming through lower growth. We return to this relationship in [Section 7](#).

71 Karagiannaki (2017), table 1, column 9.

## Top incomes

In the last section, we saw that in the UK after the early 1990s, a fall in relative poverty was accompanied by a continuing rise in the share of income going to the top 1 per cent. We can use data from other industrialised countries, also using data from the World Wealth and Income database for top income shares (for the top 1, 5 and 10 per cent) and poverty rates statistics from the OECD database to look at the relationship between the two since the mid-1970s/ early 1980s.<sup>72</sup> These data sources allow us both to look at top income shares (not possible accurately from the ECHP or EU-SILC) and at poverty rates, and for a wider selection of countries than analyses above.

In contrast to the other measures of inequality, looking across fifteen countries there is no consistent pattern in how these statistics track each other. In some countries, such as Australia, Italy and Finland, the trends in relative poverty and top income shares have been similar. But in others, such as the UK, the Netherlands and Sweden, patterns over time have been very different. This suggests that while overall measures of inequality and poverty are linked, the forces that drive the evolution of top income inequality and poverty are different.

72 See Karagiannaki (2017), figure 7 for the country-by-country patterns.

## Summary

This section offers corroboration of the picture seen looking at the UK experience over time in **Section 4**. Looking across European countries, higher income inequality, measured in a variety of ways (not just those which are most sensitive to low incomes) is associated with higher relative poverty. Furthermore, *changes* in inequality over time in a country are associated with changes in relative poverty, although the relationship is weaker than when comparing levels in a single year, and in some countries the two have moved in opposite directions. This relationship is statistically significant, even controlling for factors such as initial inequality and the rate of income growth: the positive correlation between changes in poverty and inequality remains strong and significant.

Changes in inequality are also positively associated with changes in poverty against an *anchored* standard – increasing inequality implies a *slower* reduction (or *faster* increase) in poverty even against a fixed standard. High initial inequality and growing inequality appear to hold back reductions in poverty rates against a fixed line, with part of this effect coming through lower growth. This is the opposite of what would be expected if inequality, through boosting growth, meant faster income gains at the bottom. In **Section 7** we look in more detail at the relationships between inequality and growth.

However, looking across OECD countries, we do not see a consistent relationship between what happens to *top* income shares and relative poverty rates. This suggests that when we examine the mechanisms that have been suggested to drive links between inequality and poverty in **Section 8**, the evidence for those stressing that elite income shares are the main driver is weaker.

All these relationships play out differently in each country.<sup>73</sup> The evidence suggests a strong underlying connection, but the national context – and national policies – clearly play important roles in ameliorating or strengthening the relationships.

73 See Karagiannaki (2017) for a detailed examination of patterns over time in the UK, the USA, Denmark and Sweden.







## 6 MATERIAL DEPRIVATION, MULTI-DIMENSIONAL POVERTY MEASURES AND INEQUALITY<sup>74</sup>

The previous two sections have looked at the relationships between income inequality and income poverty, measured against relative or anchored poverty lines. However, there is an extensive literature which looks at wider aspects of poverty and disadvantage than those captured by purely income-based measures. As discussed in the Introduction, there can be some circularity in looking at the relationship between income poverty and measures of income inequality that have significant weighting towards inequalities at the bottom (such as the '50:10' ratio).

Therefore in this section we investigate the relationship between income inequality in European countries and three further indicators of the extent of poverty (see [Section 3](#) for more information on the definitions used):

- A measure of **material deprivation**, based on that used by the European Commission;<sup>75</sup>
- A first **multi-dimensional poverty index (MPI1)** based on the methodology of Alkire and Foster (2011), which looks at households that experience deprivation in several dimensions. This uses six dimensions of deprivation: relative income poverty, unemployment, material deprivation, education, living environment, and health.<sup>76</sup>
- A second **multi-dimensional poverty index (MPI2)** based on the operationalisation of the capability approach suggested by Burchardt and Vizard (2011). This uses a wider range of variables for deprivation within each of five domains: standard of living; productive and valued activities; health; education; and individual life.<sup>77</sup>

<sup>74</sup> This section summarises some of the results presented in Yang and Vizard (2017).

<sup>75</sup> In our analysis of material deprivation using EU-SILC data we use the operational measure of severe material deprivation used by Eurostat. However, for data availability reasons, we use a slightly different operational measure of material deprivation for our EQLS analysis. See Section 3 for further details.

<sup>76</sup> See Yang and Vizard (2017), table 1 for detailed specification of the variables used and the deprivation cut-offs applied.

<sup>77</sup> See Yang and Vizard (2017), table 1.

The data we use are from the European Quality of Life Survey (EQLS) for the years 2007 and 2011. These cover 27 European Union countries and Turkey.

## Levels of inequality, deprivation and multidimensional poverty

Table 6.1 presents cross-sectional correlations coefficients for 2011 between four of the income inequality measures analysed in Karagiannaki (2017) and **Section 5** above and poverty as measured by both income (relative poverty) and by material deprivation and the two MPI specifications.<sup>78</sup>

**Table 6.1: Correlations between broader poverty and income inequality measures, 2011**

	Relative income poverty	Material deprivation	MPI1	MPI2
Gini coefficient	0.87***	0.58***	0.61***	0.62***
90:10 ratio	0.94***	0.73***	0.61***	0.63***
90:50 ratio	0.77***	0.58***	0.60***	0.61***
50:10 ratio	0.97***	0.74***	0.57**	0.58**

*Source: Yang and Vizard (2017), table 3, based on EU-SILC for income and material deprivation measures and EQLS for material deprivation and multidimensional poverty measures. All of the correlation coefficients are significant at the 0.1 per cent level (indicated by\*\*\*), apart from the relationship between MPI1 and MPI2 with inequality measured by the 50:10 ratio, which are significant at the 1 per cent level (\*\*).*

Across all four inequality measures, the strongest positive correlations with income inequality are for the income poverty measure. The strength of the correlations – and the variation between the four measures – is very close to that shown in Figure 5.1 above (which used data from a different source for 2014).

Although the correlations between income inequality and the broader poverty measures are slightly weaker, they are all consistently significant and positive. For material deprivation, the strongest correlations are also with the 90:10 and 50:10 ratios. But interestingly, for the two multidimensional poverty measures the correlations are as strong with the Gini coefficient and the 90:50 ratio as with the 90:10 ratio, and perhaps surprisingly a little weaker with the 50:10 ratio, which focuses on income inequality at the bottom.

<sup>78</sup> Here, and in Table 6.2, we use income and material deprivation measures from EU-SILC to maintain a degree of comparability with Karagiannaki (2017) and section 5 above. Sensitivity analysis shows that using EQLS data does not substantively affect these descriptive findings.

The material deprivation measure shows slightly weaker correlations with the Gini coefficient and 90:50 income inequality measures, which may reflect that it does not directly include a component reflecting income poverty, unlike the MPI1 and MPI2 measures. Importantly, however, even if the income poverty dimension is removed from the MPI measures altogether, the significant positive relationship with income inequality remains, so this finding is not being driven by the association we have already seen with income poverty.<sup>79</sup>

All of this confirms that the associations we see between levels of poverty and of inequality in different countries are not the mechanical result simply of measuring inequalities in low incomes in different ways. This indicates there are other substantive mechanisms generating this link between income poverty and inequality.

### Changes in income inequality, deprivation and multidimensional poverty

Table 6.2 looks at the association between *changes* in inequality and in the different poverty measures across countries over time from 2007 to 2011. The first column confirms the picture reported in **Section 5** (and in more detail in Karagiannaki, 2017), which looked at the longer period from 2005 to 2014: there is a positive and significant relationship between growing (falling) income inequality and growing (falling) relative income poverty (although over this shorter period, the association with the inequality in the top half, measured by the 90:10 ratio is insignificant). The association between changes in the variables is less strong than that shown in Table 6.1, however.

By contrast, for changes in material deprivation and the MPI1 measure, the relationship with changes in income inequality becomes insignificant for all inequality measures. The implication of this is that while *levels* of material deprivation and income inequality, and levels of multidimensional poverty and income inequality are strongly positively related to one another, this does not necessarily mean that the *trends* in the evolution of material deprivation and multidimensional poverty will follow that of income. Yang and Vizard (2017) also found this to be the case when considering correlations between income inequality changes in an earlier period (2003-2007) and lagged changes in measures of material deprivation and multidimensional poverty (2007-2011). The observed lack of relationship over time does not therefore appear to be down to lags between these changes, measured over periods of this length. It should also be noted that when we looked at relationships between changes inequality and monetary poverty in **Section 5** above, while there was a clear relationship over the whole period from 2005 to 2014, the relationship over the shorter 2008-2012 sub-period was weaker than over sub-periods before and after the crisis, so there may be special features of the crisis period we can examine in Table 6.2.

