the gap between the poorest 20% of people
and everyone else is getting bigger

Rest of
population

P20

2000   2012   2030
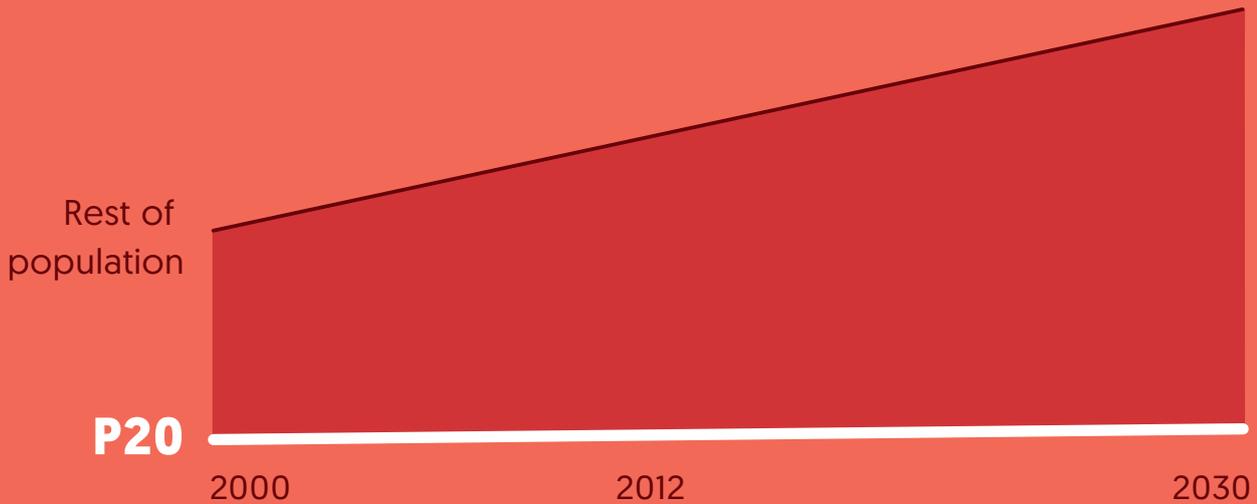
the P20 initiative

data to leave
no one behind

a world that works for everyone

means leaving no one behind

Contents

executive summary

Data to leave no one behind

Achieving the SDGs requires a different mindset and new ways of measuring and monitoring progress. The second section of this report demonstrates the need for greater investment in more and better disaggregated data as an essential step towards meeting as well as measuring the SDGs.

People in the P20 face multiple and intersecting deprivations, for example poor nutrition and low levels of education are mutually reinforcing and pass poverty from one generation to the next. People's identities affect their chances in life with discrimination often reinforcing disadvantage.

Existing statistics can help to track national averages, but they often mask disparities at subnational, community and household levels. While this may have been adequate for monitoring progress towards the Millennium Development Goals, which focused on general targets such as reducing the proportion of people living in poverty, Agenda 2030 requires a radically different approach based on monitoring progress at the level of individual people. We need to harness the energy of the data revolution and measure progress by counting people not averages, so that no one – no matter where they live or how old they are and irrespective of their gender, sexual orientation or disabilities – is left behind.

The P20 Initiative promotes the production and use of disaggregated data and comprehensive civil registration systems so that everyone can see who is left behind, and target policies and resources accordingly. As a minimum standard, data should be disaggregated by quintile, geography, gender, age and disability [QGGAD] to ensure sufficient granularity to include everyone in progress.

Increasing civil registration and vital statistics systems will cost money and take time, as will investing in the kind of registry and administrative data systems that provide the bedrock of health, education and social security. Yet they are essential to achieve, not just to monitor, the goal to leave no one behind.

At the same time as advocating for these investments, the P20 Initiative will help people make the best use of the existing data – joining up different sources, seeking greater disaggregation wherever possible and considering the potential role of new technology, such as satellite imagery, in supplementing current survey data.

Publication of this baseline report concludes the first phase of the P20 Initiative. The next phase will focus on the ways that the P20 Initiative can support everyone to identify and include people who are currently missing out on progress – politically and practically. Each year we will publish the best available data on the P20 and make the case for effective investment in the disaggregated data that is essential to ending poverty and ensuring no one is left behind.

In the era of the data revolution, every organisation – whether government, business or NGO – can use data better, to help ensure that no citizen, no customer or consumer and no family or community is left out of progress.

We invite all of those who share a commitment to eradicating extreme poverty by 2030 to use the P20 Initiative, and its data, and keep political attention on the people in the poorest 20% – the P20.

Judith Randel and Tony German, Co-Founders and Strategic Advisers, Development Initiatives

Executive summary

The P20 Initiative aims to track the progress of the poorest 20% of the world's population from poverty to security and opportunity. It is about ensuring that the Sustainable Development Goals (SDGs) and the data revolution deliver progress for the people in the poorest 20% of the world's population – the P20.

In 2015, world leaders agreed the 2030 Agenda for Sustainable Development (Agenda 2030). Its goal is to end poverty in all its forms everywhere, with a specific target to eradicate extreme poverty by 2030 and a commitment to leave no one behind. Achieving these ambitions will be much harder than meeting the Millennium Development Goals. It will require a different mindset, and new ways of measuring and monitoring progress.

We need to harness the energy of the data revolution and measure progress by counting people not averages, so that no one – no matter where they live, how old they are and irrespective of their gender, sexual orientation or disabilities – is left behind.

This is what the P20 Initiative is about. Rather than establishing a new measurement, the P20 is a simple concept that seeks to focus political attention on the poorest 20% of people.

Like the SDGs, it is a concept that is universally applicable, so it is relevant to decision-makers at all levels – globally, nationally and in every sector and every community. Those running a school, a health service, a business or a country should always ask whether the P20 are being included and if the data is available to provide the answer.

This report focuses on the global P20, the poorest 20% of people in the world. Agenda 2030 puts forward a comprehensive framework of 17 goals, 169 targets and 230 indicators. There is a risk that attention to the poorest people will be lost in this complexity and monitoring efforts will get bogged down in the detail.

The P20 Initiative will try to keep the focus on the bigger picture. Using three simple bellwethers, drawn from the SDG framework and based on income, nutrition and civil registration, it will focus on three questions:

- Are people getting better off?

- Are people better nourished?

- Do their governments know they exist?

The P20 are the poorest 20% of the world's people

The P20 are the 1.4 billion men, women and children who are the poorest 20% of the global population. The P20 includes everyone currently living below the international poverty line plus the people who are most vulnerable to falling back into extreme poverty.

The goal of eradicating extreme poverty focuses on lifting everyone above a poverty line – currently $1.90[1] a day. The P20 Initiative works on an additional frame of reference. Instead of looking at specific poverty lines, it focuses on progress among the group of people most likely to be left behind.

Currently the people in the P20 live on something between $1.00 a day and $2.56 a day. Given these levels of income and the gap between the P20 and everyone else, it is reasonable to conclude that one in five people in the world – the P20 – are not only in poverty, but also vulnerable to being left behind over the next 15 years.

The state of the P20
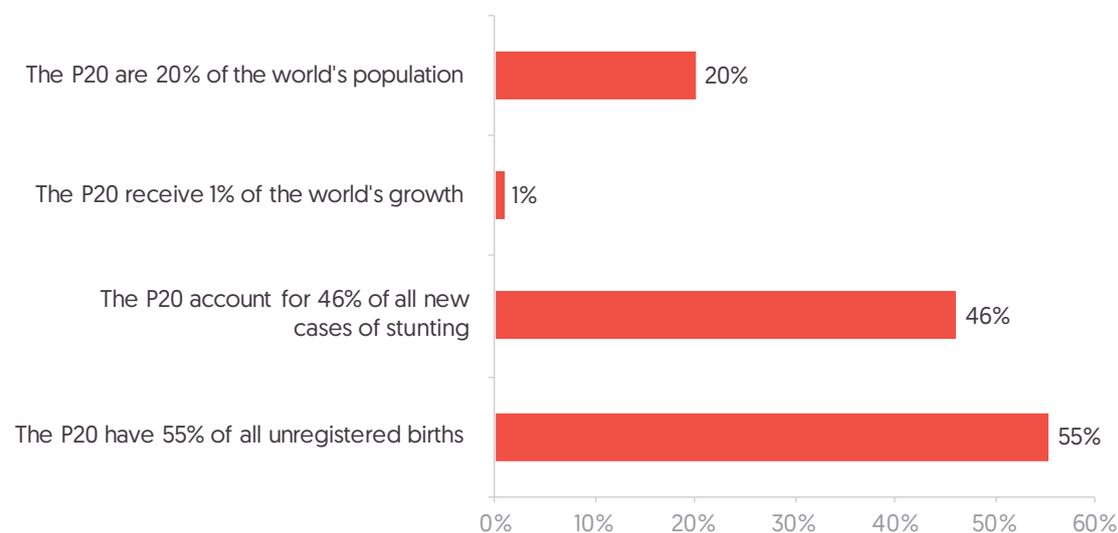
Source: Development Initiatives based on PovcalNet as well as selected Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS), and China Family Panel Studies (CFPS)
[see sources table (www.devinit.org/p20-initiative-data-to-leave-no-one-behind) for more details]

The first section of this report presents data on the global P20. It uses the best available data to set out where and how people in the P20 live, recognising that the P20 is not a static group – some people will move out of poverty while others will slip back in or become newly poor. It confirms that the 1.4 billion people that make up the poorest fifth of the global population are spread across over 100 countries, but more than half of them live in four countries; India (490 million), Nigeria (113 million), China (84 million) and Indonesia (68 million).

The report then uses the three bellwethers to construct a baseline for measuring the progress of the P20 over the next 15 years. If these bellwethers are not moving in the right direction it is very unlikely that the world will be on track to achieve its goals.

Income

Today, the P20 have a 1% share of global income.

While their incomes have been increasing, they are starting from a very low base, so despite the increases, the gap between the P20 and everyone else is getting bigger. Projections confirm that this gap will continue to widen unless the P20 secure a greater share of global growth.

Critically, the consumption floor – the lowest level of consumption at which people can exist – has not changed for more than 20 years. If the consumption floor does not rise, not only will people remain in extreme poverty, but the gap between the P20 and the rest of the world will continue to widen.

To ensure that the P20 are not left behind, they will need to share in a greater proportion of global growth.

**Past and projected income gap between the P20 and everyone else**

Source: Development Initiatives based on PovcalNet: http://iresearch.worldbank.org/PovcalNet/

Nutrition

The P20 account for 46% of all under five cases of stunting.

Better nutrition underpins health, as well as the abilities to learn and earn. Stunting – a lifelong consequence of malnutrition – is both a symptom of past deprivation and a predictor of future poverty.

