

# Left behind by the G20?

How inequality and environmental degradation threaten to exclude poor people from the benefits of economic growth

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**EMBARGOED UNTIL 00:01 HRS GMT THURSDAY 19 JANUARY 2012**



Around the world, poor families live alongside their livestock in filthy environments, only metres away from glittering signs of wealth and progress.  
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The G20 is committed to supporting equitable and sustainable growth. But new data shows that a lot needs to change if they are to live up to this pledge. The stakes are high: analysis in this paper suggests that without attention to growing inequality, strong growth is unlikely to be enough to prevent poverty increasing in some G20 countries over the next decade. Income inequality is growing in almost all G20 members, while it is falling in many low- and lower middle-income countries. Meanwhile, environmentally unsustainable economic expansion is driving dangerous climate change, and depleting the natural resources upon which poor people depend most for their livelihoods. Without action, inequality will render the benefits of growth inaccessible to the poor, even as they bear the costs of this expansion through the impacts of a changing climate and environmental degradation. It's time for the G20 to practice what it preaches.

## Summary

In 2010, the G20 committed themselves to promoting inclusive and sustainable economic growth. They argued that 'for prosperity to be sustained it must be shared' and also endorsed 'green growth', which promises to decouple economic expansion from environmental degradation. But G20 countries have some way to go to match this commitment. This paper assesses their record, and points the way forward.

The stakes are high: over half the world's poorest people live in G20 countries, and rising inequality threatens to prevent them benefiting from economic growth. Income inequality is growing in almost all G20 countries, even while it is falling in many low- and lower middle-income countries. Meanwhile, G20 countries alone consume almost all the natural resources that the planet is capable of replenishing each year. Unsustainable patterns of usage are driving dangerous climate change and depleting the natural resources upon which poor people depend for their livelihoods.

This means that many of those living in poverty will miss out on the benefits of growth, yet also bear the costs of this economic expansion through the impacts of climate change and environmental degradation. If G20 countries are to secure a prosperous future for all their citizens, they must now practice what they preach and tackle these linked, but distinct, challenges of equality and sustainability.

### Inclusive?

Inequality erodes the social fabric, and severely limits individuals' opportunities to escape poverty. Where income inequality is high or growing, the evidence is clear that economic growth has significantly less impact on poverty: a trickle-down approach does not work.

Moreover, recent research indicates overwhelmingly that inequality is detrimental to economic growth itself. Inequality leads to instability, prevents productive investment and undermines the institutions of government. Protests emerging around the world show the extent to which citizens are concerned about inequality's corrosive power.

And yet, inequality is growing in most G20 countries. Using a new dataset, we show that only four G20 countries – including just one high-income country, Korea – have reduced income inequality since 1990. In this, the G20 is being outdone: a large number of others, including low-income and lower middle-income countries, have reduced income inequality in this period.

Our analysis illustrates just how dangerous this trend is. In South Africa, our model predicts that more than a million additional people will be pushed into poverty between 2010 and 2020 unless rapidly growing inequality is addressed. The rewards flowing from increased equality are similarly dramatic. In Brazil and Mexico, bringing inequality down to the level in Indonesia (close to the G20 median)

could, according to our calculations, reduce the number of people in poverty by 90 per cent in the space of a decade.

This analysis focuses on income inequality, which though important is just one of the many inter-related forms of inequality. In its broadest sense, inequality denies the rights of whole sections of society to be treated with dignity and respect. In many G20 countries, at least half the population are affected: the often subordinate status of women and girls translates into less access to health and education, lower incomes, and poorer life chances than men.

## Sustainable?

Life depends on the planet's natural capital, the natural resources that we use to produce food, water and energy. But the current trajectory of usage is deeply disturbing. No country (in the G20 or outside) has yet demonstrated that it is possible to combine high average incomes with sustainable natural resource use.

However, several middle-income countries have succeeded in reducing the resource-intensity of their economic growth. Between 1991 and 2007, Mexico's gross domestic product (GDP) grew four times faster than its CO<sub>2</sub> emissions. China's grew two and a half times faster.

By contrast, the G20's high-income countries have on the whole performed very poorly. Only four G20 countries have reduced their carbon emissions since the Rio Summit in 1992.

The dangerous climate change and environmental degradation that results hits the poor hardest. The poor not only depend most on natural resources for their livelihoods, but also tend to live in places disproportionately affected by climate change. They can also lack the rights or power to secure access to resources in times of scarcity. Oxfam's recent report *Land and Power* documents detailed cases of land grabs depriving the poor of access in Uganda, Indonesia, Guatemala, Honduras, and South Sudan.<sup>1</sup>

The G20 member countries must therefore act far more decisively to bring their use of natural resources back within sustainable limits. The high-income countries among them must lead in demonstrating that environmentally sustainable economic growth is possible.

# Recommendations

## Towards inclusive growth

The analysis in this paper shows that without attention to rising inequality, strong growth will not be enough to reduce poverty significantly over the next decade.

Policy makers must therefore devote more attention to inequality. There are some indications that this may be about to happen, but most G20 countries are currently moving in the wrong direction. Words need to be matched by comprehensive policy programmes in all G20 countries.

The exact policy mix should be tailored to each national context, but policies in successful developing countries suggest the following starting points:

- redistributive transfers;
- investment in universal access to health and education;
- progressive taxation;
- removal of the barriers to equal rights and opportunities for women;
- reforming land ownership, ensuring the right access to land and other resources, and investing in small-scale food producers.

The experience of Brazil, Korea, and many low-income and lower middle-income countries shows that reducing inequality is within G20 policy makers' power, whatever the level of economic development in their country. There is no shortage of potential policy levers. Instead, there has perhaps been a shortage of political will.

## Towards sustainable growth

Resolving inequality will not on its own be enough to secure a prosperous future for all. Economic activity is currently depleting the Earth's natural assets, including the capacity of the atmosphere to absorb carbon dioxide, with the costs borne disproportionately by poor women and men. The most immediate concern is climate change.

Developed countries must lead by going much faster and further in absolutely decoupling their GDP growth from natural resource use, including carbon emissions. However, all G20 countries must monitor and begin to internalise in economic decisions the resource impact of their production and consumption patterns across a wide range of natural resources. These reforms should be accompanied by policies that protect the most vulnerable communities, workers and consumers from the impact of transition. A start can be made at the Rio+20 Sustainable Development Conference in June 2012.

The exact policy mix should be tailored to each national context, but may include:

- Investment in public goods, such as research and development in clean energy;
- Tax breaks, subsidies and other incentives to guide private investment to where it is needed;
- Taxing undesirables, such as greenhouse gas emissions, to direct economic activity towards more sustainable alternatives;
- Regulation to stop companies polluting or to encourage them to provide goods and services they otherwise would not.

In addition, G20 countries must show much greater leadership at the UN Framework Convention on Climate Change (UNFCCC). In particular, they should:

- ensure that developed countries commit, as a first step, to the high end of their current 2020 mitigation pledges, and give assurances that long-term mitigation financing will be mobilized to help developing countries implement their most ambitious pledges;
- forge consensus on the fair shares of the global emissions cuts needed to prevent more than 1.5°C of global warming;
- broker agreement on new and reliable long-term sources of climate finance, particularly a fair carbon charge for international shipping, with a compensation mechanism for developing countries, and financial transactions taxes in developed countries.

The G20 has an opportunity to establish itself as a group of countries that leads by example. They have committed themselves to pursuing inclusive and sustainable economic growth, and living up to this pledge is where they should start.

# 1

## Introduction

Average global income per person has doubled over the last forty years.<sup>2</sup> The proportion of the world's population living in poverty has fallen significantly over the same period, but the absolute number remains high: 1.3 billion people still live on less than \$1.25 a day. More than half of these women and men are in G20 countries.<sup>3</sup>

At the same time, the global economy is now using the planet's renewable natural resources between 20 and 50 per cent faster than they can be replenished, with the G20 alone using 95 per cent of the planet's available biocapacity each year.<sup>4</sup>

In this report, Oxfam presents new analysis demonstrating the scale of the equity and sustainability challenges facing the globe. A prosperous future for all is possible, but most G20 countries are not currently taking the route towards it.

A weight of evidence demonstrates that if policy makers focus exclusively on economic growth and ignore inequality, the benefits of economic expansion are inaccessible to the poor.<sup>5</sup> Meanwhile, the accompanying resource use often forces the poor deeper into poverty as a result of environmental stress and climate change.

Having positioned itself as the pre-eminent global forum, the G20 must lead by example. In 2010, G20 countries raised hopes that they would do exactly this. They unveiled the Seoul Development Consensus for Shared Growth, arguing that 'for prosperity to be sustained it must be shared'. Similarly, they made a welcome commitment to 'green growth',<sup>6</sup> which promises to decouple economic expansion from environmental degradation.

This paper points the way ahead, and shows just how far the G20 has to go. We reveal a few high flyers, but mostly poor performers on inequality reduction and sustainability, by examining G20 countries' performance over recent years. We contrast the G20's performance with non-G20 countries and, through case studies, demonstrate how many more people could escape poverty if the G20 actively pursued shared growth. First, we unpack the evidence demonstrating the importance of improving equality and sustainability.



## 2

# Inequality and society

The struggle for greater equality is at the heart of modern politics. As the UN Economic Commission for Latin America and the Caribbean (ECLAC) puts it:

*'For the past three centuries, equality has meant two things that, while complementary, are in a state of permanent tension. The first is the abolition of privilege and the firm establishment of equal rights for all individuals, irrespective of their origins and of their gender, nationality, age, territory and ethnicity... The second dimension is the distribution of resources in society in such a way as to allow all its members to exercise their rights effectively.'*<sup>7</sup>

Inequality remains prevalent around the world at both the micro-level – such as in violence against women – and the macro-level, which manifests itself in the mistreatment of minorities (or majorities in some cases), corruption, land grabs, and grotesque disparities in life chances between and within countries. A child born in Japan today can expect to live 37 years longer than a child born in Zimbabwe, for example.<sup>8</sup> In England, people living in the poorest neighbourhoods will, on average, die seven years earlier than people living in the richest neighbourhoods.<sup>9</sup>

Evidence has clearly linked inequality to the erosion of the social fabric, including increased crime, lack of trust, and poor mental health.<sup>10</sup> Statistical analysis suggests that a country's murder rate is strongly correlated with its level of income inequality.<sup>11</sup> In Latin America, the United Nations Development Programme (UNDP) has linked inequality with undesirable aspects of the political system, including: 'the poor regulatory capacity of the state, which allows for the presence of monopolies or oligopolies, murky rules of the game and a poor response to citizens' needs.'<sup>12</sup>

This section does not attempt to give a comprehensive account of every aspect of inequality, nor does it focus on the gross disparities that exist globally (for example, the richest 10 per cent control approximately half of the world's income).<sup>13</sup> Instead, it focuses on income inequality within countries and sets out three economic arguments for policies that favour equity:

1. The poverty-reducing effects of growth are limited by inequality.
2. Reducing inequality offers a double dividend: reducing poverty directly and making future growth more pro-poor.
3. Inequality is a barrier to growth.

*'We estimate that with the same growth rate and no rise in inequality in rural areas, the number of poor in China would have fallen to less than one-quarter of the actual value.'*

Martin Ravallion<sup>14</sup>

## The poverty-reducing effects of growth are limited

Economic growth can play a significant role in sustained development over the long term. This is most clearly the case for the poorest countries. For example, in Niger, average per capita income is \$1 per day and 93 per cent of the population is estimated by the UN to live in 'multidimensional poverty'.<sup>15</sup> Redistribution even to the point of absolute equality would rescue many people from the deepest poverty, but still leave everyone poor.