79 Yang and Vizard (2017), section 4.2.

**Table 6.2: Correlations between changes in broader poverty and income inequality measures between 2007 and 2011.**

	Relative income poverty	Material deprivation	MPI1
Gini coefficient	0.55**	-0.01	0.11
90:10 ratio	0.64***	0.15	0.21
90:50 ratio	0.30	0.10	0.13
50:10 ratio	0.73***	0.15	0.20

*Source: Yang and Vizard (2017), table 4, using EU-SILC for income and material deprivation measures and EQLS for multidimensional poverty measure MPI1 (the data do not allow us to examine changes in the MPI2 measure). Correlations between changes in 90:10 and 50:10 ratios and relative income poverty are statistically significant at the 0.1 per cent level (\*\*\*), and between changes in Gini coefficient and relative income poverty at the 1 per cent level (\*\*). The other associations are not statistically significant.*

When thinking about these wider measures, however, it is important to note that some of the components used to measure material deprivation and multidimensional poverty (see **Section 3** above) are effectively *fixed* standards, while others have a more relative nature. For instance, our measure of material deprivation includes someone's ability to afford a meal with meat (or vegetarian alternative) every second day. The housing problems included within the MPI1 indicator are about lack of problems with rot or damp/leaks. The education variable within the MPI2 indicator are about lack of any secondary education. Other components of the indices reflect people's perceptions of their own positions in society, which are inherently more relative. These include autonomy, self-rated social exclusion, dignity, and life satisfaction.

Over the longer-term, the kinds of items included as indicators tend to change. As societies get richer, popular views of what constitutes 'deprivation' change.<sup>80</sup> Looking over time, we would then see what was counted as a minimum requirement change – people who would not have been seen as deprived by the standards of the 1960s could well be seen as deprived by those of the 2000s. However, the measures used here do not include 'rebasing' of the kind that might imply. To the extent that fixed measures therefore affect the indexes we are using, we would expect changes in them to have a relationship with inequality that was more like that of monetary poverty against an anchored standard, as analysed in **Section 5**. This makes a *weaker* relationship in terms of changes over time than between levels at a point in time less surprising.

In fact, if growth was boosted by income inequality, and poverty against a fixed standard reduced faster, the effect would go in the other direction. However, the coefficients in Table 6.2 do not become negative (with the exception of one, which is very small), so that hypothesis is not supported here either.

## Multivariate analysis

In more detailed multilevel analysis, we looked at the relationship between the multidimensional poverty indicators and income inequality, using data from the EQLS.<sup>81</sup> This analysis finds that the significant cross-sectional relationship is not accounted for by compositional differences in population across countries, or other macro level covariates. We continue to observe a significant positive relationship among EU countries between levels of income inequality (as measured by Gini coefficient and by income percentile ratios), and levels of multidimensional deprivation (as measured by material deprivation and our two MPI measures).

This positive relationship persists for all the outcome variables used in Table 6.2, even after accounting for differences in micro-level variables. The analysis shows that multidimensional poverty and material deprivation are experienced to a higher degree by women and single parents, non-EU citizens and people working in unskilled elementary occupations, but compositional differences in these between countries are not enough to remove the significance of the relationship between income inequality and either material deprivation or multidimensional poverty. Including country-level macroeconomic variables in the models, we find the positive and significant relationships between material deprivation and income inequality, and between multidimensional poverty and income inequality also persists after allowing for differences in GDP per capita.<sup>82</sup>

In other words, the relationships we have shown above are not simply the result of the other underlying factors which we can investigate that are separately associated with both poverty and income inequality, thus creating an apparent association between the two.

The results suggest that broad policy differences mediate the relationships between inequality and deprivation, in that in general people living in countries with ‘social democratic’ policy regimes are either less – or no more – deprived than people in countries with ‘liberal’, corporatist, Southern or post-socialist regimes.<sup>83</sup> This was the case whether we used material deprivation or either of the MPI measures as our dependent variable of broader poverty.

81 Yang and Vizard (2017), sections 4.3 and 4.4, which explains the rationale for the use of multi-level modelling, and how it is applied in this case.

82 This is in contrast to Whelan and Maître (2012) and Whelan et al. (2014), who find that the relationships between material deprivation and Gini inequality, and MPI poverty and Gini inequality, respectively, are not statistically significant once differences in gross disposable income per capita are accounted for. The relationships therefore appear to be sensitive to a combination of differences in the model specifications used, indicators included in the definitions of material deprivation and multidimensional poverty, and years of data.

83 See Yang and Vizard (2017), section 5.4.2.3 for further discussion and listing of which countries are classed as within each ‘regime type’ of welfare states.

Allowing for welfare regime type explains the relationship between material deprivation and income inequality in the models, but the relationship between the two multidimensional poverty measures and income inequality remains significant even once we include regime type.<sup>84</sup> This implies that the link between welfare regime and basic material necessities (as captured by material deprivation) is stronger and therefore captures more variation in our models than the link between welfare regime and wider aspects of deprivation (as captured by the multidimensional measures).

We also extended the multilevel analysis to look simultaneously at changes over time between 2007 and 2011 alongside the cross-sectional associations between material deprivation and Gini income inequality, and between MPI1 poverty and Gini income inequality. This confirmed the cross-sectional results. However, we found that relationships between changes over time are distinct from the cross-sectional ones. While individuals in countries with higher income inequality tended to suffer more severely from material deprivation and multidimensional poverty, *changes* in the severity of material deprivation and multidimensional poverty were not statistically significantly associated with *changes* in income inequality from 2007 to 2011. This confirms the lack of association noted above in the descriptive analysis of changes over time.

84 Note that the income inequality measures used already reflect and capture some effect of welfare policy through taxes and transfers, and therefore it may be that welfare regime would play a greater role in mediating the relationship if it had been between market income inequality (pre-taxes and transfer) and our outcome material deprivation and poverty variables.

## Summary

The results in this section findings build on and largely support those in **Section 5**, which focused on the relationship between income poverty and income inequality. We expanded the definition of poverty beyond income to examine the link between a country's level of income inequality and how this may relate to the way its most deprived individuals experience poverty across multiple dimensions of life.

Using indicators of material deprivation and multi-dimensional poverty also shows significant associations between levels of poverty and income inequality in different countries, suggesting that these are not the mechanical result simply of measuring poverty in only monetary terms. These results hold in multilevel models that control for a wide range of micro- and macro-level variables and differences between countries: the relationships we have shown above are therefore not simply the result of the other underlying factors which are separately associated with both poverty and income inequality, thus creating an apparent association between the two.

However, while this analysis also confirms the association between *changes* in income inequality and changes in monetary measures of poverty, it did not show a statistically significant relationship between changes in inequality and changes in material deprivation or multi-dimensional poverty measures, looking at the four-year period we can examine between 2007 and 2011. The relationship is not confirmed by this stronger test, therefore. However, this does not necessarily contradict the observation that material deprivation and multi-dimensional poverty are linked to income inequality at a point in time. As discussed in **Section 8**, some of the mechanisms through which relationships between the two work will involve lags that are longer than the four years we could examine (or, indeed, shorter ones).







## 7 POVERTY, INEQUALITY AND GROWTH<sup>85</sup>

As we discussed in **Section 2**, from some standpoints it is only poverty that matters, not inequality, and within that what matters is poverty against a fixed standard,<sup>86</sup> not a relative one. If inequality – through incentive effects – boosts growth and the real standards of living of the poor, that would be welcomed from those perspectives, regardless of what happened to relative poverty.

In empirical terms we have already seen in **Section 5** a suggestion that, if anything, in the recent past in Europe, the relationship has been in the other direction, with greater inequality and growing inequality associated with *slower* reductions in monetary poverty against a fixed standard. And while the analysis of what has happened to indicators of material deprivation and multidimensional poverty, in part based on components with fixed elements, did not show a significant positive relationship between rising inequality and growing deprivation, it certainly did not show evidence of a negative relationship.

### Is growth good for inequality?

But we can also draw on a much wider literature on the relationship between inequality and growth. This literature starts with investigation of the links going in the other direction – the famous ‘Kuznets curve’, derived from the work of Simon Kuznets (1955). Looking at data from a relatively small number of countries up to the 1950s, he hypothesised that, as an economy develops, market forces will first increase then decrease overall economic inequality, illustrating the relationship through a diagram showing an inverted U-shape.

According to the hypothesis, the reason for the initial increase in inequality is the shift of labour and resources from agriculture to manufacturing during the early stages of development, creating inequalities between the urban manufacturing and rural farming sectors. Inequality is hypothesised to fall as the economy develops, with ‘trickle-down development’ argued subsequently to reduce inequality through workers earning

<sup>85</sup> This Section summarises a more detailed review presented in McKnight (2019).