**Progress needed to end stunting in children under five years of age by 2030**
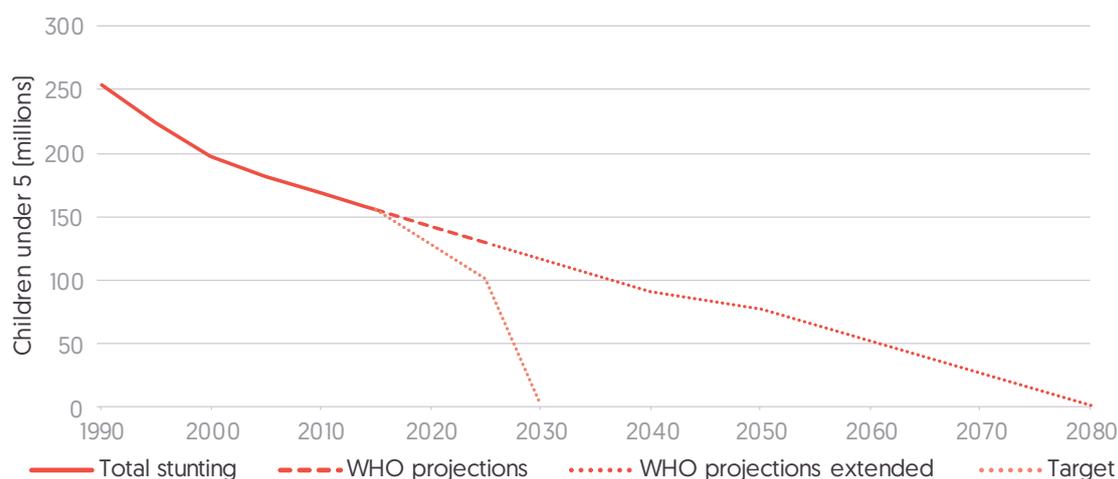
Source: Development Initiatives based on UNICEF–WHO joint child malnutrition estimates: http://apps.who.int/gho/data/view.main.NUTUNSTUNTINGv

Civil registration and vital statistics

The P20 account for 55% of all unregistered births worldwide

Civil registration means people are counted and have rights as citizens. Governments cannot begin to ensure that everyone is included in progress if they do not know they exist in the first place.

Path of progress needed to achieve 100% birth registration by 2030
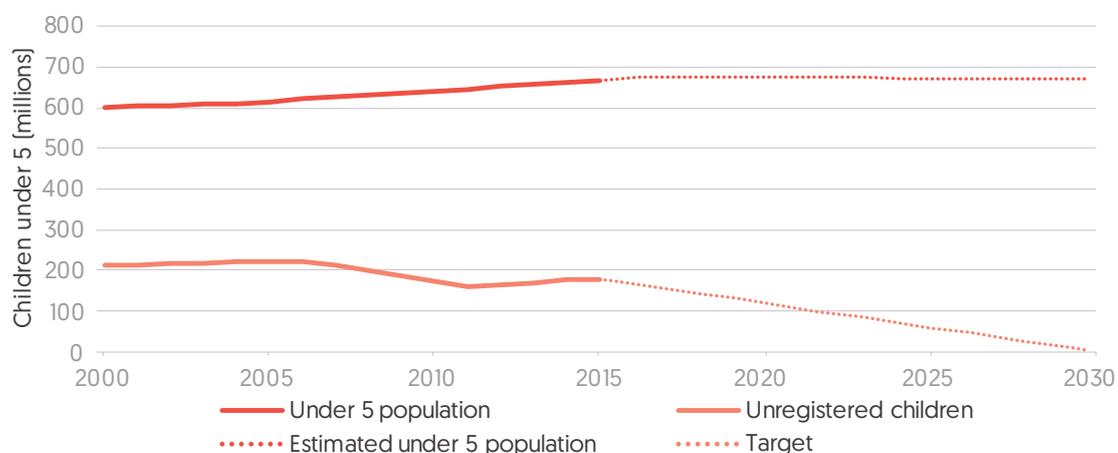
Source: Development Initiatives based on World Bank World Development Indicators: Completeness of birth registration % (interpolated): http://data.worldbank.org/indicator/SP.REG.BRTH.ZS
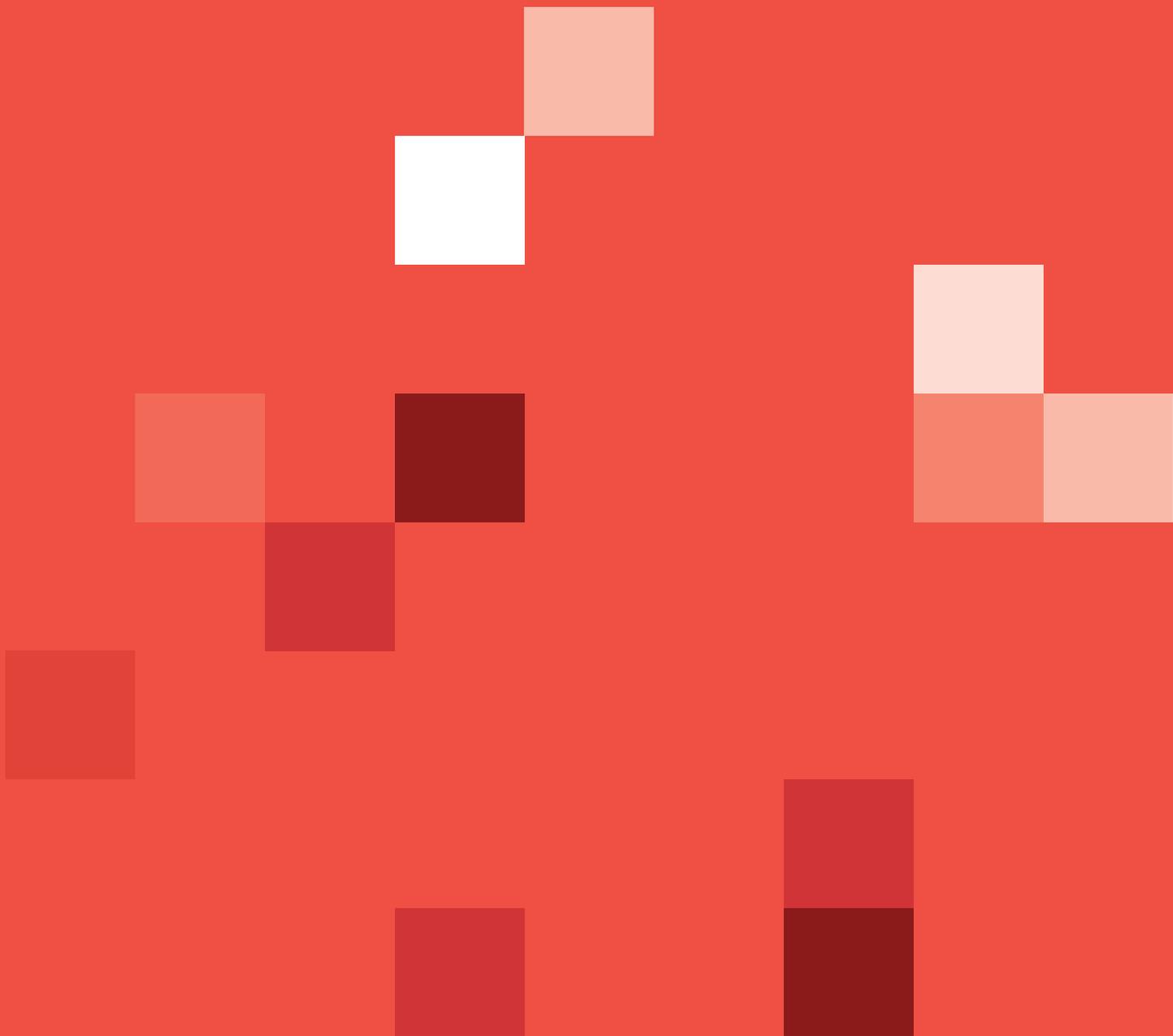
introduction —
the P20 initiative

data to leave no one behind

Introduction – the P20 initiative – data to leave no one behind

The P20 Initiative is focused on how the Sustainable Development Goals (SDGs) set out in the 2030 Agenda for Sustainable Development (Agenda 2030) can work with the data revolution to deliver progress for the poorest 20% of the world's population – the P20.

Agenda 2030 includes specific commitments to end extreme poverty and ensure that no one is left behind. The logic is clear: for these goals to be met, it is essential to know who the people in the poorest 20% are and whether they are included in global progress.

Existing statistics help to track national averages but they do not focus enough on who is included and who is left behind. In any country, if the status of the P20 fails to improve, success on Agenda 2030 will be out of reach – regardless of overall progress at national level.

The P20 Initiative promotes data that puts people first. It focuses on simple measures, drawn from the SDG framework, that assess the progress of the people in the poorest 20% of the world's population to ensure that those furthest behind are benefitting from efforts to tackle poverty and improve growth.

The P20 Initiative puts forward three 'bellwether' indicators to maintain a focus on one big question – are the poorest 20% of people getting their share of global progress? To answer this question, the P20 Initiative will track over time if the people in the poorest 20% of the world's population are better off, better nourished and counted by their governments.

**counting
the P20**

Counting the P20

Why the P20?

The global ambition to make sure that no one is left behind is at the core of Agenda 2030 and the Sustainable Development Goals (SDGs). If this ambition is to be achieved, it is essential that those furthest behind, and those most at risk of being left behind, are reached first and share in progress.

The SDG agenda is much more ambitious than its predecessor, the Millennium Development Goals (MDGs), and while there was huge progress during the MDG period, the goal of ending poverty by 2030 will be harder to achieve and will require new tools and a new mindset.

Growth has been very important in lifting unprecedented numbers of people out of poverty over the last 20 years and has been the engine that has halved the proportion of people in poverty. But it has also left many people behind: the majority of the P20 (54%) live in countries that achieved average annual GDP growth rates below 4% from 1990 to 2012.[2]

Existing measures of progress, like growth, usually track national averages, but to understand who is included and who is left behind, disaggregated and individual-level data is needed; counting people to make people count. Without this data it is literally impossible to know who and where those furthest behind are, and what holds them back. The absence of appropriate data puts a brake on the ability to design effective policies, to target services and investment, and to deliver accountability.

This is why the P20 initiative is focused on using the best available data to monitor progress for those in the poorest 20% globally and in every country. The logic is clear: if the status of the P20 fails to improve, success for Agenda 2030 will be out of reach – regardless of progress at the national level.

Who are the people in the P20?

The P20 are the 1.4 billion men, women and children who are the poorest 20% of the global population. The P20 includes everyone currently living below the international poverty line plus the people who are most vulnerable to falling back into extreme poverty.

The goal of eradicating extreme poverty focuses on lifting everyone above a poverty line – currently $1.90 a day. The P20 Initiative works on an additional frame of reference. Instead of looking at specific poverty lines, it focuses on the progress among the group of people most likely to be left behind. Currently the people in the P20 live on something between $1.00 a day and $2.56 a day.[3] Given these levels of income and the gap between the P20 and everyone else, it is reasonable to conclude that one in five people in the world, the P20, are not only in poverty, but also vulnerable to being left behind over the next 15 years. By focusing on the conditions of this group – the poorest fifth of the world's population – there will be a continuously applicable measure of inclusion, regardless of poverty lines.

The P20 is also a general term – it refers to the most excluded 20% in any circumstance and what matters is not exactly how it is measured, but that everyone should focus on the people left out – the P20 that is relevant to them.

The available data tells us a bit about where the P20 live and what their income is. Other evidence tells us more about who they are and how they live. Findings from the Chronic Poverty Research Centre[4] show that in the P20:

- People are more likely to be casual labourers than to have a secure job – often working in hazardous environments and on exploitative terms.

- Children and older people will be working, but for very low returns.

- People are more likely to be living in insecure environments such as conflict-affected places, remote rural areas and urban slums.

- Families have very few assets, so an illness, the loss of work, a mudslide or a drought can push people into deeper, and sometimes intergenerational, poverty.

- People are also likely to be held back by discrimination that reinforces disadvantage – this may be because of where they live or aspects of their identity such as gender, religion and caste, sexual orientation, disability, age and citizenship status.

For the P20, as Table 1 shows, work is often the route out of poverty but secure jobs are rare. As the International Monetary Fund (IMF) notes, "Many individuals with low skills, in particular, remain trapped in precarious jobs, often in the informal and unregulated economy. In such jobs, even full-time employment tends to be insufficient to lift households out of poverty."[5] The result is that too many people in the P20 are born poor, die young and are likely to pass poverty to the next generation.