However, the impact of aggregate or average income growth on poverty, particularly in the short and medium term, varies hugely from country to country. In some cases, growth is accompanied by a substantial reduction in the numbers and proportion of people living in poverty. Brazil's growth, for example, averaged 2.5 per cent a year from 1990 to 2009 and was accompanied by falling inequality (although it still remains extremely high). Over this period, the proportion of Brazilians living in poverty was cut in half.<sup>16</sup>

But in other cases, significant growth has occurred without any fall in the poverty rate. In Peru in the decade from 1997, the proportion of the population living in poverty grew even as the country averaged impressive growth rates of 3.9 per cent a year.<sup>17</sup>

Based on a large sample of countries, former Chief Economist of the World Bank Francois Bourguignon found that variation in growth rates on their own explained only 26 per cent of the variation between countries in rates of poverty reduction.<sup>18</sup>

## Reducing inequality offers a double dividend of poverty reduction

Inequality is the missing link – the key to explaining how the same rate of growth can lead to different rates of poverty reduction. By failing to take into account initial levels of inequality, and how they change, we can grossly misjudge the impact of growth upon poverty reduction.<sup>19</sup> We need to look at how much incomes rise on average *and* how the increase is distributed amongst the population.

There are many factors, including gender, region, or other inequalities of power, that can influence this distribution. Even in the world's richest countries, for example, women's wages and terms of employment are behind men's.<sup>20</sup> The inevitable effect of greater inequality of income is that growth has a lesser impact on poverty. Ravallion concludes that 'growth will be quite a blunt instrument against poverty unless that growth comes with falling inequality.'<sup>21</sup>

Empirical studies of recent evidence from developing countries demonstrate the benefits of equality to poverty reduction very clearly. Analysis for the World Bank<sup>22</sup> found that, in countries with very low income inequality,<sup>23</sup> every one per cent of economic growth reduced poverty by four per cent. In contrast, growth in countries with high inequality had essentially no impact on poverty.<sup>24</sup> Even having medium



levels of income inequality can make a huge difference.<sup>25</sup> They conclude that ‘the power of growth to reduce poverty depends on inequality.’<sup>26</sup>

Reducing income inequality is also a means of reducing poverty in the absence of growth. The scope for poverty reduction through redistribution is greatest in middle-income countries, where most of the world’s poor people now live. Average income is considerably higher than in the poorest countries, but is very unequally distributed.

*‘Distribution matters for poverty reduction.’*

Francois Bourguignon <sup>27</sup>

As Bourguignon points out, poverty reduction in Indonesia in the late 1990s was achieved entirely through redistribution, compensating for the impact of negative growth.<sup>28</sup> Bourguignon describes the ability of inequality-lowering policies to both reduce poverty immediately and accelerate the poverty-reducing impact of growth in the future as the ‘double dividend’ of redistribution.<sup>29</sup>

A focus on inequality is therefore crucial if policy makers want to maximize poverty reduction.

## **Inequality is a barrier to growth**

For a long time the orthodox view was that economic growth was accompanied inevitably in the early stages by increased inequality, leading eventually to greater equality. This phenomenon is known as the ‘Kuznets curve’, named after economist Simon Kuznets. This would imply that it is unnecessary and ineffective for developing economies to worry about growing inequality.

But a mass of more recent evidence has overwhelmingly refuted this characterization.<sup>30</sup>

Moreover, detailed investigation of data from both developed and developing countries from the mid-1990s onwards offers significant evidence that a high level of inequality is a barrier to future economic growth.<sup>31</sup> Indeed, the Asian Development Bank (ADB) suggests that growth and equality can *‘be seen as part of a virtuous circle.’*<sup>32</sup>

This contradicts the old argument, which asserted that inequality enhances growth, because the concentration of income provides excess wealth for investment.<sup>33</sup>

Analyses focus to different extents on inequality preventing productive investment, limiting the productive and consumptive capacity of the economy, and undermining institutions. The arguments are discussed at length in a recent Oxfam research report and are summarized here.<sup>34</sup>

Firstly, it is argued that inequality prevents individuals making productive investments or realizing their productive potential. For example, where inequality disrupts credit markets to the extent that only the wealthy elite has the capital required to access credit, many potentially productive investments by those less wealthy are foregone.<sup>35</sup> A lack of women’s land rights either in legislation or practice is a common barrier to accessing credit.

Similarly, serious inequalities of income or power can deny access to education and healthcare for large numbers of people. Besides being a violation of the rights to education and health, this means that only a minority of the population is able to develop its full capacity.<sup>36</sup> In many societies, this applies to at least half the population, where the subordinate status of women and girls translates into less access to education, health services, political spaces, land, credit, and power.

*'Societies that discriminate by gender tend to experience less rapid economic growth... than societies that treat males and females equally.'*

Andrew Mason and Elizabeth King, World Bank<sup>37</sup>

There is also a weight of evidence to suggest that inequality contributes to weak social cohesion, poor institutions, and bad governance, and that this, in turn, is a serious drag on economic growth. The ADB argue that the 'persistence of inequality could trigger social and political tensions, and lead to conflict as is currently happening in parts of Asia.'<sup>38</sup>

Furthermore, it has been influentially argued that greater equality of land ownership contributes to a more even distribution of power and thus more development-friendly institutions, including universal education. This (among other issues) could help to explain the much stronger growth in the USA as compared to Latin America over the last two centuries.<sup>39</sup>

A similar argument has been argued to apply within Latin America more recently, in explaining the greater growth in Costa Rica as compared to Guatemala, with inequalities of wealth reinforcing the concentration of power, and preventing the emergence of legitimate and growth-promoting institutions.<sup>40</sup> The way in which inequality limits the ability of individuals to participate in both government and development is central to the lack of growth.

Other studies by economists such as Dani Rodrik explore this further, pointing to the importance of good institutions for growth and the harmful impact of inequality on institutions.<sup>41</sup>

*'High inequality is a feature of under-development.'*

Francisco Ferreira and Martin Ravallion, World Bank<sup>42</sup>

The IMF has recently added to this body of evidence, with research on the contribution of inequality to causing the financial crisis,<sup>43</sup> and the role of greater equality in extending national growth spells.<sup>44</sup>

If we factor in the impact on growth, the double dividend of tackling inequality becomes a triple dividend: it directly reduces poverty, enhances the ability of future growth to reduce poverty, and finally, it improves prospects for growth itself. All this argues that high levels of inequality should be a much greater cause for concern amongst policy makers than they are at present.

# 3

## Sustainability and equity

The growth of the global economy over the last two hundred years is unprecedented. Looking forward, it is projected to quadruple in size by 2050, according to the Organisation for Economic Co-operation and Development (OECD), rising from \$70 trillion today to \$300 trillion.<sup>45</sup> However, in generating global economic growth to date, humanity has been using nature's resources in a deeply unsustainable way.

Environmental sustainability has many dimensions, including the rate of use of renewable resources, non-renewable resources, and the planet's capacity to absorb waste. Many of these dimensions and their interdependencies are still not fully understood, making it difficult to produce indicators that reflect all the relevant dimensions. One composite indicator which aims to measure humanity's use of renewable resources is the ecological footprint.

### **Box 1: What is an ecological footprint?**

The ecological footprint aims to track humanity's demands on nature, in terms of the land and sea area required to meet people's demand for food, fibre, timber, energy, and settlements, and to absorb the carbon dioxide emitted. That demand is then compared with the planet's biocapacity – its ability to regenerate those resources year-on-year, based on available cropland, grazing land, forests, fishing grounds, and the land area that would be required to sequester carbon dioxide emissions. Both a nation's ecological footprint and its biocapacity are expressed in terms of global hectares (gha) – a common unit based on all the biologically productive land and sea area in the world in a given year.

The ecological footprint is not a perfect measure of renewable resource use: it does not include measures of freshwater use or biodiversity and, like any indicator relying on internationally comparable UN data, the quality of data varies from country to country. The footprint's calculation is currently evolving as better data and improved methods for comparing the productivity of different land types become available, but the underlying trends that it documents remain alarmingly clear. As a result, it is used for analysis by many governments, cities, companies, scientists, and international organizations.

Source: Oxfam based on Global Footprint Network, October 2011, [www.footprintnetwork.org](http://www.footprintnetwork.org)

Humanity's global ecological footprint has doubled since 1961, and today we are using nature's renewable resources between 20 and 50 per cent faster than the planet can renew them.<sup>46</sup>

We are significantly depleting the planet's natural capital. Through over-fishing, over-grazing, over-harvesting trees, and depleting soils, we are running down the planet's long-term ability to produce resources for human use such as crops, meat, fish, and timber.

Likewise, we are undermining its ability to absorb waste, such as storing carbon dioxide, and its ability to provide life-supporting services such as biodiversity, freshwater renewal, and a safe climate.

## Environmental degradation exacerbates social inequalities

Natural resources are the fundamental wealth on which life depends. The current trajectory of environmental degradation is a threat to all human prosperity, but the impact of degradation falls hardest on poor countries and people, in three ways:

- *Poor people depend most on natural resources for their livelihoods.* According to the Food and Agriculture Organization of the United Nations (FAO), three-quarters of people facing hunger in the world live in rural areas, mainly in Africa and Asia. They depend on farming, fishing, herding, and forests for their livelihoods, often surviving on marginal lands that are most prone to flooding and drought.<sup>47</sup> Women food producers, in particular, tend to depend on marginal land and rain-fed agriculture, and so are among the most affected by environmental degradation such as water stress and declining soil fertility.<sup>48</sup>
- *The impacts of climate change fall disproportionately on poor countries,* because of their geography combined with their level of economic development. Even with a temperature rise of 1-2.5°C, the Intergovernmental Panel on Climate Change (IPCC) predicts serious effects in many developing countries. This includes reduced crop yields in tropical areas, leading to increased risk of hunger, and the spread of climate-sensitive diseases such as malaria.

Current greenhouse gas emissions and targets put the world on track for a 4°C increase in average global temperatures. This could devastate agriculture in many of the world's poorest regions, destroy clean water sources for up to three billion people in developing countries, and cause one billion people to lose their homes by 2100.<sup>49</sup>

- *Resource degradation exacerbates social conflict over resource use.* Poor rural communities often lack secure right of access to and use of the arable land, water, forests, and fishing grounds that they rely upon for their livelihoods. In the face of rising pressure on global environmental resources, such as growing water stress, deforestation, and declining soil fertility, low-income communities often lose control over and access to those resources, as local elites or international investors secure their own supply and access. Oxfam's recent report '*Land and Power*' documents detailed cases of such land grabs in Uganda, Indonesia, Guatemala, Honduras, and South Sudan.<sup>50</sup>

Bringing humanity's use of natural resources back within ecologically sustainable limits is essential. But inequalities in power and resources mean that poor people and poor countries are also vulnerable to the impact of making that transition to sustainability. International and national policies designed to protect their rights and interests are vital. Tackling underlying inequalities within and between countries becomes all the more important as a result.

# 4

## The inequality report card

Historically, little effort has been devoted to developing accurate or comparable measures of inequality (across time and countries). This is symptomatic of a deeper problem. Inequality does not receive the level of attention from policy makers (particularly outside Latin America) that the evidence of its significance demands.