<sup>86</sup> This is sometimes referred to as ‘absolute poverty’, but that can be confusing as different authors use the phrase to refer to a basic, global standard of minimal subsistence, while others use it to describe numbers of people below any fixed standard, in contrast to relative poverty. To avoid confusion, we refer here to fixed or ‘anchored’ real standards.

higher average wages, democratisation, and the establishment of a welfare state. If this was the continuing pattern, inequality might have become a second order concern.

In fact, of course, we have not seen continuing falls in income inequality in Western countries since the 1970s, despite economic growth. The more recent empirical evidence for a continuing Kuznets Curve is mixed, with many authors finding no clear evidence for its existence. Some studies<sup>87</sup> do find empirical evidence of a U-shaped curve between economic performance and inequality, but fail to explain variations in inequality between countries or over time. Others have criticised the hypothesis on the grounds that the original relationship was in fact due to historical differences in inequality between countries, rather than the development of individual countries themselves. Deininger and Squire (1997), for example, controlled for historical differences in inequality in their analysis and found no empirical evidence for the Kuznets curve. This brings into question whether there really is a natural tendency for inequality to fall as nations become wealthier.

### Why might inequality affect growth?

Our main concern here, though, is with causality in the other direction – the effect of inequality on incentives and growth. There is a long tradition in economics what will be the case is that inequality is good for growth. For instance:

- The greater propensity of those with high incomes to save will generate higher levels of growth-inducing investment.<sup>88</sup>
- Pursuing equality can reduce efficiency (the total output produced with given resources). Not only can more equal distribution of incomes reduce incentives to work and invest, but the efforts to redistribute—through such mechanisms as progressive taxation, transfers and minimum wages—can themselves be costly (a result of administrative costs and disincentives to work for both those who pay taxes and those who receive transfers).<sup>89</sup> Populations and policy-makers therefore have to face ‘the big trade-off’ between equality and efficiency.
- Inequality produces greater effort and therefore more innovative and enterprising behaviour as a result of the incentive to move up the wage ladder.<sup>90</sup>
- More inequality may be good for growth if it implies more political support for education.<sup>91</sup>
- Inequality increases the incentive to acquire human capital. It also increases the incentive for workers to move to higher paying technologically advanced sectors of the economy. Both these mechanisms lead to higher growth in the future.<sup>92</sup>

87 Ahluwalia (1976); Papanek and Kyn (1986); Barro (1999).

88 Kaldor (1957).

89 Okun (1975).

90 Lazear and Rosen (1981).

91 Saint-Paul and Verdier (1993).

92 Galor and Tsiddon (1997a, 1997b).

- If investments require substantial set-up costs, inequality may boost economic growth (particularly in the presence of credit market imperfections). Examples include cases where increasing returns to investment may only prevail over some range (eg formal education may only enhance growth beyond primary schooling; a business may only be productive above a certain size).<sup>93</sup>

But equally there is a series of arguments that the relationship might go in the opposite direction, and so may harm growth:

- In contrast to Kaldor's positive view of the savings and investment behaviour of the rich, more recent arguments since the crisis have highlighted their investment in non-productive assets and commodities such as housing, luxury goods and collectible items.<sup>94</sup> Growth in these markets has relatively limited potential to impact positively on the wider economy, since much of this growth manifests as increases in prices or value in the form of property or asset bubbles, rather than stimulating greater employment or productivity.
- A shift to higher inequality also entails a reconfiguration of the priorities of the finance sector which may then exclude low-income households from access to banking services and then block their savings from contributing to growth-inducing investments.<sup>95</sup>
- A model developed by Galor and Zeira describes the inequality-education-growth relationship, explained by the mechanism of unequal access to education due to imperfect capital markets. This mechanism leads to a negative effect of inequality on growth.<sup>96</sup>
- Another channel through which inequality can be harmful for growth is through social and political unrest. In an unequal society, the disadvantaged can be motivated to commit crime, riot and engage in other disruptive activities.<sup>97</sup> This can have a negative impact on economic growth due to the waste of resources (effort) diverted to non-productive disruptive activities and potential victims diverting resources in defensive effort. In addition, threats to property rights can lead to a reduction in investments and social unrest can threaten the stability of political institutions. Persson and Tabellini suggest that inequality is harmful for growth, because it leads to policies that do not protect property rights.<sup>98</sup>

In some ways synthesising these two lines of argument, some more recent theories – supported in part by the empirical evidence reviewed below – questions the assumption that the relationship between growth and inequality is linear. A number of researchers<sup>99</sup> have suggested instead that the relationship between growth

93 Barro (2000).

94 Stiglitz (2016); Turner (2016).

95 Baradaran (2015).

96 Galor and Zeira (1993). The model incorporates income heterogeneity in the determination of aggregate economic activity and growth.

97 Barro (2000); Alesina and Perotti (1996); and Benhabib and Rustichini (1996).

98 Persson and Tabellini (1994).

99 For example: Benabou (1996); Banerjee and Duflo (2003); Cornia, Addison and Kiitsi (2004).

and inequality is concave: inequality that is 'too low' or 'too high' can, other things equal, be detrimental to growth, but between these two extremes exists a growth-maximizing range which varies across countries. This is illustrated in Figure 7.1. As Cornia, Addison and Kiitsi (2004) put it,

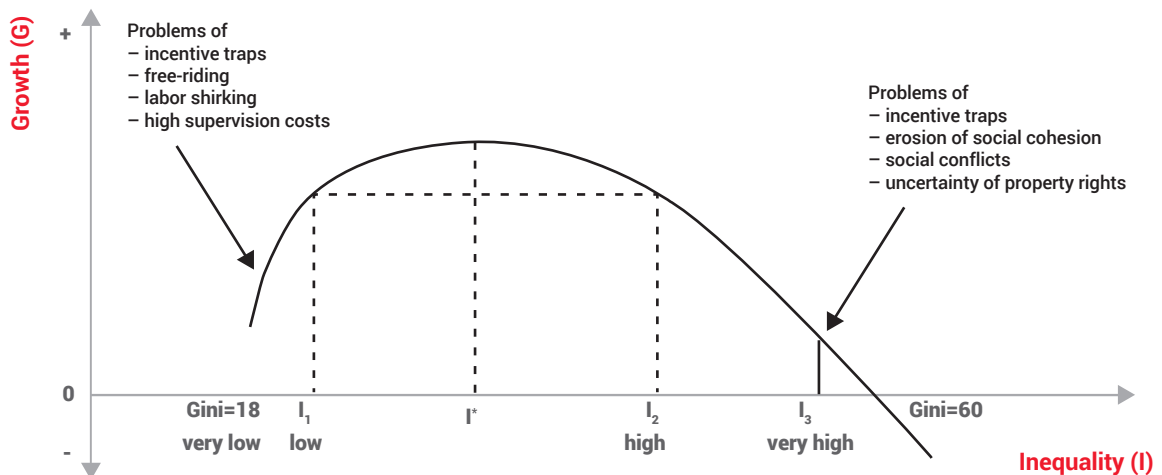
“Such a range varies across countries depending on structural factors such as asset distribution, the share of agriculture in total output, natural resource endowment, the history of past policy decisions, and, thus, the accumulation and sectoral distribution of physical and human capital.

When the real income distribution is too compressed and only poorly reflects differences in talent, merit, and effort, growth may be inhibited by a weakening of individual work incentives, by attempts at labour shirking and free-riding, and by the search for a 'quiet working life'.”

But, when inequality is 'too high',

“...growth turns sharply negative, as the observed distribution of income deviates markedly from the latent distribution of rewards based on talent, merit, and effort. This mainly happens because of the malfunctioning of labour, capital, and product markets, or because of unbalanced access to education, land, credit, and insurance or by sheer discrimination and segregation. This case is also characterized by an erosion of incentives which may lead to output contraction among the self-employed and to shirking and free-riding among dependent workers.”<sup>100</sup>

**Figure 7.1: Proposed non-linear relationship between inequality and growth**



**Source:** Cornia, Addison and Kiitsi (2003), figure 4.

<sup>100</sup> Cornia, Addison and Kiitsi (2004), pp 44-45. They also provide some empirical evidence of a concave relationship of this kind. Note that others have, however, suggested the opposite non-linear relationship, with inequality encouraging growth in rich economies but slowing growth in poor economies (Barro, 2000; Lin et al., 2009).

## Empirical evidence

A number of empirical studies have supported the idea that inequality promotes growth. For instance:

- Partridge (1997, 2005) uses data comparing US states, finding that the middle-class share (measured as the income share of the middle fifth) of income and overall inequality are positively related to long-run growth. However, the short-run income-distribution response is less clear. This is consistent with his hypothesis that a 'vibrant' middle-class is crucial for shaping policies which promote inclusive growth, such as investment in education and redistribution through the tax system, but in short run may negatively affect growth.
- Frank (2009) also uses US state-level data over the period 1929 to 2000 and finds consistent evidence that the income share of the top tenth helps income growth, but only weak evidence of an effect in the opposite direction, that income growth increases the top decile income share.<sup>101</sup>
- Forbes (2000), using data from a number of international datasets for the period 1966 to 1995, finds that in the short term and medium term, a rise in a country's level of inequality has a positive relationship with economic growth.