Table 1

Share of households escaping poverty, by region and reasons for escaping

	Share of households, by region					
Reasons for escaping poverty	Rajasthan, [India]	Gujurat [India]	Kenya [country sample]	Andhra Pradesh [India]	Central and Western Uganda	Puno and Cajamarca [Peru]
Diversification of income informal sector iversification of income informal sector	58%	35%	77%	51%	52%	44%
Diversification of income, crops and livestock	39%	29%	64%	48%	41%	69%
Private sector employment	7%	32%	9%	7%	9%	8%
Public sector employment	11%	39%	11%	10%	6%	5%
Government / NGO assistance	8%	6%	3%	7%	3%	4%

Source: Krishna, A, 2010. One Illness Away. Why people become poor and how they escape poverty. Oxford University Press.
Notes: The total of percentages reported in each column adds up to more than 100% because more than one reason was involved in most cases.

This is why inclusion in growth is so crucial. And while growth has been very important in lifting large numbers of people out of poverty over the last 20 years, it has also clearly left many people behind. The majority of the P20 (54%) are living in countries that achieved average annual GDP growth rates below 4% from 1990 to 2012.

The data suggests that people in poverty share very similar perceptions of what it means to be poor – regardless of where they live. Table 2 shows how poor people describe what it means to be poor and their perception of the stages of progress out of poverty. Once a family got as far as the pink box shown in the table they were no longer considered in poverty either by themselves or their peers.

Table 2
Stages of progress defined by people in Peru, Kenya, India, Uganda and the USA

Stage of progress	Cajamarca and Puno (Peru)	Western Kenya	West and Central Uganda	Andhra Pradesh (India)	Gujarat (India)	Rajasthan (India)	North Carolina (USA)
1	Food	Food	Food	Food	Food	Food	Basic shelter
2	Clothing	Clothing	Clothing	House repairs	Clothing	Primary education	Food
3	House repairs	House repairs	Primary education	Debt repayments	Primary education	Clothing	Transportation – cheap used car
4	Purchase small animals	Primary education	House repairs	Clothing	Debt repayments	Debt repayments	Clothing
5	Primary education	Purchase small animals			House repairs/ roof		Telephone
6	Purchase small plot of land				Renting land, sharecropping		TV
7							Better car, debt repayments

Source: Krishna, A, 2010. One Illness Away. Why people become poor and how they escape poverty. Oxford University Presses.

The P20 is not a static group. The data from the Chronic Poverty Research Centre found that between 20% and 60% of the people who escaped poverty in six countries fell back within 10 years.[6] While some people are escaping poverty and building more prosperous and secure lives, others are falling into poverty. That is why individual, continuous and disaggregated data is needed to design policies that will address both those who are in poverty now and those who are vulnerable to falling into poverty in the future.

The data used to build Table 2, which has tracked over 35,000 families over time, shows that in 36 villages, 65.6% of households were poor 25 years ago, and 63.5% are poor now. But such figures include different experiences. Over the same 25 years, 14% of households became better off but another 12.2% fell into poverty. As this research illustrates, the P20 is an ever-changing group of people some of whom are climbing out of poverty, some of whom are left behind and others who are becoming poor. However, the data on individual experiences is very weak. Monitoring the extent to which people are moving in and out of poverty and are able to take up opportunities and improve their lives is difficult. Little data is disaggregated within the household, surveys find it hard to capture information on small groups, and in many countries there is no functioning civil registration system to provide the bedrock for continuous data[7] on individuals. The number and quality of surveys has been improving and the majority (69%) of the P20 live in countries that have had an internationally comparable poverty survey in the past four years. However, the data for 15% of the P20 – approximately 200,000 people – relies on surveys conducted before 2000 and 14% are estimated to live in countries for which there has been no survey. Data on those countries will be based on applying regional averages and says nothing about who is left behind.

Where do the people in the P20 live?

People in the P20 live across more than 100 countries, with more than half living in four countries: India (490 million), Nigeria (113 million), China (84 million) and Indonesia (68 million), all of which are classed as middle income countries. The remaining 681 million people are in about 100 other countries.

490m India

113m Nigeria

84m China

68m Indonesia

> 100 other countries
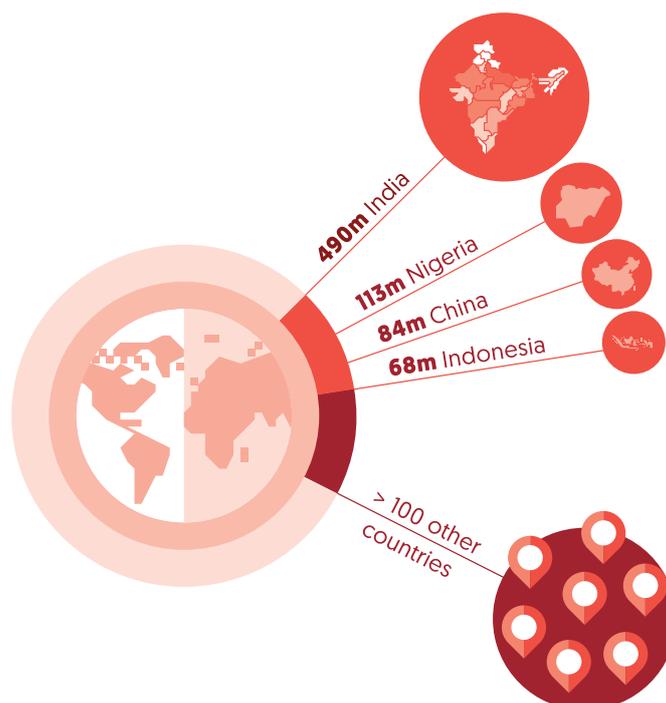
Source: Development Initiatives based on PovcalNet

Countries such as India and Indonesia were often praised for the rapid progress they made in reducing poverty rates throughout the MDG period. However, the focus on tracking progress using national aggregates meant that national level progress often masked considerable differences at the subnational and individual level.[8]

Figure 2

Number of people in the P20 by level of GDP growth
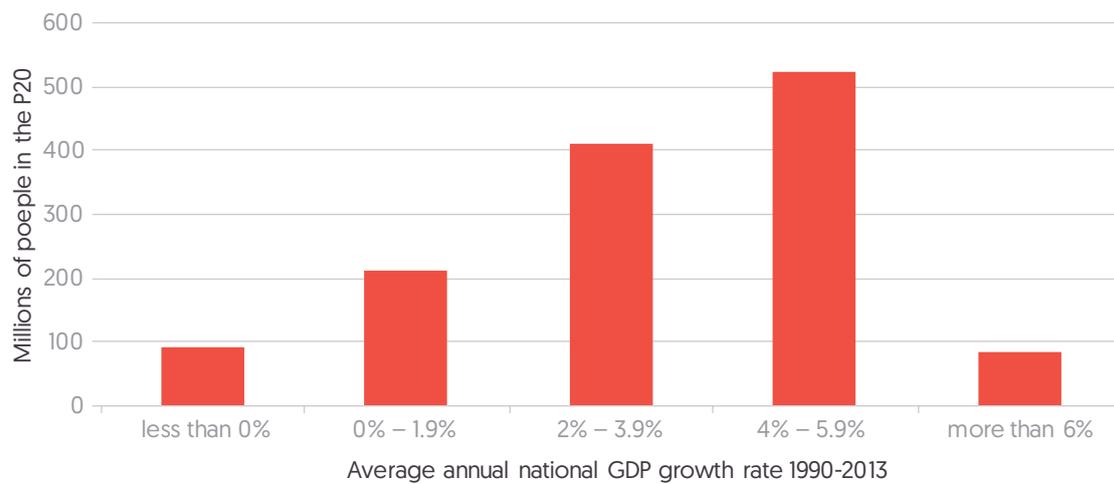
Source: Development Initiatives based on PovcalNet: http://iresearch.worldbank.org/PovcalNet/ and World Development Indicators GDP growth (annual %) http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG

As Figure 2 shows, between 1990 and 2013 even countries with high national GDP growth were home to a large number of people in the P20. Growth at the national level does not mean the whole population shares in that growth.

Figure 3

The number of people in the P20 by country
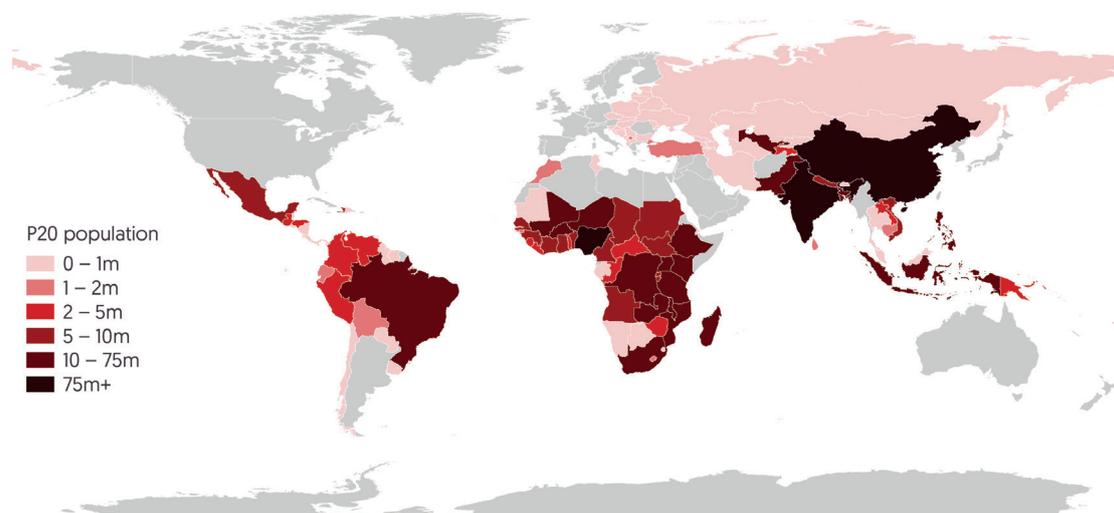
Source: Development Initiatives based on PovcalNet as well as selected Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS), China Family Panel Studies (CFPS), and Brazil National Demographic and Health Surveys (PNDS) (see sources table (www.devinit.org/p20-initiative-data-to-leave-no-one-behind) for more details)

Within regions there are significant differences, even between neighbouring countries. In Latin America, for those countries where data is available, Brazil has the largest number of people in the P20 with 14.0 million. Trinidad and Tobago has the smallest number at 8 thousand. The country with the largest percentage of its population in the poorest 20% globally is Haiti, at 63%. Uruguay and Trinidad and Tobago have the lowest percentages at 1%.

In Africa, of the countries where data are available, the largest numbers of people in the global P20 live in Nigeria (113 million) and the Democratic Republic of the Congo (DRC, 62.0 million), while another 355 million people in the P20 live across the rest of the continent. The country with the highest percentage of its population in the global P20 is the Central African Republic (CAR) with 88% while Mauritius has the lowest percentage at 2%. There are six African countries that do not have data available: Algeria, Egypt, Equatorial Guinea, Eritrea, Libya and Somalia.