Inequality is not discussed or highlighted by the IMF in its annual Article IV reports on each member country, or in its Extended Credit Facility loans, which target poverty reduction and growth.

However, a recently developed database (the Solt database of Standardized World Income Inequality<sup>51</sup>) provides a comparative measure for one type of inequality: income. It contains standardized gini coefficients: a measure of how far the income distribution is from perfect equality.

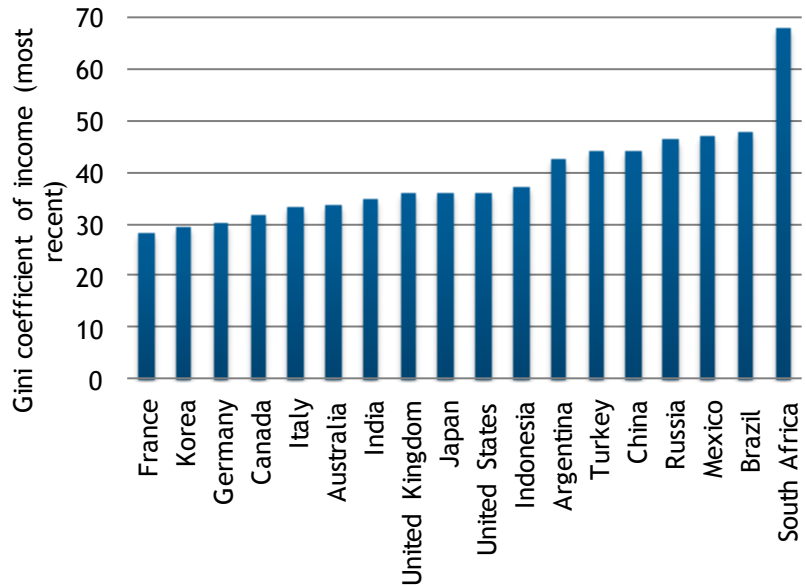
This allows us to construct an income inequality report card for the G20 countries (and other countries) where we examine how unequal they are now, and whether they are moving in the right direction. This exercise revealed a few high performers, but a worrying overall trend for G20 countries.

### The G20 inequality report card

This paper compares inequality in net household income within a country, as measured by the gini coefficient, for all the G20 countries except Saudi Arabia (for which data is not available). As a comparison, it also examines the income share of the poorest 10 per cent of the population in a subset of countries.

According to the latest data shown in Figure 1, France has the lowest inequality, closely followed by South Korea, a country that has rapidly developed without seeing a major increase in inequality. South Africa is the most unequal by a considerable distance.

**Figure 1: Gini coefficient of income in G20 countries, 2005–2009**



Source: Figure compiled by Oxfam using data sourced from F. Solt (2010) 'The Standardized World Income Inequality Database', <http://hdl.handle.net/1902.1/11992> (Version 3.0)

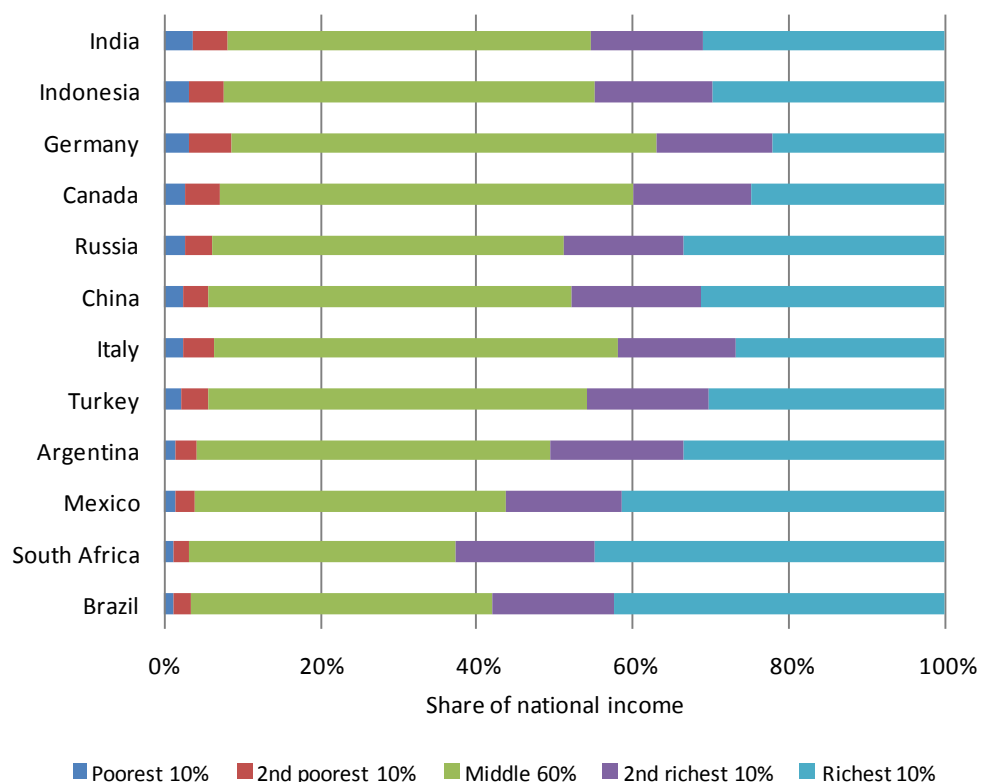
Figure 2 shows in more detail how income is shared. Comparable data on the distribution of income is available for only two thirds of the G20 countries. It is unavailable for Australia, France, South Korea, Japan, Saudi Arabia, UK, and the USA.

We find that the income share of the poorest 10 per cent of the population is often very low, sometimes as low as one per cent. Meanwhile, the richest 10 per cent enjoy a huge share, sometimes exceeding 40 per cent of all income.

In terms of the income share of the poorest 10 per cent of the population, India is the strongest and Brazil is the weakest. South Africa has the biggest concentration of wealth at the top end of the income scale.



**Figure 2: Income share in G20 countries, 2000–2009**



Source: Figure compiled by Oxfam using data sourced from World Bank World Development Indicators, <http://data.worldbank.org>

In general, the most unequal countries are emerging market economies: South Africa, Brazil, Mexico, Russia, Argentina, China, and Turkey. The most equal tend to be developed economies with a higher than average income, including France, Germany, Canada, Italy, and Australia.

However, the picture is very different when we consider which countries are reducing inequality and where it is increasing. This shows that the wealthiest countries have much more to worry about.

According to our dataset, the only four countries in the G20 to have improved equality since 1990 are emerging market economies: Brazil, Korea, Mexico, and Argentina. Brazil and Korea succeeded in reducing inequality both during the 1990s and over the last decade as they grew.

Mexico and Argentina, having become more unequal during the 1990s, reversed this with greater improvements towards equality since 2000 (again, while growing).<sup>52</sup>

## **Box 2: Reducing inequality in Brazil and Argentina**

Brazil and Argentina are two of the few recent success stories on income inequality in the G20. So what happened?

Economist Giovanni Andrea Cornia suggests two root causes of reduced inequality across Latin America over the last decade: government policy and benign economic conditions, illustrated by rising migrant remittances (which represent more than 2.3 per cent of regional GDP, and 2.8 per cent for Mexico).<sup>53</sup>

Government policies sought to increase the tax to GDP ratio, allowing countries to balance their budgets, as well as pursue increased government spending. Focusing on government policy in Brazil, Hailu, and Soares suggest that two areas stand out: improvements in education in the mid-nineties, namely universal admission to primary schooling and lower repetition rates, and cash transfers from the state.<sup>54</sup>

The UN's Economic Commission for Latin America and the Caribbean (ECLAC) affirms the importance of cash transfer programmes across the region.<sup>55</sup> UNDP agrees that they serve two major purposes: *'first, to transfer income flows to households in poverty, and, second, to promote investment by households in the human capital of the youngest generation in order to increase their capacity to generate income in the future and break the cycle of the intergenerational transmission of poverty.'*<sup>56</sup>

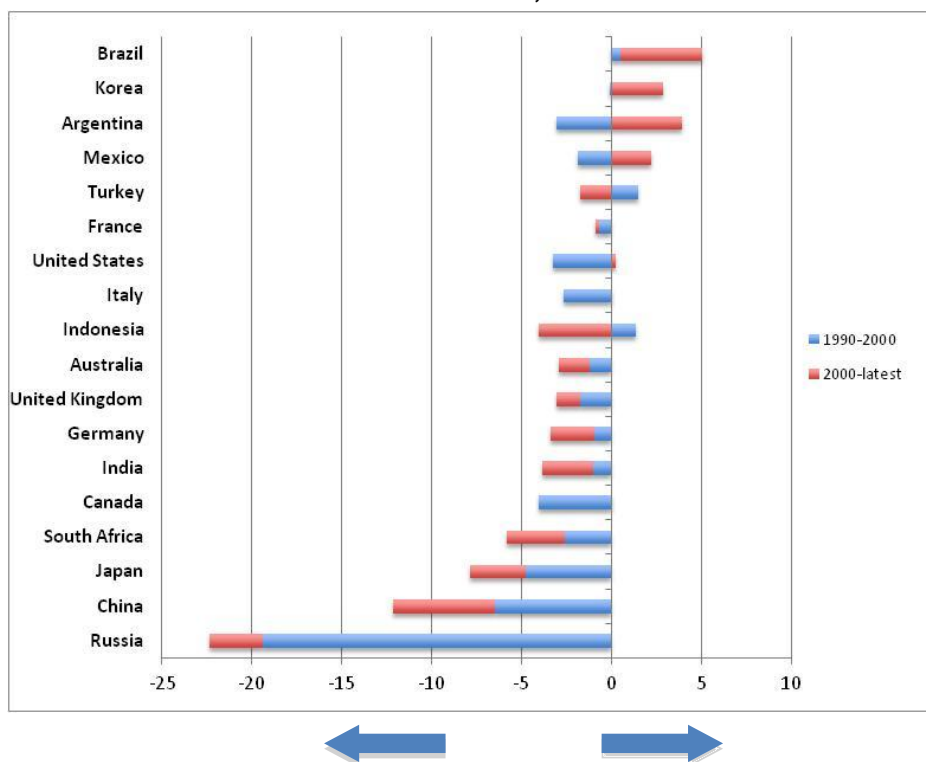
Rising employment and wages also played a key role. Cornia highlights that employment has increased more under left-of-centre governments in the region.<sup>57</sup> Cornia cites further evidence showing that minimum wages raised incomes at the bottom of the distribution, and pulled up wages in the informal as well as formal sector.

Source: Stuart, E. (2011) 'Making Growth Inclusive', Oxford: Oxfam. (Other sources as cited.)

As Figure 3 shows, however, these four countries are the exception. Across the G20 countries as a whole, and in every high-income country except Korea, the average level of inequality rose from 1990 to the mid-2000s (in each country, the latest year for which comparable data is available).