But as many – if not more – empirical studies have come to the reverse conclusion, including recent work from the International Monetary Fund (IMF) research division, which has attracted a lot of attention. One IMF recent study provides evidence that growth is linked in particular to the income shares of the poor and the middle class, estimating that while a one percentage point increase in the income share of the top fifth will drag down GDP growth over the medium term, but a rise in the income share of the bottom fifth boosts growth.<sup>102</sup>

The evidence from this study, among others, suggests that greater income shares for middle and lower income groups are not only beneficial for the poor from a static perspective, but can enhance future growth which then leads to further income growth for them. The reason for this lies in the greater share of their incomes that they spend, so there is a greater boost to aggregate demand than if income growth is concentrated among a small number of high earners. Conversely, increasing inequality depresses aggregate demand and economic growth, unless the increased savings of the rich are offset by increased borrowing among middle or low income earners. In an increasingly unequal society, the credit growth this requires then becomes necessary to maintain economic growth, but as the aftermath of the financial crisis highlights, this can be unsustainable and ultimately have detrimental effects on both growth and poverty.<sup>103</sup>

<sup>101</sup> Frank (2009). This uses the concept of 'Granger-causality', looking at the timing of when changes in one variable happen, and what happens to the other subsequently.

<sup>102</sup> Dabla-Norris, et al. (2015).

<sup>103</sup> See McKnight (2019), section 2.

Other studies have reached similar conclusions:

- Alesina and Rodrik (1994) find that higher inequality is correlated with lower subsequent growth.
- Sukiassyan (2007) finds a negative relationship between inequality and subsequent growth in Central and Eastern Europe and the Commonwealth of Independent States.
- Berg, Ostry and Zettelmeyer (2012) and Berg and Ostry (2011) suggest that when growth is looked at over the long term, Okun's 'big trade-off' between efficiency and equality may not exist. Instead, equality appears to be an important ingredient in promoting and sustaining growth. The difference between countries that can sustain rapid growth for many years or even decades, and the many others that see growth spurts fade quickly may be the level of inequality. Countries may find that improving equality may also improve efficiency, understood as promoting more sustainable long-run growth.
- Ostry, Berg and Tsangarides (2014) find that inequality increases the risk of a growth spell ending and that redistribution is not detrimental to growth.

This recent IMF staff paper explored this relationship in some detail and reached three main conclusions:

“First, more unequal societies tend to redistribute more. It is thus important in understanding the growth–inequality relationship to distinguish between market and net inequality.

Second, lower net inequality is robustly correlated with faster and more durable growth, for a given level of redistribution.

And third, redistribution appears generally benign in terms of its impact on growth; only in extreme cases is there some evidence that it may have direct negative effects on growth. Thus the combined direct and indirect effects of redistribution – including the growth effects of the resulting lower inequality – are on average pro-growth.”<sup>104</sup>

Similarly in 2014 the Organisation for Economic Co-operation and Development (OECD) published a note summarising its body of work on inequality and growth.<sup>105</sup> The conclusion of their research is that an increase in income inequality will lead to a fall in economic growth. One of the main reasons for this is that poorer members of a society are less able to invest in their education and this has a negative effect on productivity and social mobility (see **Section 8**). They find that tackling poverty

<sup>104</sup> Ostry et al. (2014), p. 4. Within their results they suggest that up to a threshold of redistribution reducing the Gini coefficient by 13 percentage points the evidence is that the inequality reduction is positive for growth. Above that level (which roughly corresponds to the reduction in the UK) they suggest that, “there is little evidence of an overall adverse effect on growth, since the pro-equality and disincentive effects of the transfers roughly balance one another out” (ibid., pp. 23-24 and figures 8-9).

<sup>105</sup> OECD (2014). The countries covered includes those in Europe.

is not enough and policy needs to work to increase the relative incomes of the lowest 40 per cent. Like the IMF research, they also find that redistribution does not hinder growth. They recommend redistribution through a well-designed system of cash transfers and taxation, and increasing access to public services (high-quality education, training and healthcare).

### Summary

There is a long tradition in economics that assumes that there is a trade-off between equality and growth, stressing the positive effects of the incentives for work, investment and risk-taking that go with wider inequalities in returns to them (but not, it should be noted from inequalities that stem, for instance, from inheritance). However, other economists have suggested a series of ways in which inequality can damage growth, including through effects on education and on economic stability, through the creation of debt and asset bubbles, including, it is argued those leading to the financial and economic crisis, the aftermath of which we are still living through.

These contradictory mechanisms suggest that this is an empirical question. But here the evidence is also divided, with some studies suggesting that inequality helps growth, but as many finding the opposite. Two possible conclusions could be drawn from this:

- Given that the evidence is equivocal, the relationship is usually likely to be weak, so that concerns about adverse effects of reduced inequality on growth are misplaced.
- Perhaps adding to this in a more sophisticated way, the relationship between inequality may be non-linear, with very low levels and high levels of inequality both damaging growth (see Figure 7.1). In between, the effect of changes in inequality will be roughly neutral.

In general, therefore – or within a middle range of inequality following the second version – the positive links we have shown in **Sections 4, 5 and 6** between greater inequality and greater poverty would remain the main focus, rather than concerns that lower inequality would hold back growth and so the real incomes of people in poverty.







## 8 MECHANISMS RELATING POVERTY AND INEQUALITY<sup>106</sup>

In **Section 2** we reviewed contrasting standpoints behind concerns about poverty and/or inequality. Some would prioritise reducing inequality in any case, but others would see both as concerns, in some cases equally, in others with a priority to poverty. But there are standpoints that see inequality as not being of concern in itself, with reducing poverty – sometimes conceptualised against a fixed standard – being their key priority. But even in the last case, if inequality leads to poverty, then inequality would become a concern for instrumental reasons.

It is this last position which makes the empirical evidence presented in the subsequent sections important. While it is very hard definitively to prove a causal connection leading from inequality to poverty, the absence of times when the UK has achieved low poverty in relative terms at the same time as having high inequality, and the absence of comparable countries where this is the case, is suggestive. And not only does the evidence suggest that the two are linked, there is no strong evidence that inequality improves economic growth, and so might be beneficial in speeding the reduction of poverty against a fixed standard either.

If the two are empirically linked in the way the evidence suggests, what might be the explanations of that, and what might that tell us about policy responses?

### (a) Linked drivers in the labour market<sup>107</sup>

A first potential explanation is that the two are common outcomes of wider phenomena. Here analysts point to changes in technology and the global labour market. One of the main explanations for rising wage inequality is that there has been a demand shift in favour of high-skilled workers, which has driven up their wages relative to low-skilled workers. Two of the main drivers identified in the literature are globalisation and ‘skill-biased technological change’. Globalisation can lead to

<sup>106</sup> This section is based on analysis presented in more detail in Yang (2018a), Duque and McKnight (2019b), and McKnight, Duque and Rucci (2017).

<sup>107</sup> See OECD (2011), pp. 28-36 for an overview of the forces involved.

a fall in the relative wages of low-skilled workers as a result of fierce competition from lower paid low-skilled workers in lower income countries in the form of cheap imports of goods and services.<sup>108</sup> At the same time, globalisation can increase the demand for relatively scarce high-skilled workers through an increase in demand for the goods and services they produce as a result of access to a larger market. If technological change is biased in favour of high-skilled workers it can reduce the demand for low-skilled workers. This can occur where it is cheaper to automate the work of low-skilled workers relative to the cost of their labour. Technological change can increase the demand for high-skilled workers both in terms of the demand for their skills to develop advanced technologies and for the operation of these technologies.<sup>109</sup>

Either of these drivers can lead to *both* rising inequality *and* rising poverty (unless they are offset by stronger government redistribution – see section (c) below). The implication is that policies that respond to one, such as increasing the relative number of skilled workers to reduce the wage premium, will also respond to the other.

An alternative explanation for rising wage inequality is that there has been a shift in the balance of power between different groups of workers.<sup>110</sup> There is evidence in many countries that labour market institutions (e.g. unions) have weakened and this has led to a deterioration in the negotiating power of low-skilled workers. There is also evidence that a change in the balance of power has affected the ability for some groups of workers to command very high salaries and bonuses. Here policy responses would build more effective labour market institutions or redress power imbalances between workers through regulation, breaking down barriers to high paying jobs, or again increased redistribution. Some of these responses would reduce inequality, but not necessarily reduce poverty, if the lower-income beneficiaries were already above the poverty line.