Figure 4

The number of people in the P20 in Africa by country
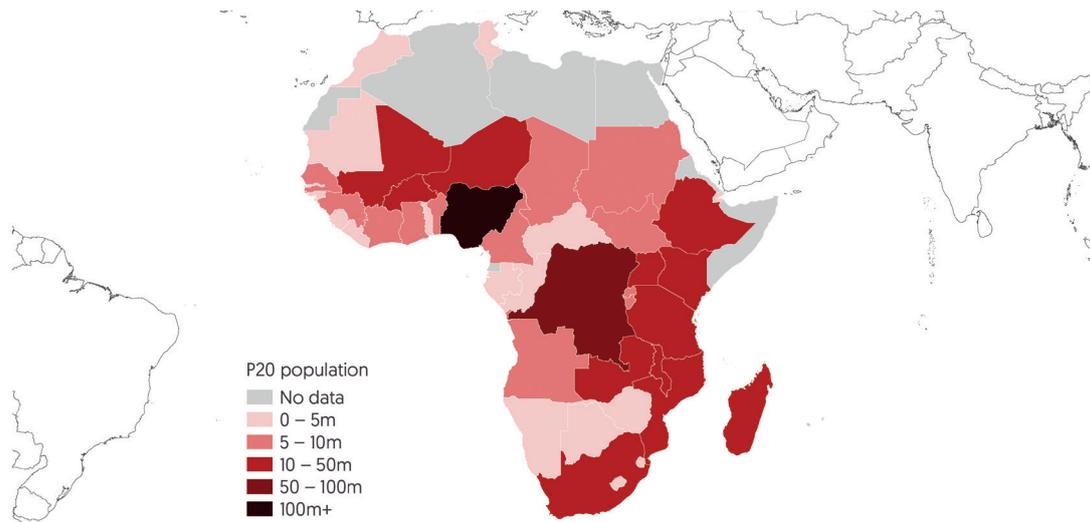
P20 population
- No data
- 0 − 5m
- 5 − 10m
- 10 − 50m
- 50 − 100m
- 100m+

Source: Development Initiatives based on PovcalNet as well as selected DHS and MICS
[see sources table (www.devinit.org/p20-initiative-data-to-leave-no-one-behind) for more details]

Figure 5

The number of people in the P20 in Asia by country

P20 population
- No data
- 0 − 75m
- 75 − 150m
- 150 − 200m
- 200 − 250m
- 250m+
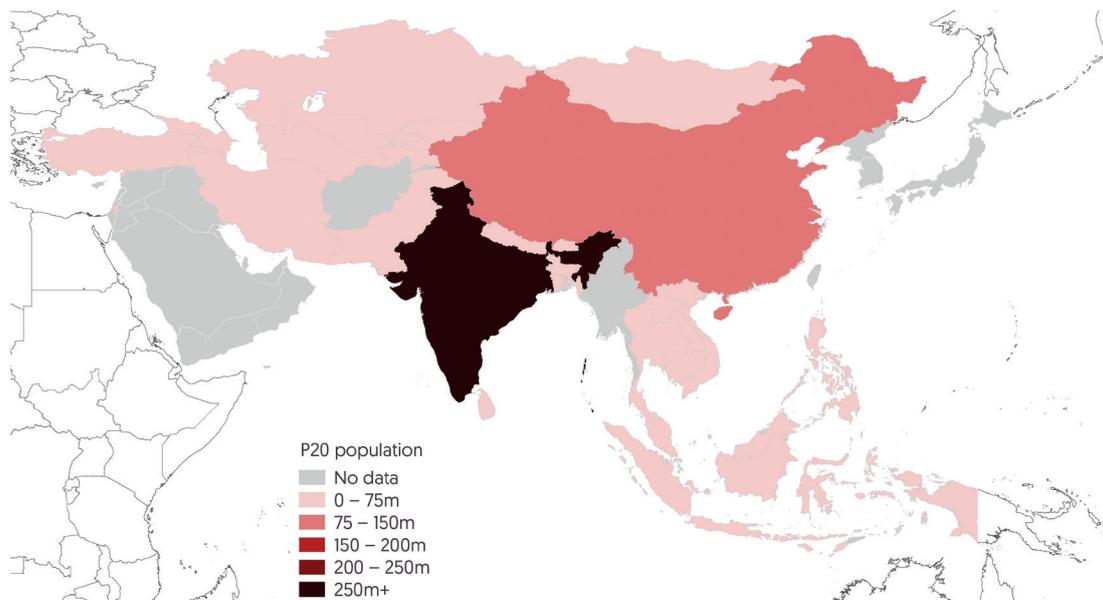
Source: Development Initiatives based on PovcalNet as well as selected DHS, MICS and CFPS
[see sources table (www.devinit.org/p20-initiative-data-to-leave-no-one-behind) for more details]

Asia is home to 800 million people in the global P20. India (490 million) and China (84 million) alone account for approximately 42% of the global P20 population.

Figure 6

The number of people in the P20 in India by state
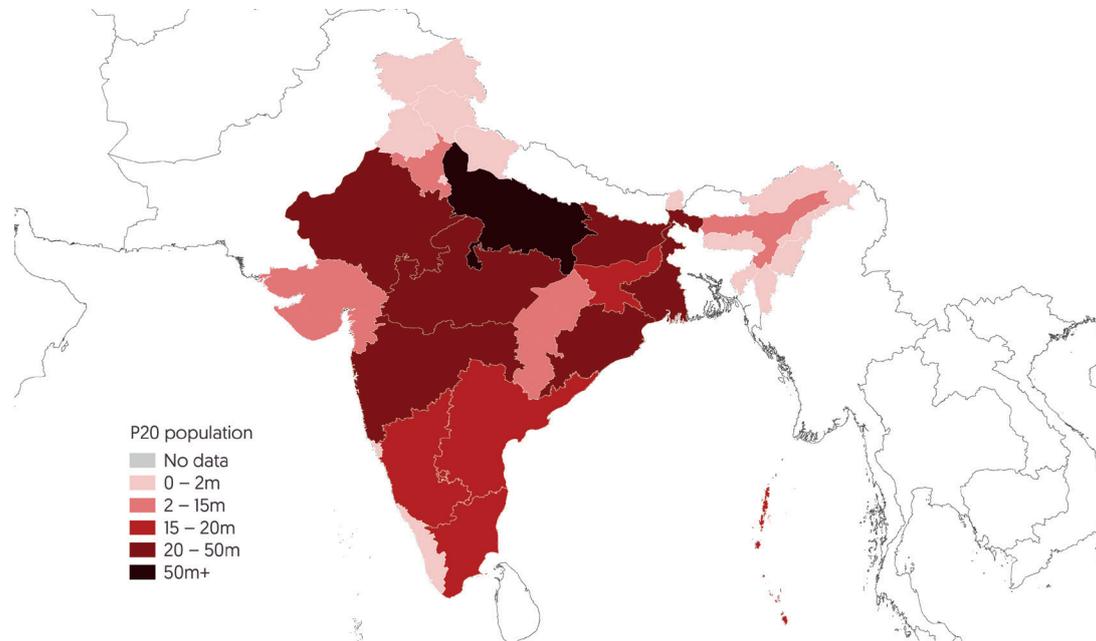
Source: Development Initiatives based on PovcalNet and India DHS 2006

India is home to 490 million people in the poorest 20% of the world's population but there are wide variations between states. Uttar Pradesh in the north is projected to have the largest number of people in the P20 of any Indian state at about 80 million. In contrast Sikkim in the north east of India has the smallest number of people in the P20 at about 0.5 million.

Between now and 2030 the P20 Initiative aims to present increasingly detailed data about where the P20 live, showing the numbers and the extent of inclusion in progress district by district so that resources and policy can be effectively targeted and monitored.

What is the state of the data on the P20?[9]

This report focuses mainly on the global P20 – the poorest 20% of people in the world – and establishes a baseline for monitoring their progress using the best data that is currently available. While this data has its limitations, it would be a mistake to wait for ideal data to make progress: we need to get the most out of what we already have.

There is a lot of data available from official and non-traditional sources, and by joining up different sources, applying new technologies and, crucially, asking the right questions, a lot of progress is possible. Nevertheless, better data will help to achieve much better results. So at the same time as making full use of what is available now, it is necessary to drive rapid progress on civil registration and vital statistics, disaggregated data and the systems and standards that enable the data to be properly applied to achieving progress.

The methodology chosen for the P20 Initiative counts the poorest 20% of the world's population and gets as close as possible to clear data on where they live and what their characteristics are. There remain many debates about how best to measure poverty – but the priority is to do something about it, whatever measure is used. For the purposes of the P20 Initiative, the methods selected are straightforward, based as far as possible on internationally comparable data, and will be used to track progress for people on an annual basis.

The method chosen to identify the people in the P20 is based on income. This does not mean poverty is defined by income. The experience of poverty and exclusion is multidimensional and interventions, policies and resources need to be invested to address many intersecting dimensions of people's lives. But in order to provide top-line data and identify the people in the poorest 20% of the world's population we use income as the starting point (see Annex 1 for the detailed methodology).

The income measures themselves rely on survey data and achieving comparability relies on international comparisons. Both have serious limitations and shortcomings but they do nonetheless enable valuable insights drawn from analysis of people who tend to be at the bottom of the distributions.

- Many surveys do not record information on marginalised and excluded groups such as homeless people, people living in institutions, refugees, migrants and nomadic groups.

- For countries where data is not available, regional averages are applied. The countries without data are often those most affected by conflict and insecurity and home to people who are most likely to be in extreme poverty and excluded from progress.

- Absence of civil registration data on the whole population means that it is not possible to say exactly who is missing and who is included – which is a logical necessity to meet the goal of leaving no one behind.

- Prevalence data tells only the likelihood of something happening, it does not count the people who are affected. Data for measuring progress under the SDGs is often based on prevalence estimates and relies on national averages[10] which, by definition, cannot say who is left behind.

- Poverty measurement itself is affected by respondent recall, the training of the enumerators who conduct the survey, definitions, sampling frames and many other factors.

- We know that poverty and exclusion are reinforced by discrimination arising from people's identities – but there is little standardised measurement of even the most fundamental aspects of identity – gender, age and disability.

- Survey data is mostly at household level. We know that within households, people with certain characteristics tend to be poorer – older people, people with disabilities, household members who are servants – but we have little data about them.

## How have the numbers on the P20 been calculated?

The income and global distribution of the P20 numbers rely on PovcalNet. PovcalNet draws on national surveys to compare poverty rates across countries and time. While there is lively debate about the methods used in PovcalNet, and despite some of its limitations, it currently is the best way to approximate the number of people living in the P20.

However, the PovcalNet data does not have much information about the characteristics and status of the P20, so other surveys, specifically DHS and MICS,[11] have to be used. This report draws on PovcalNet for the number of people in the P20 in each country, which we then use to analyse other data sources. So if 47% of Ugandans are shown to be among the poorest 20% of the world's population according to PovcalNet, this method takes Uganda's most recent DHS or MICS survey to identify the poorest 47% of the population and all the information that has been gathered about them.

The methodological limitations mean the numbers in this report are not definitive. They are based on the best that is possible with the existing sources of data and we hope that better and more open data will provide alternative methods. We could wait for years for ideal datasets to emerge without being able to say anything on the status of the most vulnerable people so we conclude that it is more important to make reasonable and completely transparent use of data that is available now for decision-making.