Some countries have even seen accelerating increases in inequality since the millennium: Turkey, Germany, Indonesia, Australia, India, and South Africa. These inequalities are often linked to extreme inequalities in wages: a May 2011 report by the UK's High Pay Commission indicated that on current trends, top executives would be paid 214 times the average wage by 2020.<sup>58</sup>

**Figure 3: Comparison of percentage point change in gini coefficient of income in G20 countries over two decades, 1990-2010**



Source: Figure compiled by Oxfam using data sourced from F. Solt (2010) 'The Standardized World Income Inequality Database', <http://hdl.handle.net/1902.1/11992> (Version 3.0)

These statistics tell us only about income inequality. Inequalities of wealth – which are very significant in explaining how inequality hinders growth, as described in the first section – can be even more extreme. There is evidence that these, too, are growing. For example, recent research by New York University economist Edward Wolff found that the wealth share of the richest one per cent of the US population actually grew during the economic crisis from 2007 to 2009.<sup>59</sup>

Even where income inequality has been reduced, in Brazil, Argentina, and Mexico (leaving out Korea because the data is not available), almost all the improvement is occurring in the middle of the distribution. The middle class have gained income share at the expense of the richest 10 per cent. A sustainable attack on poverty and inequality will require a focus on the poorest people.

Overall, the G20 data tells a story of increasing inequality. Evidence on the impact of inequality – and protests now happening around the world – indicate strongly that G20 policy makers need to take note. Experience in Brazil, Argentina, Mexico and Korea demonstrates that progress towards equality is possible. The evidence also suggests that a high level of inequality is not an inevitable corollary of a particular rate of growth or level of development. This is put beyond doubt if we consider how inequality has changed in other countries.

### Box 3: The importance of inequality beyond incomes

This section focuses on two measures of income inequality, because this is where the most comparable data exist. But this only tells part of the story. Inequalities in power and wealth, and differences between genders are all crucial for development outcomes.

The 'missing women' phenomenon demonstrates just how devastating these forms of inequality can be. Analysis of population trends shows that the number of girls and women in Asia is tens of millions lower than it should be. This is because of sex-selective abortion and post-birth neglect of young girls.<sup>60</sup>

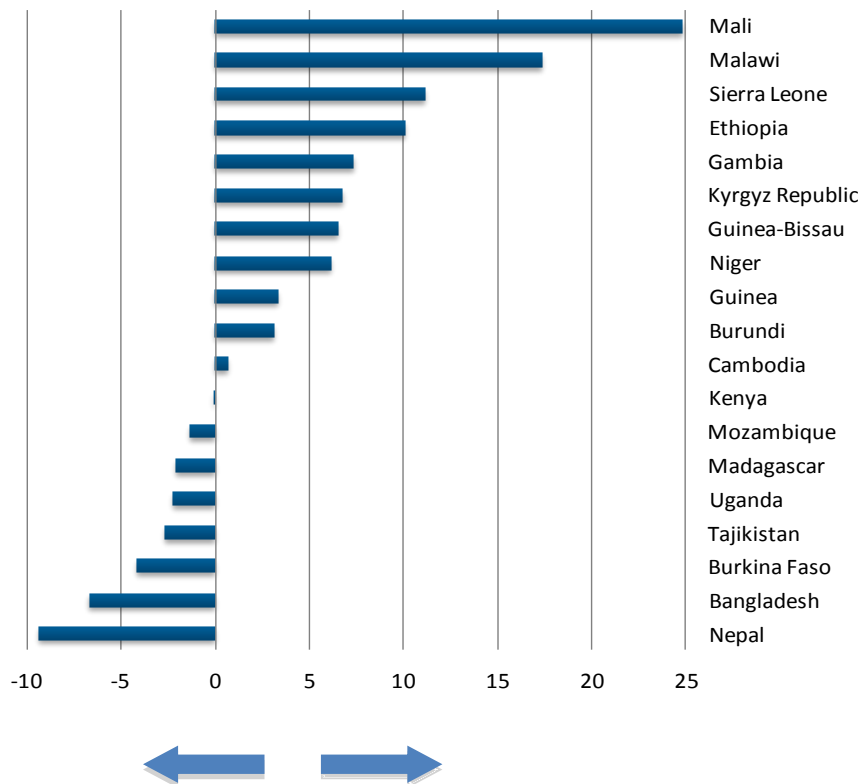
Regardless of income poverty levels, no country can claim to be truly developed unless it has addressed such foundational forms of inequality as this.

### How does the G20 compare with low-income and low middle-income countries?

Using the new Solt database, we have found that the level of income inequality is falling in most low-income countries where data over time is available.<sup>61</sup> Their levels of inequality are converging towards those in G20 countries.

A number of countries, particularly in very poor African countries such as Mali, Malawi, Sierra Leone, and Ethiopia, have made substantial improvements in their levels of income equality, as shown in Figure 4.

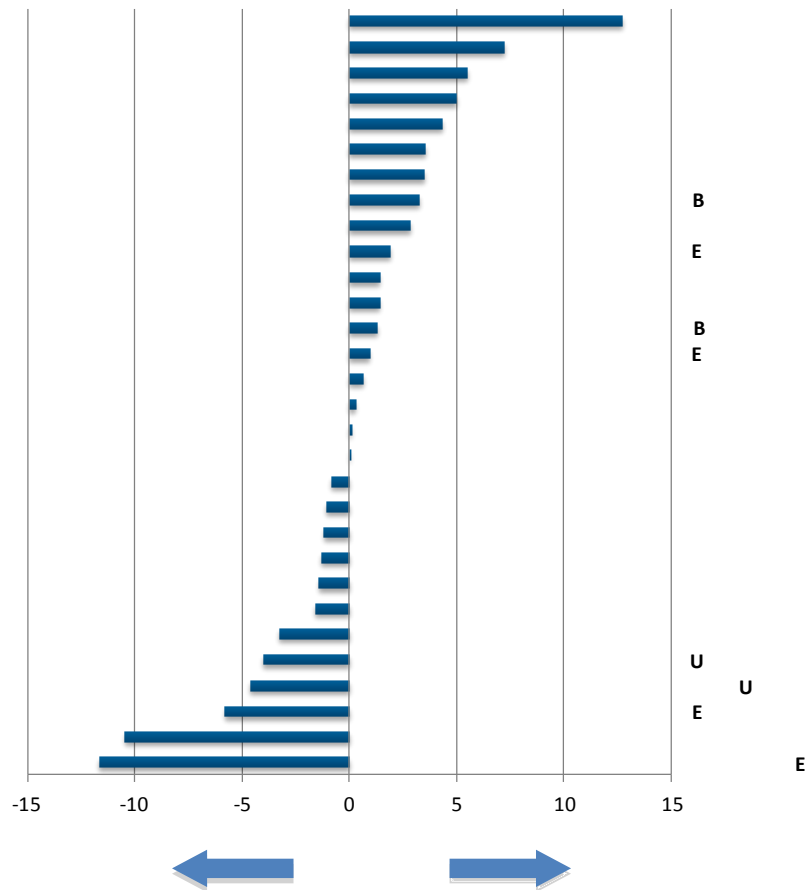
Figure 4: Changes in inequality in low-income countries, 1990-mid 2000s (2004, 2005 or 2006, depending on availability)



Source: Chart compiled by Oxfam using data sourced from: F. Solt (2010) 'The Standardized World Income Inequality Database', <http://hdl.handle.net/1902.1/11992> Version 3.0

Several lower middle-income countries have also made huge strides in reducing inequality (Figure 5).<sup>62</sup> More than half the countries in our sample reduced inequality between the mid-nineties and 2005, although often from a high starting point.

**Figure 5: Changes in inequality in lower middle-income countries, 1990-mid 2000s (2004, 2005 or 2006, depending on availability)**



Source: Chart compiled by Oxfam using data sourced from: Frederick Solt, 2010, "The Standardized World Income Inequality"

This further demonstrates that growing inequality is not an inevitable by-product of a particular stage of development. Falling inequality, and thus greater reductions in poverty, is possible at any stage of economic development.

Tackling inequality is as much a matter of political decision as of economics. Of the two fastest-growing countries in the sample, Armenia grew while becoming more equal; Turkmenistan grew while becoming considerably less equal.

These findings throw the performance of the G20 countries into sharp relief. If they want to promote a development strategy based on shared growth, they need to lead by example. In reality they often perform worse than non-G20 countries.

# 5

## The sustainability report card

The urgency of bringing global economic activity back within sustainable environmental limits has been recognized for decades. In 1992, the world's nations met in Rio de Janeiro and committed to sweeping changes in global environmental action. This included stabilizing global greenhouse gas emissions in order to prevent dangerous climate change, and conserving and using the planet's biodiversity sustainably.

Twenty years later, in June 2012, they will meet again in Rio de Janeiro to assess what progress has been made and define the way forward: they must make concrete commitments to a plan of action for the next decade and beyond that will shift economies onto a sustainable, equitable and resilient path.

The G20 economies are likely to play a central role in generating the global economic growth that is projected over the next 40 years. The path they pursue will strongly influence the prospects for human development in the rest of the world.

So what has been the G20's record over the past two decades in terms of combining economic growth with environmental sustainability? What can be learned from their experiences in terms of what is possible, and how much more action is needed?

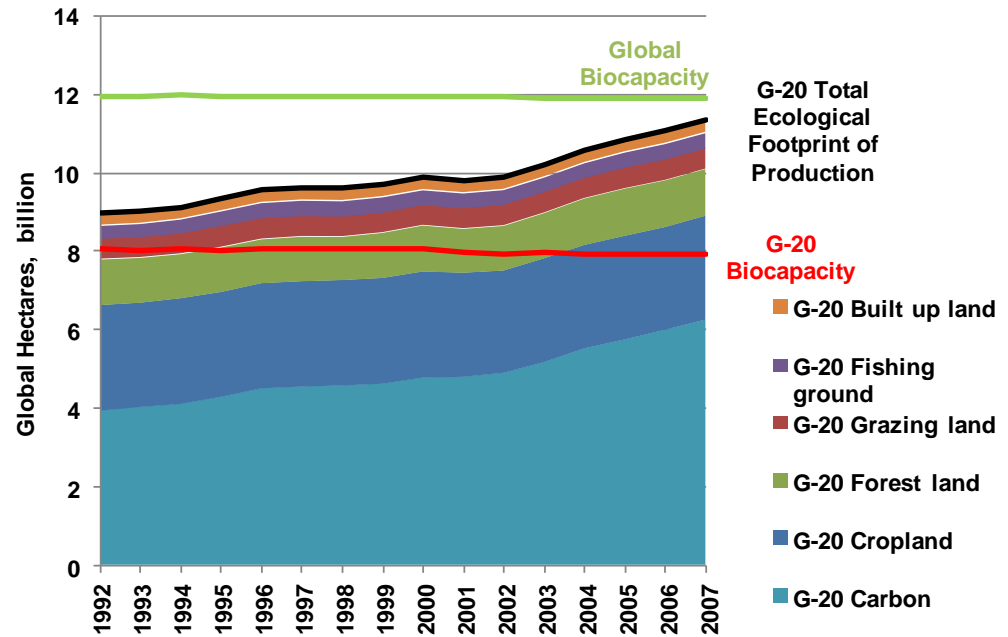
### The G20 sustainability report card

The G20 countries are home to just over 60 per cent of the world's population, and 66 per cent of the planet's biocapacity (around 8 billion global hectares) lies within their territories. Their economies collectively grew by two-thirds from 1991 to 2007,<sup>63</sup> while their combined ecological footprint rose by over a quarter.

By 2007 (the most recent year for which data is available), they were using 95 per cent of the planet's total biocapacity in order to generate their economic output. They were effectively commandeering the vast majority of the planet's sustainable resource base for their economic production (see Figure 6). Analysing the data on the components of the G20's ecological footprint shows that CO<sub>2</sub> emissions are the main driver behind its rapid increase.