A more obvious shared driver between poverty and inequality is discrimination in the labour market. Where particular groups – women, members of particular ethnic minorities, or others sharing backgrounds that attract discrimination – find gaining employment harder and are paid less when they secure it than the dominant, often decision-making, group, this will both increase their chances of poverty and increase inequalities within the overall distribution.

<sup>108</sup> Kremer and Maskin (2006); Krugman (2007).

<sup>109</sup> Katz and Murphy (1992); Juhn et al. (1993); Machin and Van Reenen (1998); Card and DiNardo (2002); Goldin and Katz (2009).

<sup>110</sup> DiNardo et al. (1996); Gosling and Lemieux (2004).

### (b) Unequal opportunities

The other explanations suggest ways in which there is a direct link running from inequality to poverty in a causal sense. Noting that we are talking about generational links, rather than those changing over just a few years, a first of these is the way in which inequality has been linked to reduced mobility between the generations.

‘Social mobility’ – or, rather, the lack of it – measures how social and economic status, and therefore inequality, in one generation is transmitted to the next. In itself, social immobility, and the unequal opportunities that often drive it is an important dimension of inequality. ‘Equality of opportunity’ is espoused by politicians across most of the political spectrum. In the UK case, both Gordon Brown and Theresa May have singled it out as core to their philosophies.<sup>111</sup>

Intergenerational measures of mobility can consider factors ranging from family income, individual earnings, level of education, social class position, occupational status and the “monetary returns to those characteristics.”<sup>112</sup> Differing levels of social mobility may be an important mechanism behind the cross-sectional correlations we see between inequality and poverty comparing between countries.

Cross country studies have found that intergenerational income mobility tends to be lower in countries where income inequality is higher.<sup>113</sup> Most famously, this relationship has been described by Alan Krueger, Chair of President Obama’s Council of Economic Advisers, as the ‘Great Gatsby Curve’, reproduced in Figure 8.1.<sup>114</sup> In high inequality countries such as the USA, the United Kingdom and Italy there are much stronger links between the earnings or incomes of parents and those of their children (often actually sons), but in the low inequality Scandinavian countries the links between parental and children’s incomes are much weaker.

111 Hills (2017), p. 212.

112 Blanden et al. (2014), p.426.

113 Corak (2013); Blanden (2013).

114 Alan Krueger referred to the “Great Gatsby Curve” for the first time in a speech, “The Rise and Consequences of Inequality”, to the Center for American Progress on January 12, 2012, in his capacity as the Chairman of the Council of Economic Advisors.

Figure 8.1: The 'Great Gatsby Curve': Income inequality and intergenerational mobility



**Source:** Corak (2013), 'Income inequality, equality of opportunity and intergenerational mobility', *Journal of Economic Perspectives*, vol 27, no. 3, figure 1. Income inequality is Gini coefficient for disposable household income in mid-1980s. Intergenerational link in earnings mobility is association (elasticity) between paternal and son's earnings for men born in the early 1960s, with adult earnings in the mid- to late 1990s. Results from individual studies are adjusted for measurement error to give comparability between nations.

Most straightforwardly, of course, inequality is transmitted between the generations through inheritance and lifetime gifts.<sup>115</sup> If someone's parents and grandparents have few assets, they are unlikely to inherit or be helped with the things that create a deposit for a house in a place where jobs are plentiful, or which make further education and training less risky. But other ways in which inequality today is perpetuated through there being less opportunity, especially in education – and therefore a greater chance of poverty – for the children of poorer parents are easy to see, running all the way from early childhood to where and how people enter the adult labour market.<sup>116</sup>

<sup>115</sup> Karagiannaki and Hills (2013).

<sup>116</sup> Hills, et al. (2010), ch. 11.

Put most simply, if the rungs of the economic ladder are further apart, it is harder to climb up it. But equally, if those at the top realise that their children may have a long way to fall, they have every incentive – and the resources – to prevent it, creating what has been described by Abigail McKnight in the UK and Richard Reeves in the USA as the ‘glass floor’.<sup>117</sup>

While the link between *levels* of income inequality and the strength of intergenerational links in incomes is relatively well-established, there are fewer studies of the relationship between *changes* in inequality and changes in intergenerational mobility within a particular country. One problem is that it is unclear at what point in people’s lives the inequality would have its greatest effects – in early childhood (leading to long lags) or on entry into the labour market (which would mean a shorter lag). Lee and Solon’s survey<sup>118</sup> observes that some US studies find large increases in intergenerational mobility as inequality rises, some find large decreases, but most find that estimated changes are statistically insignificant. Their own results suggest that in the US for cohorts born between 1952 and 1975 intergenerational income mobility did not dramatically change over time, despite the rising income inequality over the period.<sup>119</sup> This does not mean that the increase in income inequality in the USA in the last forty years will not also lead to a fall in intergenerational mobility as the ‘Great Gatsby Curve’ would predict, as it may still be too early to assess impacts that stretch over whole generations.

UK research has mainly focused on comparing what happened to two birth cohorts, born in 1958 and 1970. Economists have found declining intergenerational income mobility between the two groups,<sup>120</sup> and it can be noted the labour market was less unequal when the first generation entered it at the start of the 1980s than it was by the time the second did at the start of the 1990s. However, sociologists examining the relative chances of people ending up in different broad occupational social classes find no such decline in intergenerational mobility.<sup>121</sup> For the question being reviewed here, linking inequality and later perpetuation of poverty, the apparent decline in intergenerational income mobility is most relevant, but it has to be remembered that it is based only on the experience of two cohorts, with data limitations on what we know about their incomes when they were growing up.

For the future, the most worrying feature may be the way in which the step-change in income inequalities in the 1980s is now building up into wealth differences within the generations that have now lived their whole working lives in the more unequal labour market than their predecessors. While wealth inequalities have always been large, and trends in the period since 2000 are unclear,<sup>122</sup> what is new is quite how much more valuable personal wealth for those that have it has become *relative to incomes*

117 McKnight (2016); Reeves (2017).

118 Lee and Solon (2009).

119 Hertz (2007) reaches similar conclusions.

120 Blanden and Machin (2007); Gregg et al (2013).

121 Goldthorpe and Mills (2004). For contrasting discussion of the reasons for the differences between the results, see Blanden (2013) and Erikson and Goldthorpe (2010).

122 Alvaredo, Atkinson and Morelli (2015).

than in the past,<sup>123</sup> particularly for the 'baby boomer' generations recently retired or just reaching retirement.<sup>124</sup> Where some people stand to inherit a typical lifetime of earnings, this points to a strong mechanism to perpetuate inequality, at the least. But it also means that it becomes much more of an uphill struggle to offset differences in life chances, and with them of those in a younger generation having a lower risk of poverty than their parents.

### (c) Limits to redistribution

Looking more immediately, higher market inequality will also make it more of an uphill struggle to achieve the redistribution that would be needed to keep current poverty in check. In theory, societies could choose to have systems that generate large inequalities in *market* incomes (for instance, to maximise incentives for effort, investment and innovation), but then have greater levels of redistribution, so that those at the bottom do not lose out and fall into poverty.

It is certainly true that countries vary in the extent to which there is a difference between income inequalities before and after the effects of taxes and government benefits and other transfers. Indeed, the UK tax and transfer system reduces the Gini coefficient measure of inequality more than the Swedish system.<sup>125</sup> But by and large, countries that have high levels of market income inequality also end up with high levels of inequality in disposable incomes<sup>126</sup> and with them higher poverty risks. Despite its somewhat greater 'redistributive effort', the UK is still a much more unequal country than Sweden.

There are two factors here. The first is that however easy it is to imagine highly redistributive tax and benefit system on paper, it is much harder to achieve them in practice. To finance generous benefits for those that have no or little market income requires high marginal tax rates on those who have more. This creates the obvious political challenge to explain why these are needed, for instance that the recycling of money is needed to compensate for the greater inequality that a more productive economy inequality may have created. This is even harder if the 'losers' in the market are stigmatised as just that, and so undeserving of support (see section (d) below).

At the same time, it is not so easy to create an effective benefit system to transfer large amounts to the poor. Universal systems (including proposed 'universal basic incomes') may reach everyone, but require acceptance of high tax rates. 'Targeted' or means-tested systems can keep down overall tax rates, but suffer from imperfect take-up of benefits, partly as a result of stigma,<sup>127</sup> so some people remain poor. Recent evidence suggests that greater concentration of net cash transfers is not more effective at poverty reduction than systems with a stronger universal

123 Hills et al. (2013). This is, of course, the point that Piketty (2014) stresses in his cross-country survey over two centuries.