For further and more detailed information on the methodology for the P20 Initiative please consult the supporting materials at www.devinit.org/p20i
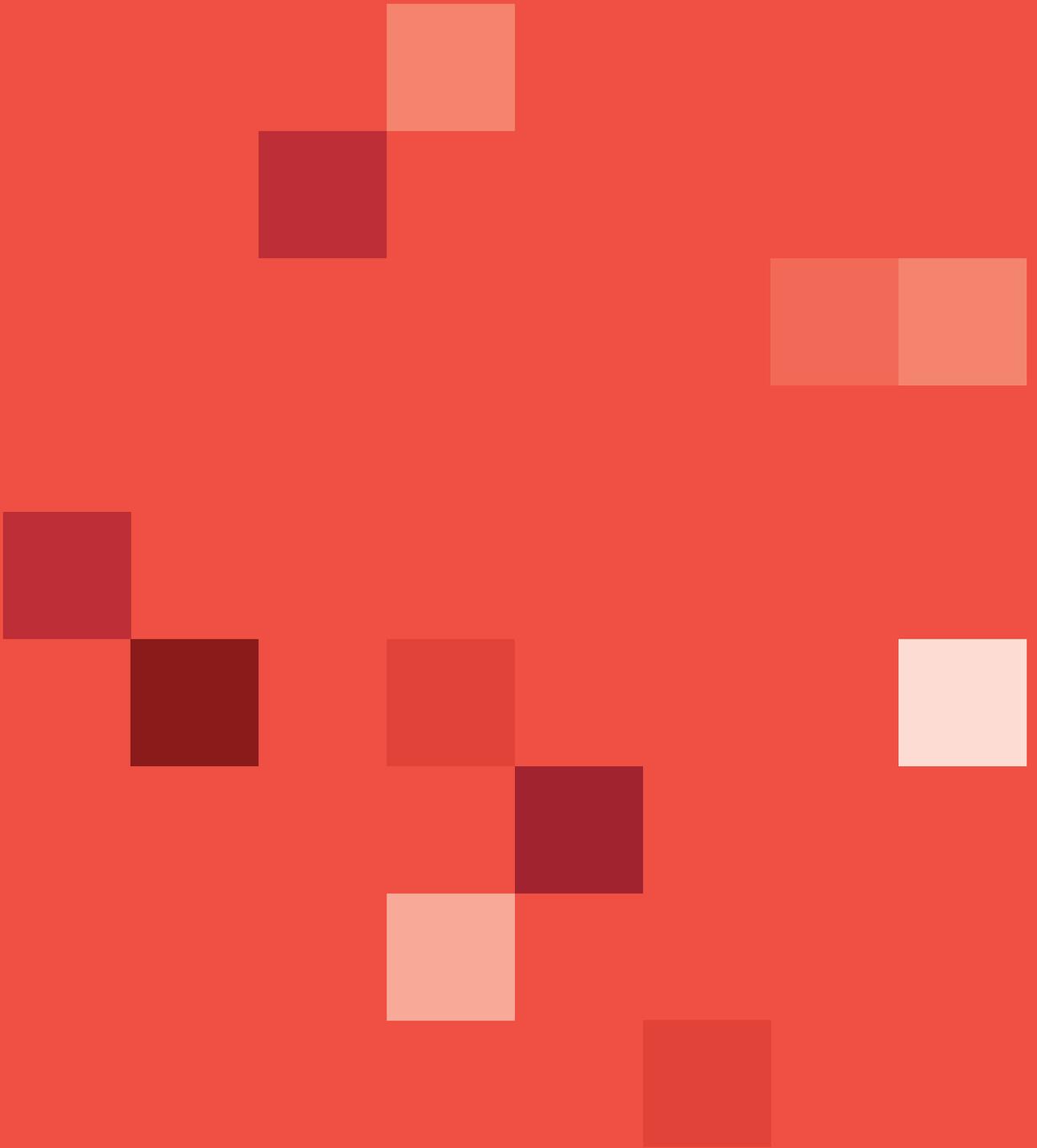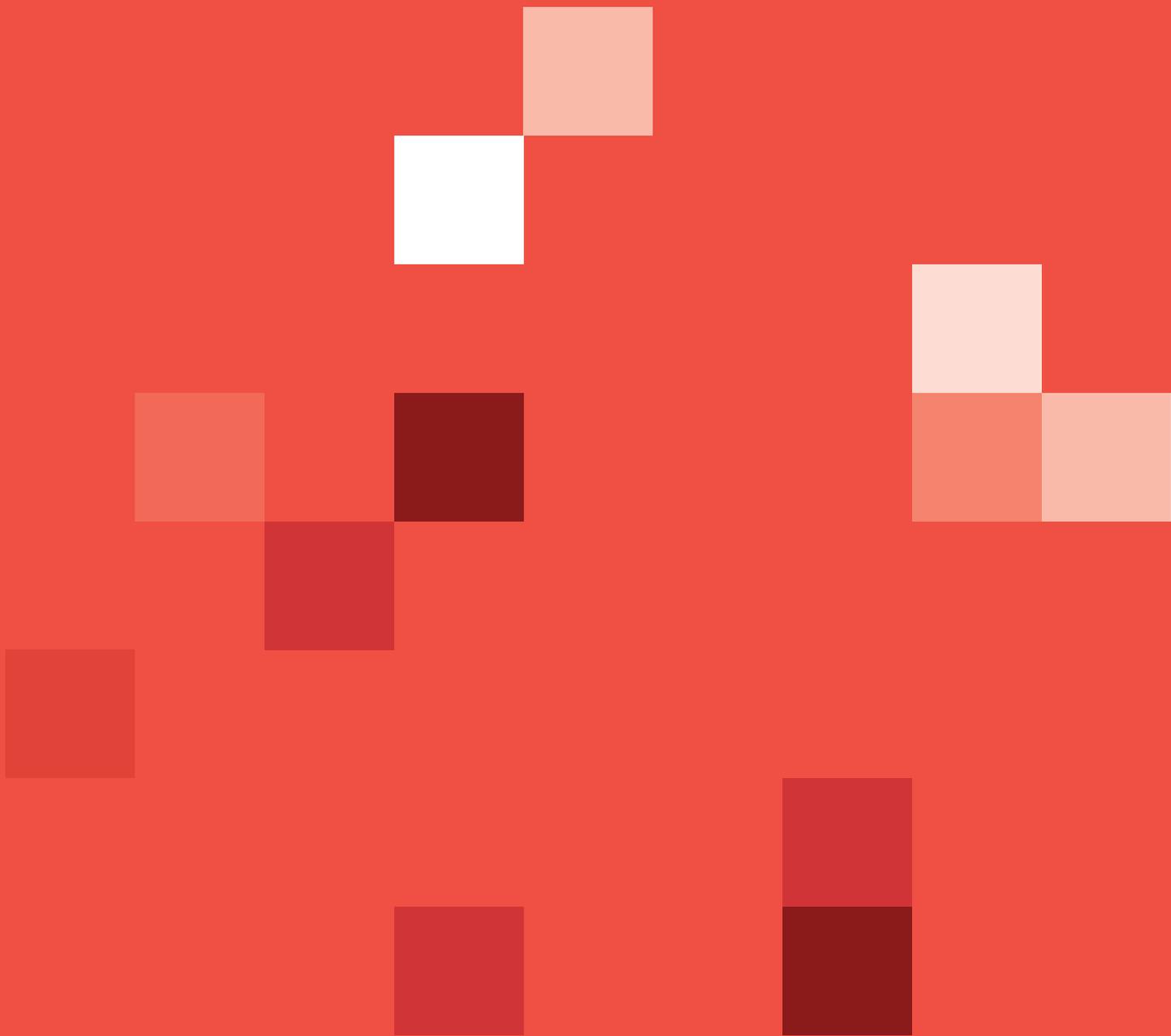
**the
bellwethers
of progress**

The bellwethers of progress

The P20 is a simple idea, designed to keep political attention on the key question of whether the world's poorest people are being included in progress.

The world has set itself 17 goals, with 169 specific targets and around 230 indicators of progress. That is over 400 things to remember. There is a real danger that people will get lost in the detail and lose focus on key issues, such as the eradication of poverty.

That is why the P20 Initiative has three bellwethers of progress:

Are people better off?

Are people better fed?

Are people known to their government?

If these three things are not going in the right direction it is very unlikely that other global goals will be met.

Figure 7
2030 target for ending extreme poverty

Why are they important?

Progress in these bellwethers underpins progress elsewhere:

- Rising *incomes* give people choice and control over the goods and services they need – whether to invest in a home or a livelihood, food, health, education or information (see Annex 1).

- Better *nutrition* underpins health, as well as the ability to learn and earn (see Annex 2).

- *Civil registration* means people are counted and have rights as citizens. Governments cannot begin to track if everyone is included in progress if they do not know they exist (see Annex 3).

Income

Poverty is multidimensional. Living in poverty often means going hungry or being malnourished. It means limited access to education and other basic services such as healthcare, restricted opportunities, and limited rights through social discrimination and exclusion from participating in decision-making.

Income is a predictor of wellbeing. It is the standard and most widely used indicator of poverty and as such is one of the key building blocks to achieving the first sustainable development goal of ending poverty in all its forms everywhere and in particular ending extreme poverty. Income gives people choice and control. It is a key test of whether people are included in economic growth.

The most recent data on average income for the P20 is from 2013. It shows the average daily income for the 1.4 billion people in the P20 was $1.75 a day, compared with an average of $24.90 a day for the rest of the world.

Figure 8

Average daily income of the P20 compared with everyone else
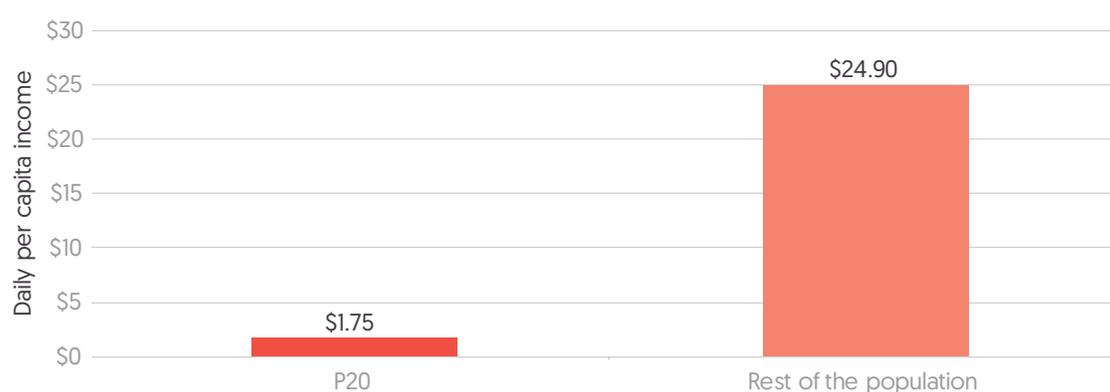
Source: Development Initiatives based on PovcalNet: http://iresearch.worldbank.org/PovcalNet/ and World Development Indicators http://data.worldbank.org/indicator/NE.CON.PRVT.KD

Even a quick glance at Figure 8 shows how far the average person among the P20 is behind the average person in the other 80% of the world's population in income terms. The poorest 20% of the world's population all live on less than $2.56 per day.[12] The *increase* in income since 1990 for the majority of the world's population – 80% of people – is five times the *total* income of the P20.

There is no doubt that income growth is important for poverty reduction. Over the period 2000 to 2015, a combination of income growth and concerted action to deliver on the MDGs was successful in halving the proportion of people globally living in poverty. But Figure 9 shows how, at the same time, the P20 have been excluded from the benefits of growth over the past 25 years and why, to deliver on the SDGs, it is essential to focus on including this poorest 20% of people.