**Figure 6: The G20 countries' ecological footprint of production, 1992-2007**



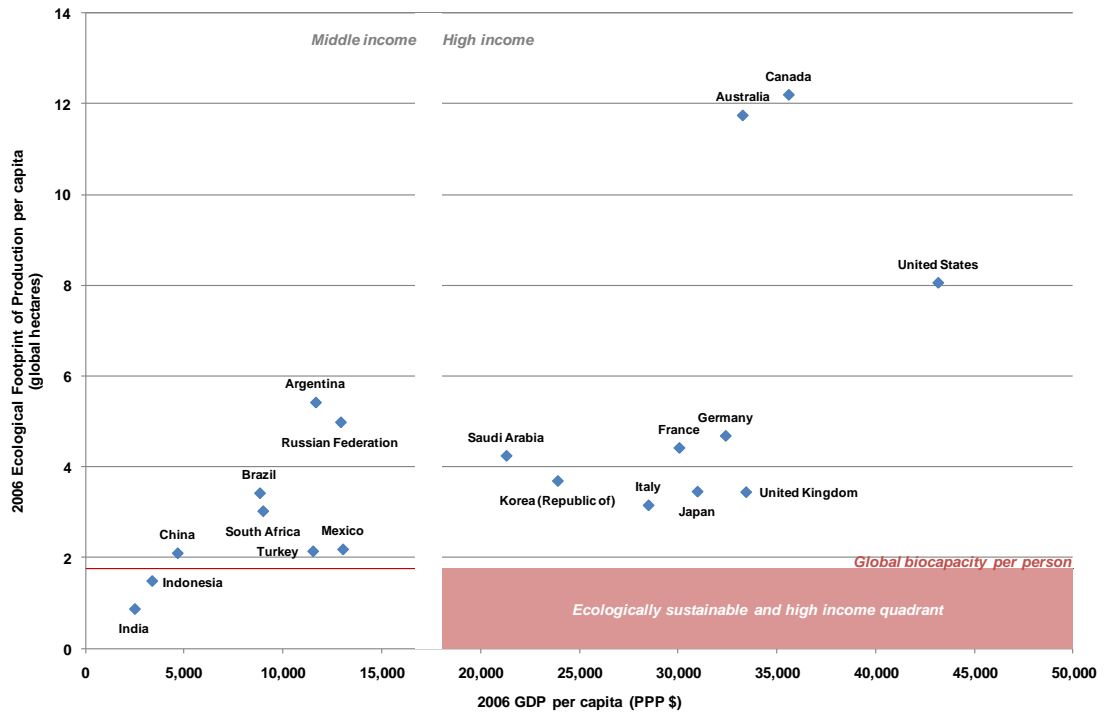
Source: Global Footprint Network database, analysed by Oxfam.

Within the group of G20 countries there are, of course, wide variations in both per capita ecological footprints and average national incomes. Figure 7 shows that countries with similar GDP per capita can have very different ecological footprints associated with how they generate economic output.

Germany and Australia, for example, have very similar GDP per capita (around \$33,000) but Australia's resulting ecological footprint of production is over two and a half times bigger than Germany's.

Likewise, Mexico's GDP per capita is higher than Argentina's, but its ecological footprint from producing that output is less than half of Argentina's. It is not surprising that nations' ecological footprints vary, given their differences in size and natural resource endowments. It is, however, clear that the path to economic growth taken by countries with large ecological footprints cannot be replicated globally.

**Figure 7: The G20 countries' ecological footprint of production versus GDP per capita, 2006**



Source: UNDP 2010 (Human Development Report 2010) and Global Footprint Network database<sup>64</sup>

Figure 7 also sets out what would be required for globally shared sustainability. If the planet's biocapacity were distributed equally among the current global population of seven billion, there would be at most 1.8 global hectares (gha, a measure of biocapacity<sup>65</sup>) available per person.

Among the G20 countries, only India and Indonesia have per capita ecological footprints of production below 1.8 gha, but they both have per capita GDP below \$5,000. In contrast, Australia and Canada's annual economic output results in ecological footprints six times larger than what would be globally sustainable.

This encapsulates the challenge of achieving sustainable global economic growth. No country within or outside the G20 has achieved high average incomes and a sustainable ecological footprint.

So what would it take to make economic growth environmentally sustainable? Unpacking this question is essential for sharpening debates on 'green growth' and for assessing progress made by countries in decoupling economic growth from resource use.

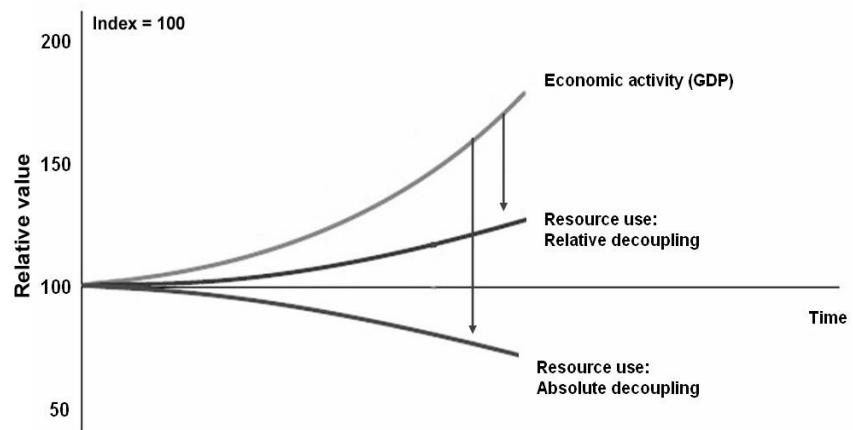
#### Box 4: What would sustainable economic growth take?

Whether or not sustainable economic growth is possible hinges on the concepts of *relative decoupling* and *absolute decoupling* of economic growth from natural resource use. Figure 8 demonstrates the crucial difference between them.

*Relative decoupling* occurs when GDP grows faster than resource use grows, so that the resource intensity of growth declines – but resource use still rises in absolute terms. For example, the G20 countries' collective GDP grew 66 per cent from 1991 to 2007, while its collective ecological footprint of production grew 26 per cent over the same period. Clearly the resource-intensity of the countries' growth fell by this measure, but the G20's ecological footprint still rose by over a quarter in absolute terms.

In order to achieve environmentally sustainable economic growth at the global scale, global resource use must fall while GDP continues to rise. This is *absolute decoupling*. Given that the planet's renewable resources are already being used far beyond sustainable levels, absolute decoupling is needed quickly in order to prevent irreversible environmental damage.

**Figure 8: GDP growth and resource use: relative and absolute decoupling**

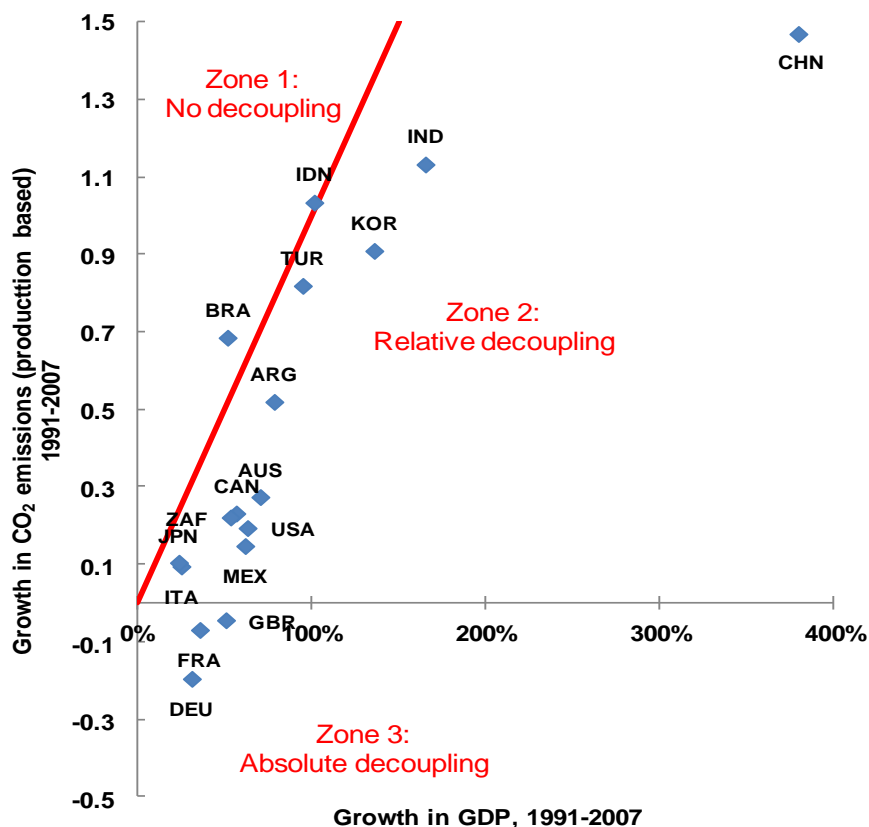


Source: Oxfam 'G20 countries and carbon dioxide emissions'

What can we learn about the prospects for decoupling from G20 experience? Carbon dioxide emissions are driving the growth of the G20's ecological footprint of production. Given this, and the urgent need to tackle climate change, we focus here on trends in decoupling economic output from carbon dioxide emissions over the past two decades.

Figure 9 shows how G20 countries' GDP has grown in relation to the CO<sub>2</sub> emissions associated with that output. What does this imply about the potential for environmentally sustainable economic growth?

**Figure 9: The G20 countries' growth in GDP versus growth in CO<sub>2</sub> emissions from production, 1991–2007**



Source: World Bank 2011 (for GDP) and Peters et al (2011)

First, the majority of G20 countries achieved relative decoupling. Most countries are clustered in Zone 2 where GDP growth was faster than the growth of CO<sub>2</sub> emissions. Among middle-income countries, Mexico and China achieved the most significant relative decoupling. Mexico's GDP grew four times faster than its CO<sub>2</sub> emissions. China's GDP grew two and a half times faster. This suggests that reducing the carbon-intensity of economic growth is possible across different levels of economic development.

Second, a lot more is required. Global CO<sub>2</sub> emissions must fall at least 90 per cent by 2050 to prevent dangerous climate change. Countries have varying responsibilities for making this happen, including those within the G20. As agreed under the UNFCCC, all countries must take action to prevent dangerous climate change on the basis of their 'common but differentiated responsibilities and respective capabilities'.

Industrialized countries (including G20 members Australia, Canada, France, Germany, Italy, Japan, the Russian Federation, the UK, the USA, and other EU member states) must cut their emissions fastest and furthest. This is because of their role in emitting the vast majority of the atmospheric build-up of CO<sub>2</sub> over the last century.

Collectively, those countries need to reduce their CO<sub>2</sub> emissions by 40 per cent below 1990 levels by 2020 to be on track to prevent dangerous climate change. In other words, they must urgently lead in achieving absolute decoupling of economic growth from CO<sub>2</sub> emissions.

The performance of industrialized countries in the G20 is split. Five failed to reduce their CO<sub>2</sub> emissions levels at all over the period: Australia, Canada, Italy, Japan, and the USA saw their CO<sub>2</sub> emissions of production rise in absolute terms. This ranged from nine per cent in Italy to 27 per cent in Australia.

In contrast, Russia saw its emissions fall significantly, but this was primarily due to industrial decline and stalled economic growth over the period. Three countries – Germany, France, and the UK – achieved absolute decoupling. Germany's GDP, for example, grew 31 per cent while its production-based emissions fell by 20 per cent.