124 D'Arcy and Gardiner (2017).

125 Hills (2017), figure 2.9 based on OECD data.

126 Hills (2017), figures 2.6 and 2.8.

127 See McKnight, Duque and Rucci (2016) for a review of the literature on this.

element.<sup>128</sup> This may be due to the greater support for the welfare state in more universal systems, which allows them to be more generous than in highly means-tested systems, which become leaner over time. It may also be influenced by ‘poverty traps’ (where an increase in someone’s income is offset by higher tax and lower state benefits, leaving them little or no better off), therefore, unable to escape poverty. The more redistribution that has to be achieved, the stronger these effects may be – and if they are already at or beyond reasonable limits, they cannot be added to.

The second problem is the political one. If we start from highly unequal market incomes, will the political system actually deliver high levels of redistribution? We discuss some of the evidence on this in Section (f) below.

#### **(d) Perceptions and attitudes<sup>129</sup>**

Perceptions and attitudes: what drives policy responses to poverty and inequality will ultimately depend on the public’s perceptions of them. If inequality is associated with less knowledge of how others are living, and less mixing between groups, popular demands for something to be done about poverty may be reduced.

Over long periods of time, higher inequality can become an accepted ‘norm’, and this could lessen support for reducing inequality; although there may continue to be stronger support for reducing some types of poverty, such as pensioner poverty and child poverty. These cultural norms can be shaped by perceptions of merit and ‘justification’ for high income and wealth, and these views can coexist with narratives blaming those living on a low income on assumed laziness and idleness.

The majority of Britons agree that the gap between those with high and low incomes is too large, and there is little variation in this view between education groups. The share of the population agreeing that inequality is too high increased most over the 1980s when the greatest increases in inequality occurred and continued to increase further, peaking in 1995, but had declined to by 2004 even though there was very little change in income inequality over this period.<sup>130</sup> This may indicate that the UK population had become slightly more tolerant of the higher level of inequality, or at least desensitised to the higher level of inequality, but this was a period of rising average incomes and employment, and this may have played an important role.

A smaller share believe that government should redistribute income from the well-off to the less well-off, but this does not mean that they do not believe that government should seek to reduce inequality through other policies. Figure 8.2 shows that support for ‘redistribution’ is lowest for those with some higher qualifications (but not with degrees), and highest for those without qualifications, although those with

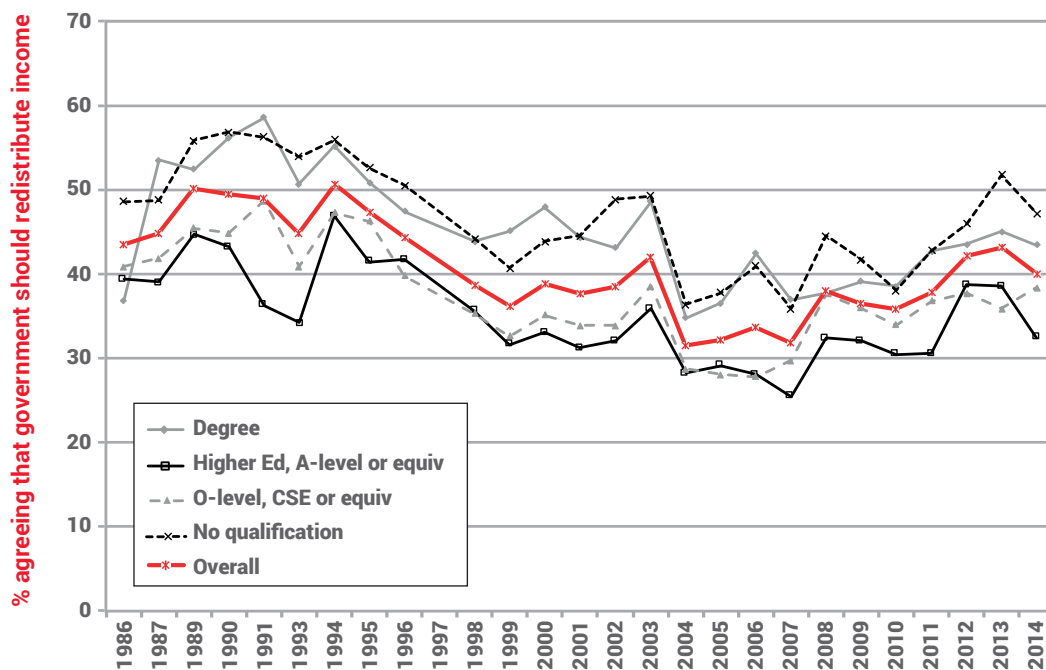
<sup>128</sup> McKnight (2015). See also the review in Yang (2018a), section 5.1, which concludes that there have been contrasting findings in the literature on whether universal or targeted approaches are more effective in reducing poverty and inequality, although the studies are often not directly comparable due to the use of different time periods, groups of countries, or measures of universality.

<sup>129</sup> See Yang (2018a), section 2, and McKnight, Duque and Rucci (2016), section 7.3 for more detailed discussion. See in particular, Orton and Rowlingson (2007), Cruces et al. (2013) and Kuziemko et al. (2015).

<sup>130</sup> McKnight and Tsang (2013) (updated), based on British Social Attitudes Survey.

degrees also support it more than the overall average. As a result, those who would gain most and those who would lose most are most likely to support redistribution. Between 1994 and 2007 the proportions from all education groups favouring redistribution fell, even though overall inequality changed little (and the share of the very top rose), but since the crisis support for it has risen.

**Figure 8.2: Should government redistribute income?**



*Source: McKnight and Tsang (2013, updated) from British Social Attitudes Survey (various years).*

A 2007 review conducted by Michael Orton and Karen Rowlingson found that public attitudes to inequality should not be seen as fixed and that there is a potential for attitudes to change. However, they did not find clear evidence explaining why attitudes change over time. One study<sup>131</sup> found that increasing inequality did not lead to greater redistribution in the UK between 1986 and 2004 as might have been predicted (see section (f)). The authors suggest that this was due to preferences and beliefs changing quite rapidly, in particular about the importance of incentives, coinciding with political rhetoric at the time and a continuing programme of reforms in welfare to work programmes which included greater means-testing and conditionality.

131 Georgiadis and Manning (2007).



A number of studies have shown that people's knowledge of inequality, the tax and benefit system, and redistribution is limited.<sup>132</sup> People consistently underestimate pay differences between different occupations and especially the pay of the highest earners.<sup>133</sup> In the UK, Hills (2004) and Pahl et al. (2007) have shown that the extent of wage inequality at the top is much greater than perceived. Studies in other countries also show that perceptions of inequality do not in general tend to align with measured levels of inequality, but in different directions. In the US, people's perceptions also tend to be biased downwards, so that there is a systematic *under*-estimation of the true level of inequality.<sup>134</sup> The opposite may be true in continental Europe, with perceptions tending to be biased towards *over*-estimating rather than underestimating inequality.<sup>135</sup> Nor is this phenomenon is not confined to high-income countries. According to an Indonesian survey by the World Bank, on average Indonesians also vastly underestimated the degree of inequality.<sup>136</sup>

This lack of knowledge will affect attitudes to redistribution. A recent study has shown that people are more in favour of redistribution when they *perceive* that inequality is high and that this relationship is much stronger than the relationship between support for redistribution and actual levels of income inequality.<sup>137</sup> There is also evidence that perceived levels of social mobility are linked to support for redistribution.<sup>138</sup> A belief in the 'American Dream' and a misperception of actual, much lower, social mobility rates in the US may, in part, explain why Americans are less in favour of redistribution than Europeans. Evidence also shows that there are systematic biases in individuals' evaluations of their own relative position in the income distribution, and this too is important because individuals who overestimate their relative position believing that they are relatively richer than they are tend to demand higher levels of redistribution when informed of their true ranking.<sup>139</sup>

Here, people's degree of contact with others who are unlike themselves will be important, and lower contact in more unequal societies may lead to lower perceptions of inequality and hence of the need for redistribution.<sup>140</sup>

In general, survey evidence shows that people believe that a certain level of inequality is desirable. The argument is often made that pay differentials are important to motivate and reward work effort and entrepreneurship, but there is clearly a limit to the degree of inequality people believe is necessary. Bromley (2003) examined evidence from the British Social Attitudes Survey in 1987, 1992 and 1999. This showed that only a minority of people agreed that large differences in income are necessary for Britain's prosperity and the share that held this view fell from 26 per cent in 1987 to 17 per cent in 1999 (although there is no indication of what

132 Orton and Rowlingson (2007).

133 Osberg and Smeeding (2006).

134 Norton and Ariely (2011)

135 Niehues (2014).

136 Indrakesuma et al. (2015).

137 Niehues (2014).

138 Engelhardt and Wagener (2014).

139 Cruces et al. (2013).

140 Windsteiger (2017).

people mean by a 'large difference'). However, a majority of respondents agreed that inequality persists because it benefits the rich and powerful.