Figure 9
P20 share of global GNI and projections to 2030
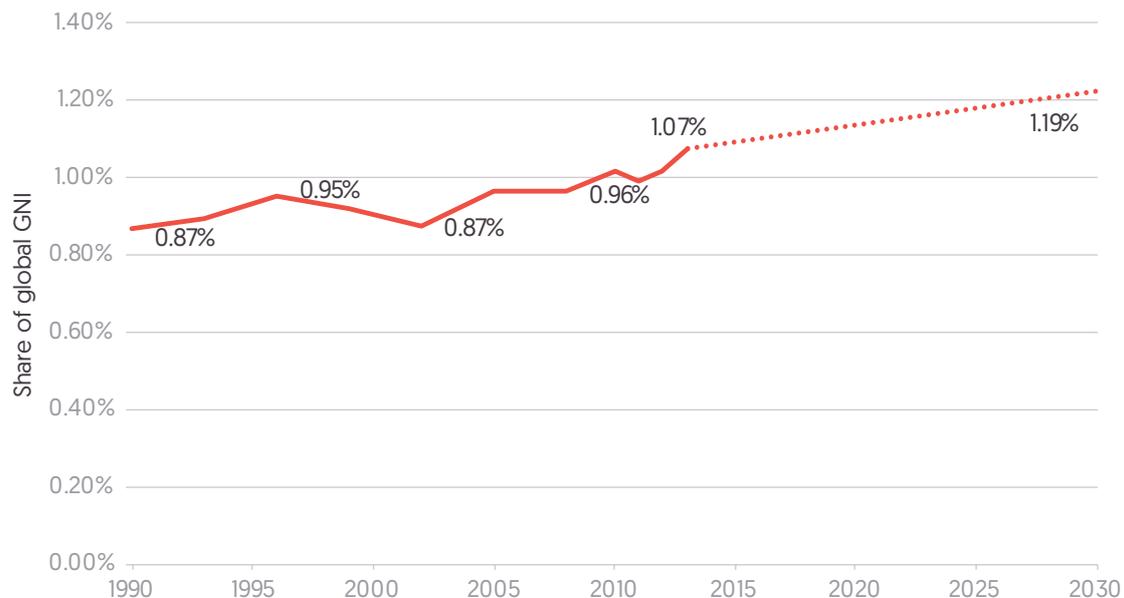
Source: Development Initiatives based on PovcalNet: http://iresearch.worldbank.org/PovcalNet/ and World Development Indicators
Notes: GNI: gross national income

Since 1990, the rate of growth for the P20 (2.7% average annual growth) has been faster than for the rest of the population (2.0%). But because the P20 start from such a low base, this growth only translates into very small dollar increases. The average income for the P20 grew by $0.79 per day; the average for the rest of the population grew by $8.91 per day. As Figure 10 shows, if current trends continue, the existing gulf in average daily income between the P20 and the rest of the world's population will grow from $23 per person in 2013 to $29 in 2030. The P20 share of global income will increase – from 1% to 1.5% over 15 years.

Increased incomes for the poorest 20% of the population will not just deliver security to individual families. Better livelihoods and opportunities increase cohesion and reduce migration pressures and vulnerability to exploitation such as child labour, human trafficking and modern slavery. Issues of global and national concern are often concentrated in the P20, for instance over half of people reported as having tuberculosis (TB) in India are in the P20.[13]

Helping the poorest people to accumulate assets and skills increases aggregate growth, creating market opportunities and helping to make everyone better off. Currently the total spending power of the P20 is $915 billion. When the goal of ending extreme, dollar-a-day poverty is reached and everyone is living above the international poverty line, there will be a further $160 billion being spent by the world's poorest people every year.

Source: Development Initiatives based on PovcalNet: http://iresearch.worldbank.org/PovcalNet/ and World Development Indicators
http://data.worldbank.org/indicator/NE.CON.PRVT.KD
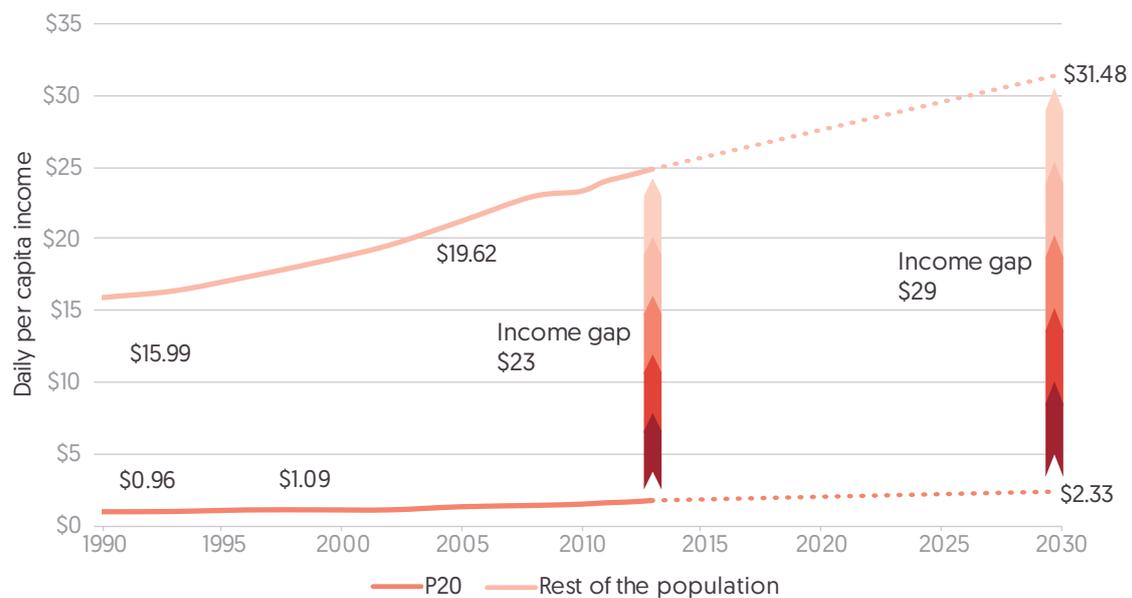
Reaching those furthest behind first

The first imperative in leaving no one behind is to get everyone in the P20 above the global extreme poverty line – currently $1.90.

Progress has been made for some in the P20 since 1990, with the highest income level of those in the poorest 20%, the P20 threshold ($2.56), moving above the international extreme poverty line in 2008. The median income of the P20 (the line that separates the population in two equal halves – one half with income above the line, the other with income below) is just under $1.90 per day and is very likely to be above the international poverty line by 2030. This signifies great progress. But many in the P20 are still being left behind.

It is not enough to lift the average or the median above the poverty line. The internationally acceptable floor below which nobody is expected to be able to exist (the so-called consumption floor) needs to move up.[14] This is a key point for policymakers. If steps are not taken to lift the consumption floor then a growing gap between the P20 and everyone else is inevitably built into the system. This is because the incomes of every other quintile will rise with growth – but if the consumption floor stays the same, the poorest quintile is always dragged down by a minimum that does not change. The idea of leaving no one behind is simply incompatible with a global minimum standard that does not change over time in line with increasing global wealth.

The consumption floor did not rise between 1990 and 2013 and has remained at roughly the same level for over 20 years. The economist Martin Ravallion has written, "The bulk of the developing world's progress against poverty has been in reducing the number of people living close to the consumption floor, rather than raising the level of that floor. In this sense, it can be said that the poorest have indeed been left behind."[15]

Figure 11

The path to progress needed to ensure that everyone in the P20 is lifted out of extreme poverty
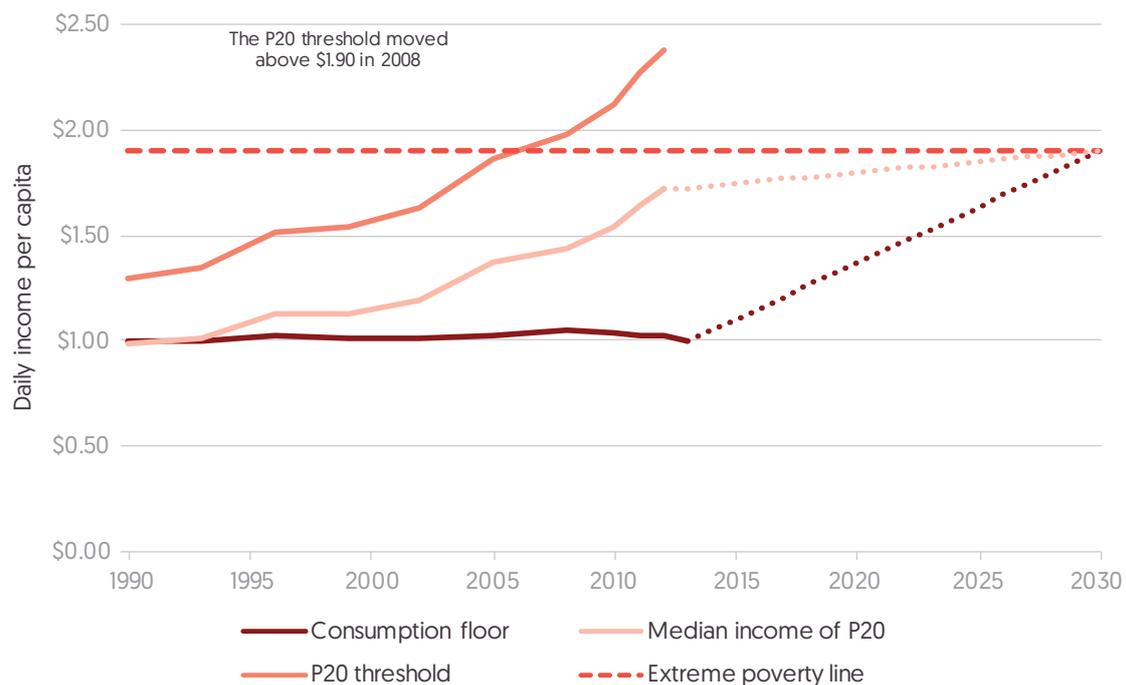
Source: Development Initiatives based on PovcalNet: http://iresearch.worldbank.org/PovcalNet
Note: The P20 threshold refers to the highest income in the P20. Currently everyone in the P20 has an average daily income of less than $2.56. The consumption floor represents an estimate of the minimum permanent level of consumption observed globally based on the $1.90 poverty line. If no one was left behind the consumption floor would rise rather than remain constant.

Nutrition

Nutrition is a bellwether of progress for two key reasons. First, because it is both a result of other investments in areas such as health, education, employment, women's empowerment, and poverty and inequality reduction. Secondly, nutrition is a fundamental prerequisite for human, social and economic progress with intergenerational impact both reflecting past deprivation and predicting the future: malnourished women are more than twice as likely as well-nourished mothers to have stunted children.[16]

Malnutrition underlies 45% of child deaths – approximately 3 million deaths per year. Basic nutrition underpins a child's ability to grow and learn and an adult's ability to work, take up opportunities and live a long and healthy life. Nutrition itself is represented under SDG 2 to end hunger, achieve food security and improve nutrition with the specific target of ending all forms of malnutrition by 2030. But in addition, without assured nutrition, it will be impossible to reach internationally agreed targets for basic health, education, economic prosperity and a range of other issues. The 2016 *Global Nutrition Report* identified 56 SDG indicators that serve as inputs to nutrition.[17]

Among the many measures of nutritional status, stunting (low height for age) is critical. If the incidence of stunting is not reduced, it is likely that many other SDG targets will be off track. Stunting is both an indicator of past deprivation and a predictor of future poverty. Last year, approximately 160 million children under five years were reported as stunted worldwide. In the P20, almost every other child under five was stunted.