This evidence of absolute decoupling offers some hope that an era of sustainable economic growth is technically possible. But there are three important caveats:

- *Absolute decoupling, yes – but not fast enough.* Germany, France, and the UK may have absolutely decoupled economic growth from producing CO<sub>2</sub> emissions over the period. However, their emissions must fall faster to be on track for the collective cut in developed countries' emissions to 40 per cent below 1990 levels by 2020. Furthermore, all industrialized countries must make this scale of progress.
- *From production to consumption: the record on traded emissions.* National carbon accounting typically focuses on production-based emissions, but the impact of a nation's consumption patterns must also be taken into account. This includes carbon emissions that are embodied in imports and exports, such as steel, cement, cars, and electronic goods. Globally, carbon emissions embodied in trade flows have grown by 80 per cent since 1990, accounting for over a quarter of the global total by 2008. Developed countries as a group are net carbon importers. Their collective production emissions fell by almost two per cent between 1990 and 2008, but, when carbon imports are taken into account, the true change is an increase in carbon emissions of seven per cent.<sup>66</sup> Therefore, while Germany and France both cut their consumption emissions on a par with cuts in their production emissions, the UK's record reversed. While production emissions fell four per cent, consumption emissions rose 14 per cent.
- *Environmental sustainability is broader than cutting CO<sub>2</sub> emissions.* Reducing global CO<sub>2</sub> emissions is an urgent priority for preventing dangerous climate change. But it is just one aspect of environmental sustainability, and hence sustainable economic growth. Other environmental concerns, such as the impact of economic growth on biodiversity and sustainable water use, also need to be taken into account.

There is some cause for hope, but far more progress is required. The vast majority of developed countries in the G20 have provided no evidence that they can make economic growth environmentally sustainable.

Most countries have barely started to put in place the scale of investments, regulations, and incentives required to make absolute decoupling happen fast enough. Even those countries that have led the transition are not doing enough.

As a whole, developing countries (led by many members of the G20) have pledged, under the UNFCCC, to take more tonnes of CO<sub>2</sub> out of the global atmosphere compared to projected levels than developed countries have.<sup>67</sup>

The G20 member countries must act far more decisively to bring their use of natural resources back within the limits of what this planet can provide. The developed countries must lead in demonstrating that environmentally sustainable economic growth is possible.

All G20 members must use their influence to ensure that the 2012 Sustainable Development Conference in Rio de Janeiro is a turning point towards sustainable and internationally equitable use of resources.



# 6

## What would shared growth mean?

Tackling inequality is key to reducing poverty. However, as this report demonstrates, income inequality is growing in many G20 countries. This section shows just how significant this is for women and men seeking to escape poverty over the next decade.

A number of economists have developed statistical models of the links between economic growth, income inequality, and poverty reduction, which we can use to illustrate the likely impact of inequality on future poverty levels.

One such model has been developed by Augustin Fosu of the UN University-World Institute for Development Economics Research<sup>68</sup>, building on work by former World Bank chief economist Francois Bourguignon.<sup>69</sup> We have used this model to calculate how different levels of inequality will affect the number of people living in poverty in selected G20 countries over the next decade. For more on the model and calculations, see the annex.

When tested against historical data for our selected countries, the model proves surprisingly accurate at predicting performance in absolute poverty rates (that is, people living on less than \$1.25 a day).<sup>70</sup> This gives us confidence using the model (together with the IMF's projections of economic growth and population trends) to illustrate how inequality could affect future poverty levels.<sup>71</sup>

The results are dramatic across the three case study countries: Brazil, Mexico, and South Africa. In Brazil and Mexico, reductions in inequality (combined with forecast growth rates) could see absolute income poverty virtually eliminated. While this could still leave many people living below national poverty lines – which are more sensitive measures of well-being in different contexts – this would be a hugely important step forward. However, if inequality is instead allowed to creep back up, the model predicts that reductions in extreme poverty would be minimal or even non-existent. In our scenarios, strong economic growth in South Africa will not stop the number of people living in poverty *increasing* by 2020 unless inequality is brought under control.

Furthermore, it is likely that tackling inequality would reinforce economic growth. But for the purposes of these case studies, we do not assume any knock-on impact. We simply aim to illustrate how the distribution of income becoming more (or less) equal is likely to impact on poverty, given currently projected growth rates.

## Brazil

Poverty reduction in Brazil is strongly dependent on tackling inequality, but here past progress on both counts bodes well for the future.

Between 1999 and 2009, nearly 12 million people escaped absolute poverty (income less than \$1.25 a day), bringing the percentage of Brazilians living in poverty down from 11.2 per cent to 3.8 per cent.<sup>72</sup> During the same period, income inequality fell significantly. As measured by the gini coefficient, it dropped by more than four percentage points, from 0.52 to around 0.47.<sup>73</sup>

Although the starting level of inequality was very high, it was this reduction in inequality that made such extensive poverty reduction possible, during a period when annualized real growth in GDP per capita was only around two per cent per year.

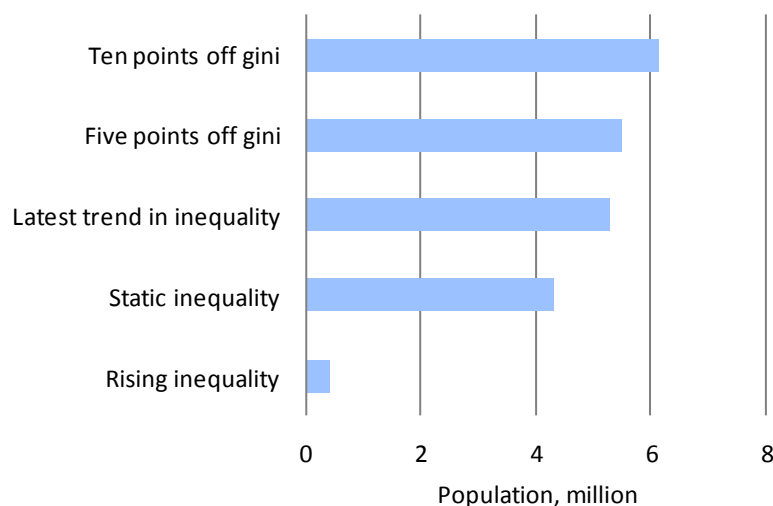
Going forward, the IMF projects that Brazil's GDP will grow rather faster: at 3.8 per cent in 2011, 3.6 per cent in 2012 and over 4 per cent in subsequent years. If Brazil continues to grow at approximately this rate until 2020, and continues current trends in population growth and reduction in inequality, our model indicates that the number of people living in poverty will fall by almost two thirds between 2010 and 2020, a reduction of more than five million.

If inequality is allowed to rise however, there could be little or no reduction in the numbers living in poverty. If inequality rose at the rate seen in Indonesia, for example, less than half a million women and men would escape poverty by 2020 despite strong economic growth.

Achieving a reduction in the Brazilian gini coefficient of inequality by 10 percentage points over the next decade (taking it to a level of inequality still above the current median for G20 countries), could reduce the number of people living in absolute poverty by more than 90 per cent. Compared with the situation in which inequality is unchanged, almost two million additional people would be able to move out of poverty.

Brazil's past performance shows how a country with high inequality and comparatively low growth can substantially reduce poverty by addressing inequality. Going forward, our model indicates that if policy makers can intensify their focus on inequality as growth accelerates – that is, on promoting truly inclusive growth – they could virtually eradicate absolute poverty.

**Figure 10: Potential impact of changes in inequality on number of people escaping poverty in Brazil, 2010-2020**



Source: Figure compiled by Oxfam based on model developed by Augustin Fosu, using data from World Bank World Development Indicators (<http://data.worldbank.org>), the IMF World Economic Outlook database, and the Solt Standardized World Income Inequality Database. See annex for more details. ("Rising inequality" refers to inequality increasing at the annualized rate seen in Indonesia, 1999-2009)

## Mexico

Mexico, like Brazil, has managed impressive reductions in poverty in recent years (partly as a result of growth in overseas remittances). According to the Solt database, its gini coefficient has also fallen, although not as much as Brazil's. Public policy has also not been as focused on inequality as in Brazil. Future progress against poverty is strongly dependent on increasing the focus on inequality.

From 1998 to 2008, the number of Mexicans living under \$1.25 a day fell by almost seven million,<sup>74</sup> even though growth in per capita GDP was under two per cent.<sup>75</sup> The proportion of Mexicans living in absolute poverty fell from 11.2 per cent to 3.4 per cent,<sup>76</sup> while the gini coefficient of inequality fell from 0.49 to 0.47.<sup>77</sup>

This is a less impressive reduction in inequality than in Brazil. However, Mexico's lower starting level of inequality, at least compared to Brazil's extremely high level, aided poverty reduction.

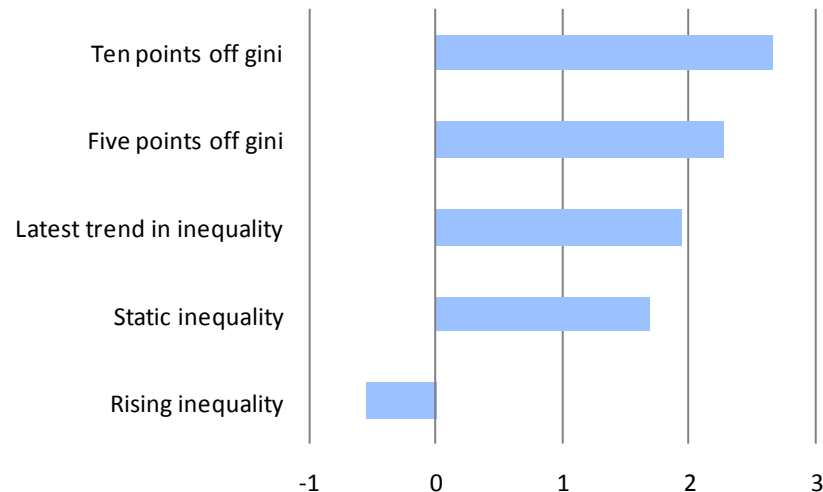
Over the next six years, the IMF's growth projections translate into a per capita GDP growth rate of a little under three per cent.<sup>78</sup> Combined with current trends in inequality, this would result in a drop of nearly two million in the number of people living in absolute poverty, i.e. two thirds of the current total.

However, a reversal of recent trends in inequality could see poverty levels stand still over the next 10 years. Our model predicts that if inequality were to increase as fast as it has in Indonesia, the number of Mexicans living in poverty would increase.

If Mexico could accelerate the recent improvement in its income distribution, however, poverty levels would drop significantly. Our calculations indicate that reducing the gini coefficient by five points by 2020 could reduce poverty by more than 77 per cent. Reducing the gini coefficient by 10 points by 2020 would reduce poverty by more than 90 per cent, leaving fewer than 300,000 Mexicans in absolute poverty.

Like Brazil, the more serious Mexico is about reducing poverty, the more it should focus on reducing inequality.

**Figure 11: Potential impact of changes in inequality on number of people escaping poverty in Mexico, 2010-2020**



Source: Figure compiled by Oxfam based on model developed by Augustin Fosu, using data from World Bank World Development Indicators (<http://data.worldbank.org>), the IMF World Economic Outlook database, and the Solt Standardized World Income Inequality Database. See annex for more detail. ("Rising inequality" refers to inequality increasing at the annualized rate seen in Indonesia, 1999-2009)

## South Africa

The projections for South Africa demonstrate how flawed a poverty-reduction strategy focused solely on economic growth can be. South Africa already possesses the highest level of income inequality in the G20, and this is growing still worse (the latest data is for 2005). If this were to continue to 2020, our calculations predict that even strong growth would not prevent an increase in the number of South Africans living in extreme poverty.