### **(e) Geographical polarisation: attitudes, opportunities and local resources<sup>141</sup>**

Geographical polarisation may reinforce each of the mechanisms discussed in the preceding three sections: opportunities for poor people will be reduced, if they are distant from work and access to higher education institutions; if local resources in part determine the quality of local public services (which they will do, if they are not fully 'equalised'); and geographical polarisation or even segregation will further limit knowledge of how others are living, increasing stigma and reducing empathy. This can reinforce what is known in other parts of Europe as the 'Matthew' effect<sup>142</sup> – 'to him that hath shall be given' – where the parts of overall inequality that are linked to geography are only weakly reduced.

Research examining the geography of income, poverty and wealth has consistently shown unequal distributions across the UK. This segregation can alter people's perceptions and their preferences for redistribution or other policy action designed to tackle poverty and inequality. Regional inequalities in individual average annual earnings have widened since the end of the 1990s. This was driven by greater increases in average annual earnings in England and Scotland than in Wales and Northern Ireland, and within England by much faster growth in London, and this gap has widened since the financial crisis. However, housing costs have also changed and higher housing costs in London have meant that a large gap in relative income poverty rates has emerged between London and other English regions after allowing for housing costs. This *could* have been compensated for by more generous Housing Benefit in London, but in fact limits on eligible rents have bitten hardest in the capital. Rising house prices and wealth inequalities have been transmitted into higher rents, but then greater shortfalls between those rents and maximum benefits have led directly to greater poverty – one of the most obvious direct links between inequality and growing poverty.

Public spending varies considerably across regions. Some of that may reduce regional inequalities, for instance, with higher spending in Northern Ireland, Scotland and Northern England, but lower spending in the South East and East of England. But higher spending in London, particularly on infrastructure, pushes in the other direction, and has been suggested by some researchers as a factor behind the much higher growth rates in London relative to other English regions since 2009.<sup>143</sup>

Recent austerity in public spending was achieved in particular by cuts to the central grants to local authorities that were designed to have an equalising effect between

<sup>141</sup> See McKnight, Duque and Rucci (2016), section 7.4 for more detailed discussion.

<sup>142</sup> As the quotation is from St Matthew's Gospel in the Christian New Testament.

<sup>143</sup> Cox and Davies (2014).

regions.<sup>144</sup> For the future, greater freedoms to raise and retain local revenue could in principle reduce poverty, but there is a danger that spatial inequalities increase as lower taxes are used to attract higher income households to an area, while the areas with the highest rates of deprivation are the least able to raise much-needed revenue.

Geographical polarisation interacts with attitudes and empathy, potentially making mobilising support for redistribution and poverty alleviation harder. Polarisation between rich and poor areas increases polarisation of political attitudes through erosion of awareness and misunderstanding of those who live in very different circumstances from one another.<sup>145</sup> If this erodes the empathy and reciprocity that underpins redistribution through tax and transfer systems, then geographical polarisation may act as a feedback mechanism, undermining support for redistributive policies and further reinforcing high levels of inequality. In addition to reducing support for redistribution by affecting perceptions of the level of inequality, such polarisation can generate a more direct animosity effect. People may become more susceptible to false portrayals in the popular media and by politicians of a population divided into welfare state contributors and beneficiaries.<sup>146</sup>

#### **(f) Politics and the influence of the affluent**

There is a substantial political science literature that examines why countries make different choices about inequality, and the extent to which they take action to counter it, either by affecting the factors that drive differences in income from the market or in redistribution to narrow market income differences. Some analysis discusses the ways in which democratic systems – where one person has one vote – might be expected to favour redistribution, if many would gain from that and few lose. But other parts of the literature stress the ways in which there may be a feed-back loop from pre-existing inequalities in resources to inequalities in political power, adoption of policies that favour the *status quo*, and only limited action to counter poverty.

In thinking about the relevance of this literature for establishing connections between inequality and poverty, the empirical findings of earlier sections should be borne in mind: both looking across time in the UK, and comparing the situations in different countries, we see a strong empirical link between *overall* inequality and poverty rates; but we do not see strong links between income shares right at the top and poverty rates.

In this section we review the evidence on the link between aspects of political economy and inequality and poverty.<sup>147</sup>

Political economy models have shown how the middle-income groups can determine the outcome of elections, since they have the ability to form alliances with either low-

144 Hastings, et al. (2015); Beatty and Forthergill (2016).

145 Bailey et al. (2013).

146 Hills (2017).

147 See McKnight, Duque and Rucci (2017), section 9.5 for a more detailed discussion.

income or higher-income groups – as in the literature associated with the ‘median voter theorem’.<sup>148</sup> As a prediction, politics might be expected to converge on the interests of the middle. That could include redistribution and poverty reduction as a reaction to rising inequality, if an electoral alliance is constructed in that direction. But at least three factors may interfere with that.

First, voter turnout may vary by income, and that is certainly the case in the UK, with the gradient against lower-income turnout increasing since the 1980s rise in inequality.<sup>149</sup> Unequal turnout in general elections – where lower-income individuals are less likely to exercise their right to vote – results in pivotal voters having higher than actual middle incomes. There is some evidence<sup>150</sup> that this leads to the voting electorate being less likely to vote in favour of redistribution than the population at large. This can become a vicious circle, with lower-income individuals withdrawing from the voting booths because political parties are doing little to represent them, while these political parties instead focus on policies that benefit the profile of the voting electorate. This tendency may contribute to a trend towards entrenched levels of inequality and poverty, potentially reinforced if voters seeing themselves as losers from this are attracted to populist parties and candidates, whose policies are not actually designed to reduce poverty.

Second, the design of the electoral system appears to play an important role in determining which motive dominates, with empirical evidence supporting the theory that centre-right governments tend to dominate in majoritarian systems, while centre-left governments tend to dominate in proportional representation systems, which tend to redistribute more than centre-right governments. Torben Iversen and David Soskice suggest that the ‘middle class’ has an incentive to ally with low-income individuals and to exploit the wealthy, but also an incentive to support the wealthy and avoid being exploited themselves. They find that from a study of electoral systems and redistribution that,

“In a majoritarian two-party system, the latter motive dominates because the middle-class cannot be sure that the poor will not set policies in a center-left leadership party. In a PR [proportional representation] system with three representative parties ... the first motive dominates because the middle-class party can make sure that a coalition with the left party will not deviate from pursuing their common interest in taxing and redistributing from the rich. The center-right governments therefore tend to dominate in majoritarian systems, whereas the center-left governments tend to dominate in PR systems.”<sup>151</sup>

A third factor that may interfere with an expected political reaction against growing inequality is the sheer political dominance of an elite who combine financial

148 See in particular Melzer and Richard (1981).

149 McKnight and Tsang (2014).

150 Toth, Horn and Medgyesi (2014).

151 Iversen and Soskice (2006), p. 178.

resources with political influence. What Jacob Hacker and Paul Pierson label ‘winner-takes-all politics’, boosts the influence of their organised interests in the process of policy making, leading to (for the US case, at least), major policy shifts that have bolstered the economic standing of those at the top.<sup>152</sup>

Mechanisms that underlie this include contributions to political campaigns (assumed then to give donors later influence). For instance, in the USA, the share of campaign contributions coming from the top 0.01 per cent (the top ten-thousandth) more than doubled from less than 20 per cent in the 1980s to 40 per cent by 2012.<sup>153</sup> This happened just as their share in total income soared. More indirectly, those with resources can influence opinion through buying media outlets and providing financial backing for lobbyists and ideology-driven think tank research.<sup>154</sup>

A broader feature may be the social background of those in the elite professions that dominate policy-making and implementation. A recent Sutton Trust report shows that while 7 per cent of the UK population went to private schools, more than half of judges and barristers, half of journalists, half the Cabinet and nearly half of the top 150 senior civil servants did so.<sup>155</sup> Similar proportions attended either Oxford or Cambridge Universities, but less the 1 per cent of the whole population.<sup>156</sup> At the least, this implies lack of exposure to the problems faced by those at the wrong end of inequality and poverty. At the most, it may have driven the assumptions that have led to recent austerity policies stressing cuts in public spending (which have their greatest proportionate impact on the poor) rather than tax increases (which reduce everyone’s incomes roughly in proportion).<sup>157</sup>

Note that the suggested mechanisms may have very long-term effects, but over widely varying periods. They may have more purchase in explaining how high *levels* of inequality and poverty can become entrenched, than in predicting a quick short term-link between *changes* in them. This would be consistent with the picture shown in earlier sections. However, the suggestion that the rising income share of the very top, and so growing political influence, may drive increasing lack of concern for poverty, and then just a few years later to rising poverty is not consistent with wider international evidence that there have been periods when top income shares have been rising, but poverty falling. The UK between the 1990s and 2007 is a case in point (Figure 4.7).