Stunting is a lifelong brake on a person's potential and passes poverty from one generation to the next. The first, and sometimes second, generation offspring of malnourished parents have a higher likelihood of later-life health complaints (cardiovascular, metabolic).[18] Malnutrition in the womb has also been associated with educational deficiencies, with children getting lower scores in tests and school entrance exams.[19,20]

Figure 12

Stunting in children under 5 in the P20 compared with global average
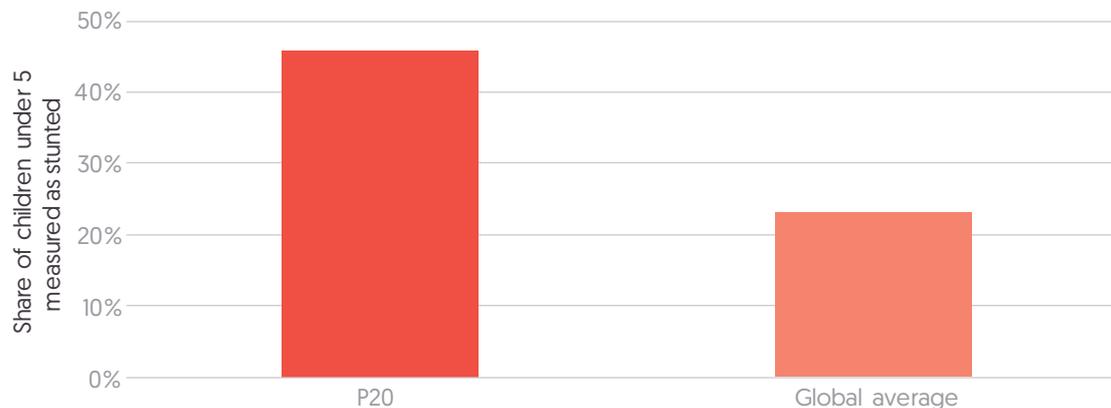
Source: Development Initiatives based on PovcalNet as well as selected DHS, MICS, CFPS, and PNDS
[see sources table [www.devinit.org/p20-initiative-data-to-leave-no-one-behind] for more details] and World Development Indicators
http://data.worldbank.org/indicator/SH.STA.STNT.ZS
Notes: Data is based on DHS/MICS surveys conducted in 75 countries between 2004 and 2014.

Since 1990, stunting rates have been declining with 100 million fewer children reported to be stunted now than 25 years ago. But business as usual is not enough; a big shift is needed to change trajectory. The world is not on course to meet the internationally agreed 2025 target for a 40% reduction in stunting rates from 2012, let alone the SDG target 2.2 of ending all forms of malnutrition by 2030. Based on World Health Organization (WHO) projections, levels of stunting will significantly exceed international targets by 2030. Extending the WHO projections forward, stunting would not be eliminated until 2078.

Figure 13

Progress needed to end stunting in children under five years of age by 2030
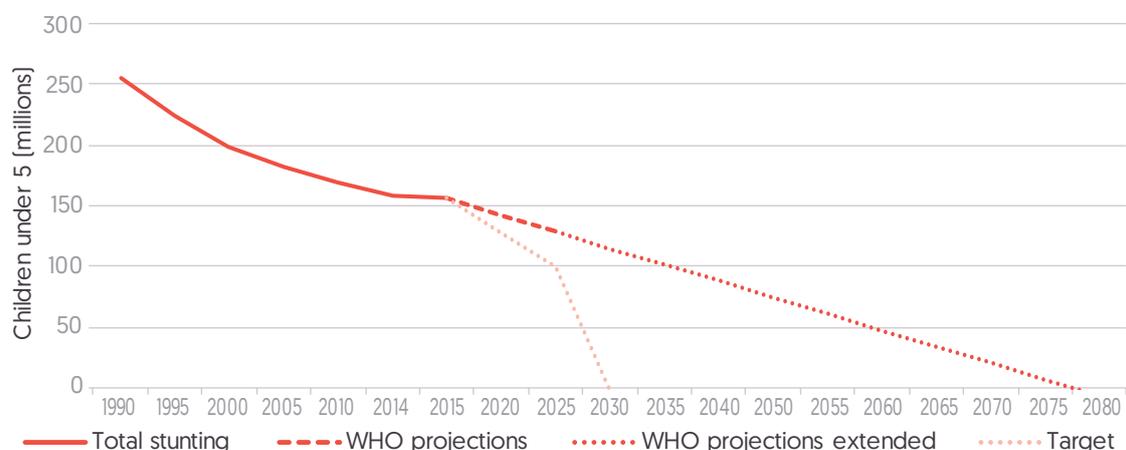
Source: Development Initiatives based on UNICEF–WHO joint child malnutrition estimates:
http://apps.who.int/gho/data/view.main.NUTUNSTUNTINGv

Disaggregated data is essential if the most fundamental goal of better nutrition for all by 2030 is to be achieved. Headline figures reveal the disproportionate burden shouldered by the P20 globally in terms of stunting, and within most countries there is a marked difference between the levels of stunting in the poorest wealth quintile and the rest of the country.

Figure 14

Prevalence of stunting comparing the people in the P20 with the rest of the global population
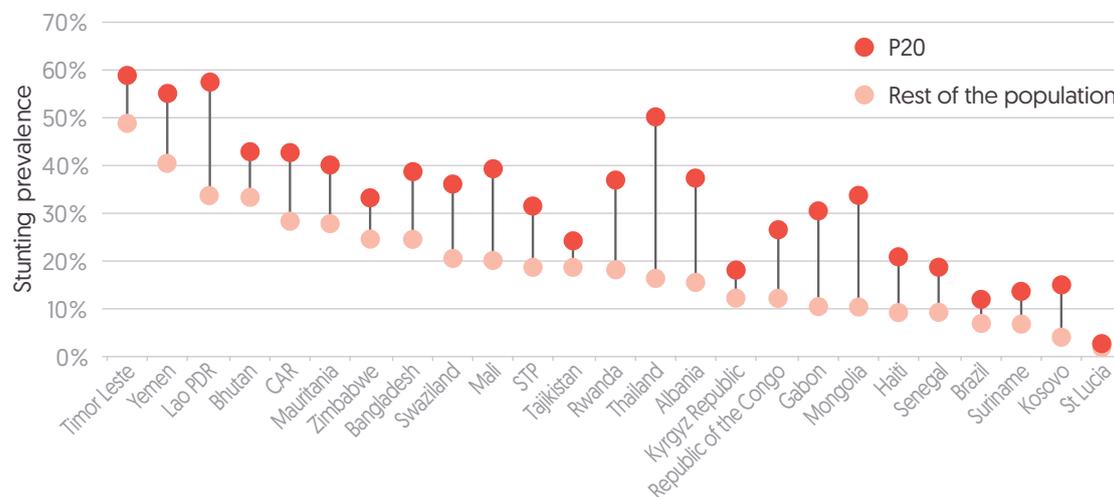

Source: Development Initiatives based on PovcalNet as well as selected DHS, MICS, CFPS, and PNDS [see sources table [www.devinit.org/p20-initiative-data-to-leave-no-one-behind] for more details]
Notes: Data is based on DHS/MICS surveys conducted in 75 countries between 2004 and 2014.

Disaggregated national data identifies subgroups that are more likely to be malnourished. Mothers younger than 18 are more likely to have stunted children so while the national average for stunting prevalence in Uganda is 13%, for mothers under 18 it is 23%. Children are also more likely to be stunted if their mothers have not completed their secondary education, and less than 6% of women in the P20 have completed secondary education.

Civil registration and vital statistics

What are civil registration and vital statistics systems (CRVS)?

"Civil registration is an administrative system to record occurrence and characteristics of major vital events (notably births and deaths).[21] The main function of civil registration is to provide individuals with documentation needed to establish legal identity and family relationships, make claims of nationality, exercise civil and political rights, access services and participate in modern societies."[22]

Civil registration means people count and have rights. If governments cannot register that every individual exists, they cannot begin to track if they have access to basic health, education or economic growth. While CRVS alone will not end poverty, it is critical for ensuring that no one is left behind, and therefore a bellwether of progress. Under the MDGs, progress was measured by the proportion of the population escaping poverty, but the SDG imperative to leave no one behind is a different dynamic and requires population data. It is not possible to know if people are missing if there is no data to show that they exist in the first place.

Civil registration and vital statistics is a bellwether for three main reasons:

- CRVS allow governments to know that their citizens exist, when they were born and when they have died. Without functioning civil registration systems, people will remain invisible and uncounted.

- Countries' abilities to monitor and steer progress towards the SDGs, realising goals for health and education, inclusion and equality depend on the availability of comprehensive CRVS systems.[23]

- People in the P20 are particularly likely to be disadvantaged by lack of legal identity and unable to prove family relationships, enter into contracts, protect their citizenship rights in society and at work or access services.

Figure 15
Birth registration rates for children under 5
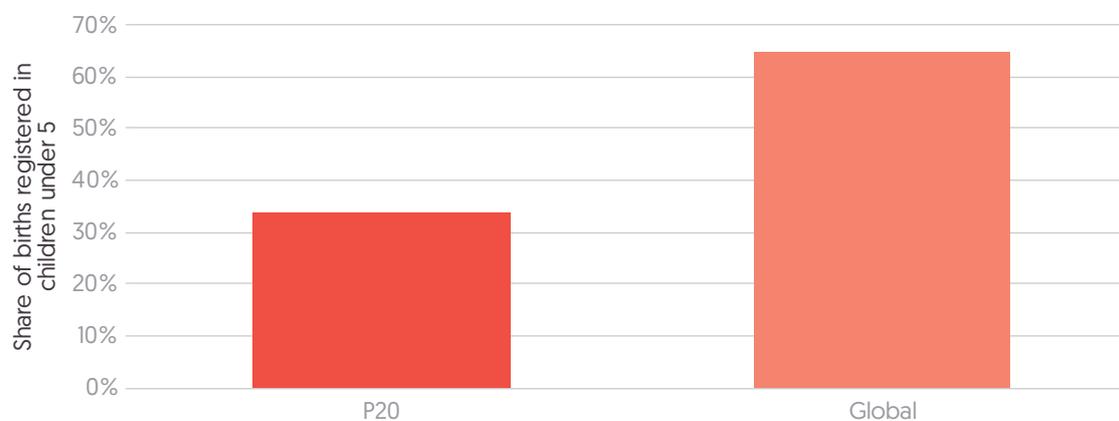
Source: Development Initiatives based on PovcalNet as well as selected DHS, MICS, CFPS and PNDS[24]

CRVS is the foundation of comprehensive and continuous information about individuals and means that each person is recognised before the law and by the state. It also provides the most fundamental information for services and investment to be planned, delivered and monitored so that, at a minimum, all people receive the basic services they need.

Globally, 65% of all births are registered, but among the P20 this is much lower with only one out of every three children (34%) having had their birth registered.

With the evidence of identity provided by civil registration, people are better equipped to access education, health services, social protection and employment, to open a bank account and buy or sell assets such as land. CRVS is fundamental to women's empowerment, increasing independent control over property, inheritance and family relationships. Children who have been registered are better protected from early marriage, child labour and exploitation.

The comprehensive nature of a well-functioning civil registration system, which records every birth and every death, means that no one can be invisible and policymakers can see the 'universe of need'. If a child's birth is not registered, their death is also unlikely to be recorded, leading to inaccurate estimates of progress on infant or child mortality. Data from CRVS can be paired with administrative data on health, education and other critical sectors to help plan, deliver and monitor basic services and basic rights.