Between 1995 and 2006, the proportion of the population living in absolute poverty fell from 21.4 per cent to 17.4 per cent.<sup>79</sup> However, increases in population over the same period meant that the total number of South Africans living on less than \$1.25 fell by just 102,000. Real growth in GDP per capita, at just under two per cent, was comparable to that of Mexico over this period.

The key to the difference was South Africa's extremely high, and growing, inequality. Looking ahead, inequality in South Africa is so

high that our model predicts that, even if it remains static *and* is accompanied by strong GDP growth of around 3.7 per cent, the number of people living in absolute poverty in South Africa is likely to increase.<sup>80</sup> (The poverty rate would fall, but not enough to offset the impact of a rapidly growing population, so the absolute number of people living in poverty would still rise.)

Even on the very conservative assumption that inequality has remained static since 2005 and will continue at this level, the model suggests that just 200,000 South Africans will escape absolute poverty by 2020, leaving almost eight million living on less than \$1.25 a day.

If we assume, on the other hand, that inequality rose from 1995 to 2010 at the same rate that it rose from 1995 to 2005, and that this continues until 2020, the number of South Africans living on less than \$1.25 a day would rise by 1.9 million to nearly 10 million from 2010 to 2020.

These scenarios would result in South Africa having between 14 and 18 per cent of its population living in absolute poverty, a rate comparable to that of Kenya.

South Africa must bring inequality under control if it is to prevent poverty increasing. The model suggests that, if South Africa were to match Brazil's 1999–2009 rate of reduction in inequality (and assuming static inequality between 2005 and 2010), the absolute poverty rate would fall by more than three percentage points, or more than a million people, by 2020. Reducing the gini coefficient by 10 percentage points by 2020 – which as things stand would still leave South Africa the most unequal society in the G20 – could bring 1.5 million people out of poverty.

Inequality must be a major focus of public policy if South Africa is to escape a development disaster.

**Figure 12: Potential impact of changes in inequality on number of people escaping poverty in South Africa, 2010-2020**



NB Chart is based on conservative scenario of unchanged income inequality between 2005 (latest year for which data is available) and 2010.

Source: Figure compiled by Oxfam based on model developed by Augustin Fosu, using data from World Bank World Development Indicators, the IMF World Economic Outlook database, and the Solt Standardized World Income Inequality Database. See annex for more details.

### **Box 5: Growth without poverty-reduction in India**

Focusing on the gini coefficient of income inequality is a significant simplification. Although models based on it perform well for many countries, it misses crucial aspects of inequality such as the position of women in society. India's recent past potentially demonstrates how significant this can be.

From 1994 to 2005, India's GDP per capita grew at an extremely impressive average annual rate of nearly five per cent. Inequality, although rising, remained below 0.35 as measured by the gini coefficient.<sup>81</sup>

Yet the poverty rate dropped by fewer than eight percentage points – far less than most models would predict. As a result of India's increasing population, by the end of this period, 3.4 million more Indian women, men, and children were living on less than \$1.25 a day, even as the country as a whole was booming.

India has fallen significantly short of expectations, and there are three potential causes. Either: incomes are in reality more unequal than statistics suggest, income inequality misses a big part of the story in India, or something beyond inequality is inhibiting poverty reduction.

The second of these is certainly true. For example, the entry of women into the workforce is far below what would be expected given increases in girls' education and average incomes. Female participation in the workforce in 2008 was lower than in 1983.<sup>82</sup> Furthermore, the World Bank notes that, despite high levels of growth, India continues to experience very high levels of maternal mortality.<sup>83</sup>

India is thus missing out on the reductions in poverty that, as substantial academic research has shown, generally follows from improved education for women, and their entry into the workforce.<sup>84</sup>

Martin Ravallion, Director of the Development Research Group at the World Bank makes a similar point. He suggests that aspects of inequality that are particularly prevalent in India, such as inequality in ownership of land and gender inequality, are not captured by the gini coefficient. He also suggests that there are reasons to believe that the data on incomes in India is not particularly reliable. As he puts it, 'India may not be a low inequality country after all.'<sup>85</sup>

As a result, despite apparently low levels of income inequality, India cannot rely on economic growth alone to map a route out of poverty for the nearly half a billion Indians who live on less than \$1.25 a day. Rather, it needs to address the particular factors that are currently denying many Indian women, men, and children the chance to realize their rights and escape poverty.

Source: Oxfam and sources cited

# The way forward

## Towards inclusive growth

All the evidence suggests that policy makers must devote more attention to inequality. It has been linked to a wide range of social ills, including crime and lack of trust, and reducing it offers a triple dividend: it can directly reduce poverty, enhances the ability of future growth to reduce poverty, and improves prospects for growth itself.

The analysis in this paper shows that, without attention to inequality, strong growth in South Africa will not be enough to prevent poverty increasing significantly over the next decade. Similarly, in Mexico and Brazil, if inequality is allowed to creep back up, even strong growth will not reduce poverty significantly (if at all) over the next 10 years.

In all three case study countries, combining growth with greater equality will allow millions more to lift themselves out of poverty by 2020. These results are not confined to the case study countries. They serve as an example of just how powerfully inequality influences the growth-poverty relationship.

Despite this, most G20 countries are moving in the wrong direction. They are being put to shame by the significant reductions in inequality that have taken place in many low-income and lower middle-income countries over the last 15 years.

The experience of Brazil, Korea, and many low-income and lower middle-income countries shows that reducing inequality is within G20 policy makers' power. There is no shortage of potential policy levers. Instead, there has perhaps been a shortage of political will.

There are some indications that this may be about to change. India's Prime Minister, Manmohan Singh, recently admitted that 'rapid growth will have little meaning, however, unless social and economic inequalities, which still afflict our society, are not eliminated quickly and effectively.'<sup>86</sup> Chinese Premier Hu Jintao has also suggested that 'China is a strong supporter and follower of inclusive growth.'<sup>87</sup>

These words need to be matched by comprehensive policy programmes in all G20 countries. The exact policy mix should be tailored to the national context, but past Oxfam research<sup>88</sup> – which will be explored in more depth in future papers – suggests policies that have been successful in many developing countries:

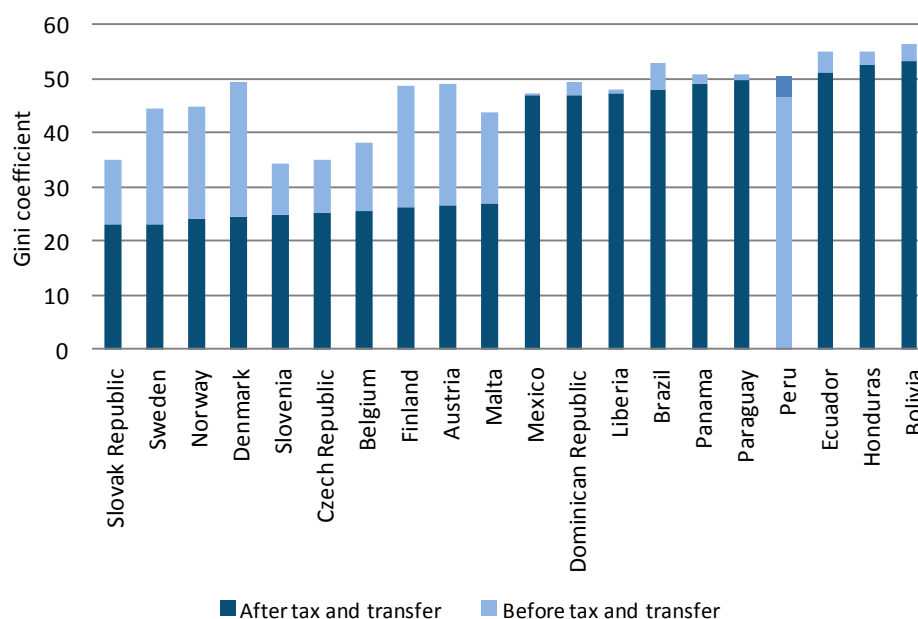
- *Redistributive policies, including cash transfers.* ECLAC suggests that cash transfer programmes in Latin America typically have three objectives: 'to alleviate poverty through direct income transfers, to provide incentives for investment in human capacity-building, and to bring the target population into the social protection and promotion networks.'<sup>89</sup>



- *Investments in universal access to education and healthcare.* Access to education and healthcare is not only a basic right; it also provides greater equality of opportunity – thus lessening other inequalities – and helps to foster economic growth.<sup>90</sup> Services that rely on high out-of-pocket payments, or systems that rely on private provision that often fails to reach the poor, exacerbate rather than reduce inequality.<sup>91</sup>
- *Progressive taxation.* As Figure 13 shows, on the basis of gross income, Denmark, Finland, and Austria, and to a lesser extent Sweden and Norway, have similar levels of inequality to the most unequal countries in the world. But progressive taxation and spending makes them among the most equal countries in the world after tax and transfer. At the other end of the spectrum, Peru is not only one of the most unequal countries in the world, but one where taxes and transfers are regressive to the point of increasing inequality.
- *Tackling the inequalities that exclude women and girls from participating in economic growth.* This includes reform of discriminatory legislation and institutions, targeted action to meet women’s health and educational needs, and the removal of barriers to women’s participation in quality employment. Women must be given a voice in parliaments, in society at large, and in the home. Prevailing social norms that limit their access to access to assets, income, and decision-making cannot be allowed to persist.
- *Strengthening access to land and other natural resources, reforming land ownership, and investing in small-scale food producers.* In Viet Nam for example, land reform was key to reducing inequality and stimulating growth in the 1990s. The government sequenced reforms in order to kick start growth in the countryside where there was more poverty.<sup>92</sup>



**Figure 13: Effect of tax and transfers on gini coefficient, 2007-08**



Source: Figure compiled by Oxfam using data sourced from F. Solt (2010) 'The Standardized World Income Inequality Database', <http://hdl.handle.net/1902.1/11992> (Version 3.0). NB Peru becomes more unequal AFTER tax and transfer.

There are plenty of policy levers available to policy makers (and these will be fully documented in future Oxfam papers). What is required is the political will to engage them.

### Towards sustainable growth

Redistributing the vastly unequal benefits of economic growth will not on its own be enough to secure a prosperous future for all. Economic activity is currently depleting the earth's natural assets, including the capacity to absorb wastes like greenhouse gases, and this must also be addressed.

The costs are borne disproportionately by poor women and men. The poor tend to be most dependent on natural resources for their livelihoods. They are also more at risk of losing control over their resources, and are typically more exposed to the impacts of climate change.

The environmental sustainability of growth must be addressed, and addressed in ways that protect the rights and interests of the most vulnerable. The most immediate concern is climate change. Only four G20 countries reduced their carbon emissions over the period examined.

Developed countries must lead in absolutely decoupling their GDP growth from natural resource use. This requires changes to production patterns in key sectors such as energy, transport, construction, manufacturing, and agriculture. It also means transforming national consumption patterns, including those for food, consumer goods, energy, and transport.

All countries must monitor and start to internalise in economic decisions the resource impact of their production and consumption patterns across a wide range of natural resources. Far greater investment in, and analysis of, data is needed internationally. This will help to determine whether and how economic growth can become environmentally sustainable.

In all countries, these reforms must be designed and backed up by policies that protect the most vulnerable from the impacts of transition.