152 Hacker and Pierson (2010), pp. 152-3. Hopkin and Shaw (2015, pp1-2) come to similar conclusions for the United Kingdom, though using a different rationale. They argue that the “Thatcherite reforms of the 1980s entrenched the structural power of wealthy groups while weakening organized labour, ensuring that an ever-growing share of economic resources flowed to the top”.

153 Bonica, et al. (2013), figure 5.

154 Christiano (2012).

155 Kirby (2016).

156 Kirby (2016), p.4.

157 Hills (2017), figure 8.1.

Such links will also depend on the extent to which democratic systems are effective in insulating themselves from the influence of the economic elite: this may work better in the UK than in the US, for example.<sup>158</sup>

They will depend, for instance, on who ‘sets the rules of the game’, in setting the legal structures within which labour and other markets operate, for instance through minimum wages, and whose interests are represented on such institutions, which vary between countries, as well as people’s ability to exercise what legal rights are granted (which will be constrained by inequalities in access to the law, if these depend on ability to pay).

### **(g) Crime, punishment and criminal justice<sup>159</sup>**

Evidence suggests that the mechanism through which crime, punishment and the legal system link inequality to poverty is multifaceted. The literature points to the impact of economic inequality on criminal behaviour through affecting incentives to commit crime (affecting rates of activity for crimes with a direct financial gain) and inequalities in power and influence over others driven by differences in income and wealth (affecting crimes related to intimidation, violence, extortion, slavery, etc.). There appears to be a positive association between economic inequality and preferences for punitive policies, increases in incarceration rates, sentencing inequalities and inequalities in access to justice. Higher incarceration rates also appear to be linked to the design of social policies and the effectiveness of the welfare state. A cycle is generated with further links to poverty derived through longer term poorer economic prospects for those drawn into criminal activity, high rates of recidivism, intergenerational effects, and the impact of crime on victims and society.

Historically, much of the literature on the determinants of crime focused on highlighting characteristics of the criminal and their cultural and social surroundings, such as biological factors, family background, cultural factors and their disenfranchisement with society. A growing literature on the economics of crime has shifted this focus to examining behavioural incentives, demonstrating how individuals’ economic circumstances influence their incentives to commit certain types of crime. Becker (1968) outlined the modern economic model of behavioural determinants of crime through the use of a cost-benefit model. The model predicts that when economic inequality is high and economic opportunities, including social mobility, are low, economically disadvantaged individuals have an increased incentive to commit certain types of crime (those associated with an economic gain: robbery, burglary, theft, etc.), with crime acting as a form of redistribution between the ‘haves’ and the ‘have-nots’.

<sup>158</sup> Burchardt and Hick (2017) make the case for thinking about inequality across multiple spheres/dimensions for this reason.

<sup>159</sup> See Duque and McKnight (2019a) for a more detailed review.

Research in the UK and the US has found evidence to support this theory<sup>160</sup> However, at the macro-level there is less evidence of a clear relationship between economic inequality and crime rates, as some studies find a positive relationship,<sup>161</sup> but on the whole results are inconclusive.<sup>162</sup> This finding is likely to be influenced by the fact that in many rich and middle-income countries, including the US and the UK, crime rates have followed a downward trend over recent decades while economic inequality has increased. A number of factors seem to be behind this downward trend suggesting that while economic inequality is an important determinant of some types of criminal activity, trends in aggregate levels of crime have been driven by other strong forces.

A clearer relationship is found between trends in economic inequality and incarceration rates.<sup>163</sup> Although crime rates have been falling for some time, the prison population has increased substantially in the US and UK; reflecting a wider upward trend across OECD countries. Economic inequality and insecurity appear to have fed popular anxiety about crime, with politicians using penal and incarceration policies to sway undecided voters.<sup>164</sup> Although it can alternatively be argued that increasing incarceration alongside falling crime rates is proof that 'prison works', research suggests that the magnitude of any resulting reduction in crime rates is small.<sup>165</sup> Other evidence suggests a relationship between welfare spending and incarceration rates, with higher imprisonment rates found in countries which spend relatively low proportions of GDP on welfare.<sup>166</sup>

Trends in aggregate rates of imprisonment only tell part of the story. For a fuller picture, we need to look at the characteristics of those being imprisoned. This helps to reveal how crime and punishment provide potential mechanisms linking poverty with inequality. International evidence shows that there is a tendency for specific minorities to be more likely to have contact with the criminal justice system than majority groups.<sup>167</sup> Sim reaches the conclusion that prisons are filled with "the unemployed, the homeless, the mentally distressed, the institutionally brutalized, the sexually traumatized and the substance dependent" in addition to the racially and economically marginalized Black and Minority Ethnic groups.<sup>168</sup>

A variety of factors helps to explain why some groups are more likely to be incarcerated than others. In 2016 the government commissioned David Lammy MP to conduct an independent review into the treatment of, and outcomes for, Black, Asian and Minority Ethnic (BAME) individuals in the Criminal Justice System (CJS). The review found clear evidence, that BAME groups are overrepresented in the prison population, in part because they are more likely to receive longer prison sentences;

160 Danziger and Wheeler (1975); Machin and Meghir (2004); Wu and Wu, (2012).

161 Ruffinos et al. (2013); Wilkinson and Pickett (2009).

162 McKnight and Tsang, (2013); Nolan et al., (2014).

163 Côté-Lussier (2016); Wilkinson and Pickett (2009).

164 Lacey and Soskice (2013), p.9; Jones and Newburn (2006), p.791.

165 Travis, Western and Redburn (eds) (2014); US Government (2016).

166 Downes and Hansen (2006), p.4.

167 Tonry (1999).

168 Sim (2009).

although BAME make up 14 per cent of the population, they represent 25 per cent of prisoners in England and Wales.<sup>169</sup> Not only are black prisoners overrepresented in the prison population, their share has been increasing: while the prison population grew by 12 per cent between 1999 and 2002, the number of black prisoners increased by 51 per cent.<sup>170</sup> Similarly, the rise in both the count and proportion of Muslim prisoners in England and Wales from 5,502 prisoners (7.7 per cent) in 2002 to 12,225 (14.4 per cent) in 2014, has been “far greater than the Muslim population increase”.<sup>171</sup> Lammy identifies factors in the CJS that affect disparities but also notes that many of the causes of BAME over-representation, and therefore the answers, lie outside the CJS (for example, experience of poverty).<sup>172</sup>

### Summary

In this section we have reviewed a wide range of studies that examine mechanisms that may explain the associations we have seen between poverty and inequality. However, these links are of different kinds and imply potential causal mechanisms that work with greatly varying time lags:

- In the **labour market** research has identified four different factors that have tended to increase *both* poverty and inequality, although varying in the emphasis studies put on each: the effects of technological change; effects of globalisation and increased trade; changes in labour market institutions, such as the position of unions and levels of minimum wages; and discrimination between population groups. Policies addressing their effects are therefore likely to affect both poverty and inequality.
- In terms of **life chances**, relationships between inequality and poverty will be much longer-term. Inequalities between family incomes affect relative life chances (through both income and wealth effects) and can both lead to inequality in the next generation and make it harder to escape poverty. Both inequalities in life chances and limits on prospects for escaping poverty will be driven by inequalities in education provision.
- Higher levels of inequality make it harder to reduce poverty because there are limits to what states can achieve by way of **redistribution**, given that the tax and targeting systems that achieve redistribution are not perfect, with greater side-effects the more they have to be relied upon.

169 Lammy (2017), p.3.

170 Sim (2009), p.104.

171 Shaw (2015).

172 Lammy (2017), p.4.



- **Perceptions and general attitudes** will be affected by current inequalities. It might be expected that greater inequalities would generate political pressure for more action to reduce them, and with them poverty. But the same political currents may be driving choices that both tolerate high levels of inequality and reduce demands for poverty reduction. The polarisation and lack of knowledge of how others live resulting from by current inequality may also reduce such demands.
- A particular case of this may be driven by **geographical polarisation**, reducing knowledge and empathy between residents of different areas, and possibly reducing support for policies that equalise resources between areas within those that have most.
- A series of studies have linked inequalities at the top to the **political influence of elites** of different kinds, with lives that are remote from those affected by poverty. That influence might, over time, constrain policies that achieve poverty reduction. At the same time turnout by those who are at the bottom of more unequal societies may be depressed, reducing the influence of those with most to gain from redistributive policies.
- Unequal societies tend also to have harsher **criminal justice systems** which can make escape from poverty harder, especially if those systems disproportionately affect disadvantaged minorities. Increasing inequality increases the incentives for the least well-off to commit crimes associated with an economic gain, increasing their incidence. Increasing inequality also appears to increase political preferences for more punitive policies with harsher sentencing and rising prison populations. As prison populations have increased, prison conditions have deteriorated and rehabilitation resources cut. As a result, recidivism rates remain high and those drawn into crime are more likely to be stuck in a vicious cycle of crime and poverty.



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