The exact policy mix should be tailored to each national context, but based on recent experiences in G20 countries may include:

- *Investment in public goods, such as research and development in clean energy.* Spurred by huge investment from the Chinese government, alongside a range of other supportive policies, China has become the largest investor in renewable energy projects worldwide, leading the way as developing countries have overtaken developed countries in terms of new investment in renewable energy<sup>93</sup>.
- *Tax breaks, subsidies, and other incentives to guide private investment to where it is needed.* Following considerable success in Germany<sup>94</sup>, a number of countries, including the Philippines, are exploring how feed-in tariffs for renewable energy can be used to boost the uptake of renewable energy by providing price certainty for investors and accelerating cost reductions in renewable energy technology.
- *Taxing undesirables, such as greenhouse gas emissions, to direct economic activity towards more sustainable alternatives.* As policies in the EU and Australia – and under discussion in South Africa – demonstrate, applying a carbon price to polluting economic sectors can both drive down carbon emissions while also generating substantial new revenues, which can be invested in public goods or protecting the most vulnerable from the transition to sustainable growth, for example, by boosting social protection spending.
- *Regulation to stop companies polluting or to encourage them to provide goods and services they otherwise would not.* While too often governments have backed down from regulating big businesses, tending rather to deliver handouts to well-organised interest groups,<sup>95</sup> Brazil's experience of bringing deforestation rates to their lowest ever levels through effective enforcement of anti-logging laws shows what is possible.<sup>96</sup>

In addition, G20 countries as a whole must show much greater leadership at UNFCCC climate talks. In particular, they should:

- ensure that developed countries commit, as a first step, to the high end of their current 2020 mitigation pledges, and give assurances that long-term mitigation financing will be mobilized to enable developing countries to implement their most ambitious pledges;
- forge consensus on the fair shares of the global emissions cuts needed to prevent more than 1.5°C of global warming;
- broker agreement on new and reliable long-term sources of climate finance, particularly a fair carbon charge for international shipping,

with a compensation mechanism for developing countries, and financial transaction taxes in developed countries.

Two foundational challenges face the G20 and the world as a whole: equity and sustainability. Evidence shows that without action in these two areas, the benefits of future economic expansion will be inaccessible to the poor, even as they bear the costs of this expansion through the impacts of climate change and environmental degradation. The G20 has an opportunity to establish itself as a group of countries that leads by example. Addressing these two challenges is where they should start.

# Annex

## Methodology for projections

In order to calculate the potential impact of changing levels of inequality, we use a model developed by Augustin Fosu of the UN University-World Institute for Development Economics Research,<sup>97</sup> which builds on modelling and empirical analysis by other economists, including Martin Ravallion, William Easterly, and particularly Francois Bourguignon.

### The model

The model is expressed in the following equation (equation 6 in Fosu's paper, and based on 'Improved model 1' in an earlier paper by François Bourguignon):<sup>98</sup>

$$p = d_1 + d_2y + d_3g + d_4y(Z/Y) + d_5yG^I$$

where:

$p$  is the growth rate of the level of poverty,  $P$  (measured various ways)

$Z$  is the poverty line

$Y$  is the level of average income

$y$  is the growth rate of average income

$G^I$  is the initial level of inequality, measured as gini coefficient of income

$g$  is the growth rate of inequality, measured as gini coefficient of income

$d_1 \dots d_4$  are the coefficients indicating the impact of each factor.

Fosu then estimates the value of each of the coefficients, for this and two other slightly different models, calculating coefficients separately for sub-Saharan African (SSA) and non sub-Saharan African countries. He uses data derived from a World Bank global sample, providing 353 unbalanced panel observations over 1977–2004: 51 observations from 24 countries in SSA, and 302 observations from 61 non-SSA countries. (N.B. Country representation differs substantially.)

For this model, and when interpreting  $P$  as a headcount ratio of poverty (i.e. the proportion of population below the poverty line) rather than a measure of the depth of poverty, Fosu's regressions produced estimates for each of the coefficients that are significant at least at the 0.05 level, and in most cases at the 0.01 level, except for the intercept ( $d_1$ ). The values are captured in the following table:

	$d_2$	$d_3$	$d_4$	$d_5$
<i>non-SSA</i>	-8.802	5.428	4.083	11.414
<i>SSA</i>	-3.331	1.105	0.579	4.008

The sign of these coefficients indicates the direction of their impact: higher rates of income growth contribute to a faster rate of poverty reduction ( $d_2$ ), but a low level of development ( $d_3$ , as represented by a high ratio of the poverty line to mean income) and, particularly, high rates of initial inequality ( $d_5$ ) mitigate this effect. At the same time, a higher rate of growth in inequality ( $d_4$ ) contributes to a lower rate of poverty reduction.

Fosu's calculations also indicate that these effects, though they have the same direction in all cases, are substantially smaller in scale in SSA than non-SSA countries.

NB: We chose this model rather than Fosu's alternative (his equation 5) both because for headcount poverty, this model produced more significant results for the calculations of the coefficients (according to Fosu's own calculations) and because when we tested both models against past data (see below), this model gave a better fit.

### Applying the model for purposes of projections

We applied this model and these coefficients to four case study countries: Brazil, Indonesia (not included in the final paper for reasons of space, although some data is used for comparative purposes), Mexico and South Africa. Given that the intercept in Fosu's calculations did not come out as statistically significant and did not in our test (see below) produce better results, we excluded it and used the four other terms from the model. In each case, we first tested the model against past data, to assess how well it predicted actual rates of growth in the poverty rate, measured as the compound annual growth rate over the most recent decade for which all relevant data is available. Given data constraints, we used a proxy for average income and income growth (see below).

Nonetheless, the predictions produced by the model were very close to actual performance. For Brazil, the predicted rate of change was -10.3% from 1999 to 2009, compared to actual change of -10.2%. For Indonesia, the prediction was -7.9%, compared to an actual rate of -8.9%. For Mexico, the prediction was -8.1%, compared to an actual rate of -11.1%, and for South Africa the prediction was no change (0.0%) compared to an actual rate of -1.2%. (For South Africa, we tested both the SSA and the non-SSA model – given that South Africa is an unusual country in SSA – but the SSA model gave a better fit.)

We then applied the model to produce future projections, using 2010 as a base year, and projecting over a decade. Again using a GDP proxy for starting income and income growth, available data on inequality and poverty rates, and available projections for GDP and population growth, we were able to model the potential impact of different inequality scenarios on rates and numbers of people living in poverty in 2020.

### Data and sources for the projections

- **Poverty rate, P:** the poverty rate is the proportion of the population living under the absolute poverty line, for which we used \$1.25 per day per capita in 2005 PPP terms. The source of data on the poverty rate was the World Bank World Development Indicators databank

(at [data.worldbank.org](http://data.worldbank.org)). The rate of growth in the poverty rate ( $p$ ) was calculated as a compound annual growth rate. Numbers of people in poverty was calculated using poverty rates and population levels.

- **Average income,  $Y$ :** we were unable to find robust, comparable data for average income across different countries, or any data for future projections of average income growth. However, many economists working on inequality anyway argue that income data from household surveys, while it may be valuable for determining income distribution, is not robust for mean income levels as well as often being unavailable, and instead consider GDP per capita to be a reliable proxy. (See, for instance, Bourguignon and Morrisson (2002).)<sup>99</sup> Moreover, our test of the past predictive power of the model using this data was strong enough to justify this proxy. Past GDP per capita, in 2005 PPP terms, was sourced from the World Bank World Development Indicators databank (at [data.worldbank.org](http://data.worldbank.org)). Future GDP per capita was calculated on the basis of IMF projections of real GDP growth and population growth from the World Economic Outlook database.
- **Population:** past population was sourced from the World Bank World Development Indicators databank (at [data.worldbank.org](http://data.worldbank.org)). Future population projections were calculated using rates of population increase sourced from the World Economic Outlook database at [www.imf.org/external/ns/cs.aspx?id=28](http://www.imf.org/external/ns/cs.aspx?id=28)
- **Inequality,  $G$ :** as in the model, we used the gini coefficient of income (on a 0 to 1 scale) to express inequality. Our source was the Standardized World Income Inequality Database, produced by Frederick Solt (at [www.siuc.edu/~fsolt/swiid/swiid.html](http://www.siuc.edu/~fsolt/swiid/swiid.html)). Past growth in inequality over periods of a decade was calculated as a compound annual growth rate.

## Assumptions

Beyond the assumption (given above) that GDP per capita and GDP per capita growth can be used as proxies for average income and average income growth, we have made other assumptions, as follows:

- Real GDP growth over the next 10 years will be at the rate projected by the IMF in the World Economic Outlook until 2016 (the final year for projections). From 2017 to 2020, the rate is projected as the average of the 2014-2016 rate.
- Population growth over the next 10 years will be at the rate projected by the IMF in the World Economic Outlook, drawn from national statistics, until 2016. For Mexico and South Africa, that is a uniform rate, which we have assumed to continue until 2020. For Brazil, it is a slowing rate and projections only exist until 2014; we have assumed that the 2014 rate will then continue to 2020.
- In some cases, where data on income gini or GDP was not available for 2010 (or 2009), we projected the level for the missing year(s), assuming that the (compound annual) rate of growth over the previous decade still held.

## Inequality scenarios

We tested various scenarios for the development of inequality, as measured by the gini of income:

- **No change:** inequality remains unchanged from 2010 through to 2020.
- **Current trend:** inequality continues to grow or decline at the average rate observed in the last 10 years for which data exists (compound annual growth rate).
- **Inequality increases at Indonesian rate:** inequality grows, at the rate observed in Indonesia from 1999 to 2009 (0.017).
- **Inequality decreases at Brazilian / Mexican rate:** inequality falls, at the rate observed in Brazil from 1999 to 2009 (-0.009) or Mexico from 1998 to 2008 (-0.005).
- **Inequality falls by 5 or 10 percentage points:** we first calculated what rate of change in inequality (compound annual growth rate of the gini) would be implied by the final target gini, whether 5 or 10 percentage points lower than the starting point. We then used this rate in the model.

## Projections

For each country, we produced a set of projections for 2020, based on the different inequality scenarios, including: the poverty rate; the number of people living in poverty; the reduction (or growth) in the number of people in poverty in the period 2010-2020, and this reduction (or growth) as a proportion of the total number in 2010; and the percentage point change in the level of poverty between 2010 and 2020.

### *Note on South Africa*

For South Africa, inequality data was only available up until 2005, and was already at a very high level. We therefore produced two sets of projections: firstly a standard one in which we projected forward inequality to 2010, based on growth at the rate observed from 1995-2005, and used that as the starting point; and also a more conservative scenario in which inequality remained unchanged from 2005 until 2010.



# Notes

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- <sup>52</sup> <http://data.worldbank.org>
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- <sup>73</sup> F. Solt (2010) *op cit.*
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This paper was written by Richard Gower, Caroline Pearce and Kate Raworth. Oxfam acknowledges the assistance of Richard King, Antonio Hill, Caroline Green, Eduardo Caceres, Max Lawson and Dr Paul Segal in its production. It is part of a series of papers written to inform public debate on development and humanitarian policy issues.

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The information in this publication is correct at the time of going to press.

Published by Oxfam GB for Oxfam International under ISBN 978-1-78077-023-9 in January 2012. Oxfam GB, Oxfam House, John Smith Drive, Cowley, Oxford, OX4 2JY, UK.

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