There has been some progress in birth registration over the last decade. Overall estimates suggest that the world has moved from registering 58% of births in 2000 to 65% in 2010. UNICEF, which has been championing birth registration, reports the number of countries accumulating household survey data on birth registration rising from 61 to 100 between 2000 and 2012.[25] However, a more significant increase in registration and development of fully functioning CRVS systems will be needed to achieve the SDG target of 100% birth registration by 2030.[26]

Path of progress needed to achieve 100% birth registration by 2030
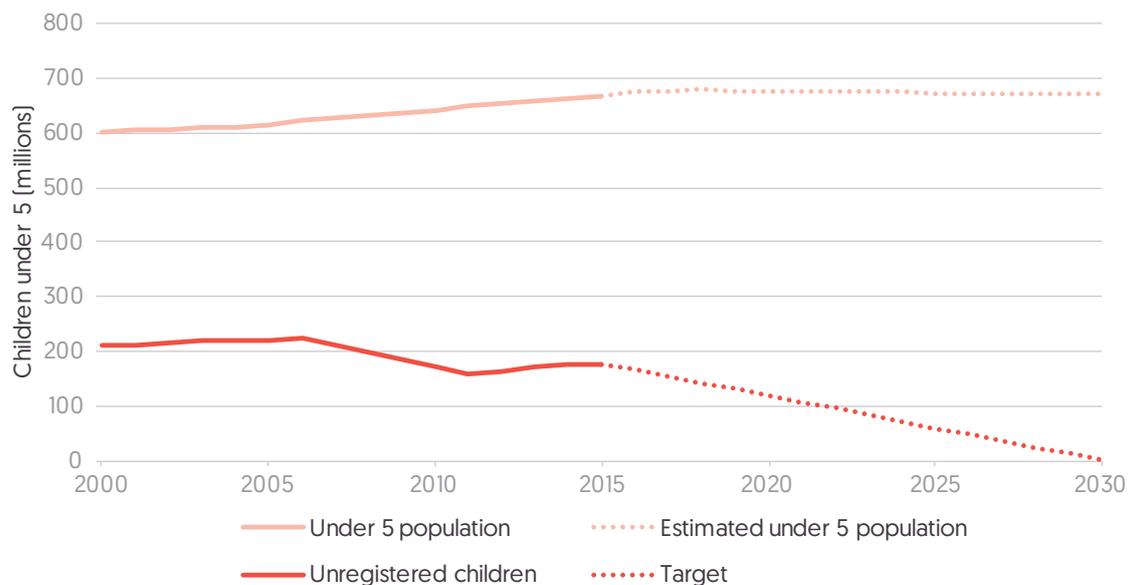
Source: Development Initiatives based on World Development Indicators: Completeness of birth registration % (interpolated): http://data.worldbank.org/indicator/SP.REG.BRTH.ZS

In some countries there has been strong progress. Liberia has moved from 4% to 25% of births registered in just six years, and Bangladesh moved from 10% to 37% in seven years. Countries with already high birth registration rates, such as Brazil and Vietnam, have continued to push towards 100%, but at a slower rate. In other countries there has been much slower and even negative progress; Chad, Malawi, Pakistan and Zambia have managed only modest increases over the past 15 years and Zimbabwe, which had 74% of births registered in 2006, had only 32% registered in 2014.

The baseline for progress for CRVS systems needs to be measured country by country. The starting points are given in Figure 17, which shows the percentage of births registered in each year since 2000 for selected countries where data is available.[27]

Figure 17

Percentage of births registered, 2005–2015
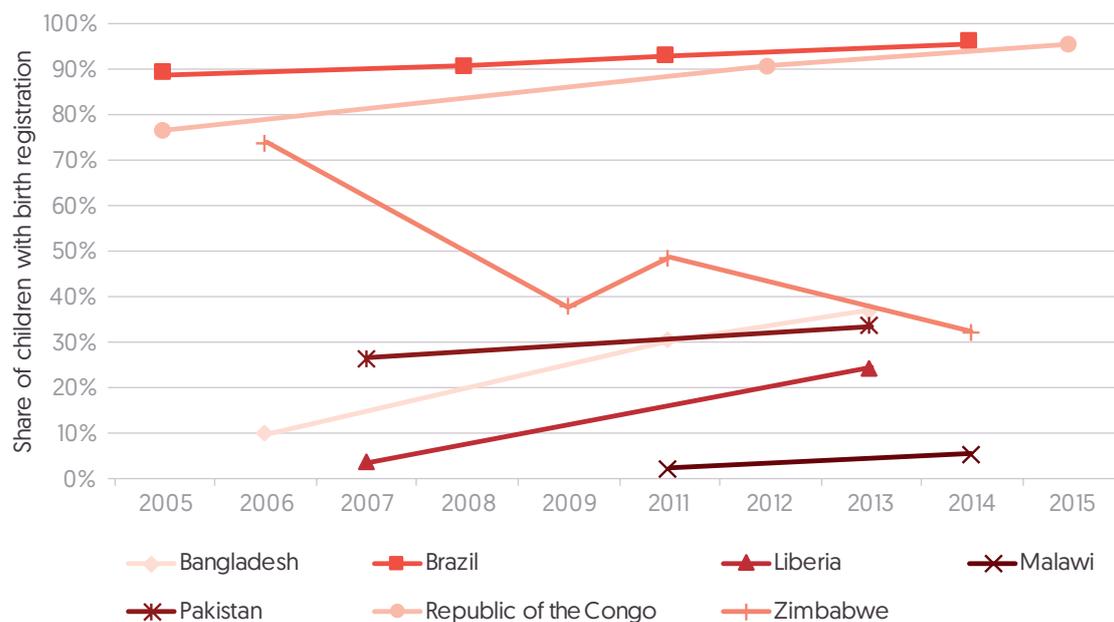
Source: World Development Indicators Completeness of birth registration % [http://data.worldbank.org/indicator/SP.REG.BRTH.ZS]

The expansion of civil registration is required to support inclusive progress. Civil registration is vital for people to access services, welfare and rights, and for governments to capture important information about their citizens for effective decision-making. It signals a move away from modelled estimates and surveys towards data collected at the level of every individual.

> **"When CRVS systems are dysfunctional, decision-makers and planners do not have the most basic information they need – about changes in population size, distribution, fertility and mortality patterns – to inform and formulate economic, social and health policies and respond adequately to people's needs for current and future services."[28]**

In addition to monitoring how many births are registered, it is important to have better information on the development of CRVS systems. There is currently no global database to monitor and assess CRVS.[29]

Bellwethers and other indicators

Progress against the three bellwethers, income, nutrition and CRVS, will be tracked and monitored annually to maintain focus on the key questions at the heart of successfully achieving Agenda 2030: are the P20 sharing in global progress? Who is being left behind? The bellwethers have been chosen as indicators of wider progress across a broader spectrum of sectors. Better nutrition means better ability to learn and earn. Higher incomes mean people have choice and control over the goods and services they need. Functioning and sustainable CRVS systems mean everyone is counted and provide foundation data and evidence needed to inform decision-making on the provision of services and allocation of resources.

But exclusion and inequality are about much more than these three bellwethers. The identities, circumstances and events of people's lives are multidimensional and intersecting. The following section looks at how marginalisation and exclusion for the P20 intersect, often reinforcing disadvantage with discrimination.

Data to leave no one behind – across all sectors and all actors

The P20 is about people – the whole person and whether their life is improving. This is about much more than income – poverty is multidimensional, and people typically face multiple deprivations that intersect with each other and are often mutually reinforcing. In addition, where a person lives, their gender, age, religion, ethnicity affiliations, citizenship and any disabilities they have are all aspects of identity that will affect the extent to which they can take up opportunities, participate in their societies, contribute to and benefit from progress.

The concept of the P20 is always relevant. It can be applied in any sector, in any place and at any time. For everyone who is trying to ensure that the world does a better job of including the poorest people in progress – whether that is a company selling goods, a government providing services and ensuring rights, an agency meeting needs, a bank offering financial services or civil society advocating change – the question of who the P20 are and whether they are sharing in progress should always be asked.

Inclusion and identity are linked so the data used to measure the progress of the P20 out of poverty must reflect this. Different datasets need to be joined up to show who is missing out on progress, to highlight the aspects of identity that lead to exclusion in different societies, and the investments that can work together to generate progress across sectors.

Many of these linkages are obvious but the relevant data is not always there to support decision-makers. For example, nutrition and education are linked – better nutrition is strongly associated with better educational outcomes[30] but investment in nutrition from government budgets is very low.[31] Children of indigenous people in Peru, with low productivities and incomes, have less access to schooling than other ethnic groups, so they too have low incomes when they grow up.[32] Religion, linguistic groups and geography in Nigeria overlap, reinforcing disadvantage; this can be seen in the UNESCO finding that Hausa-speaking girls are the children most likely to be out of school.[33]

Education

Education is seen as one of the things that affects people's ability to escape poverty. UNESCO data shows that earnings can increase by up to 10% for every additional year of schooling.[34] SDG 4 calls for inclusive and equitable quality education for all. However, the P20 are currently excluded from access to and completion of education at all levels, compared with the rest of the global population, holding people back opportunity and restricting life chances.

- 29% of adults in the P20 have completed primary education, compared with 73% of adults among the rest of the population.

- 7% of adults in the P20 have completed secondary education, compared with 46% of adults among the rest of the population.

- 2% of adults in the P20 have completed tertiary education, compared with 21% of adults among the rest of the population.

Figure 18

Figure 18

Adults globally who have competed education
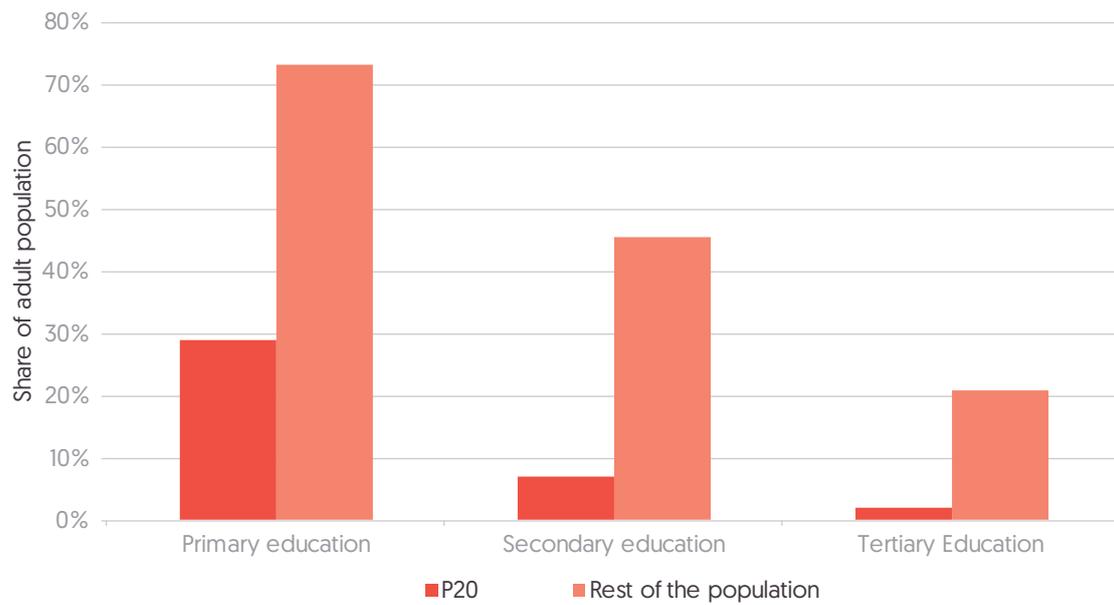
Source: Development Initiatives based on PovcalNet as well as selected DHS, MICS, CFPS, and PNDS
[see sources table [www.devinit.org/p20-initiative-data-to-leave-no-one-behind] for more details]

Looking at individual countries, the data shows that children and young adults aged 5 to 24, the cohort that *should* still be in education, are less likely to be if they are in the P20. In Benin for example, about 44% of the children and young adults aged 5 to 24 in the P20 who have not yet completed secondary education are still in school compared with 67% among the rest of the population.

Figure 19

Youth in Benin aged 5–24 who are enrolled in school
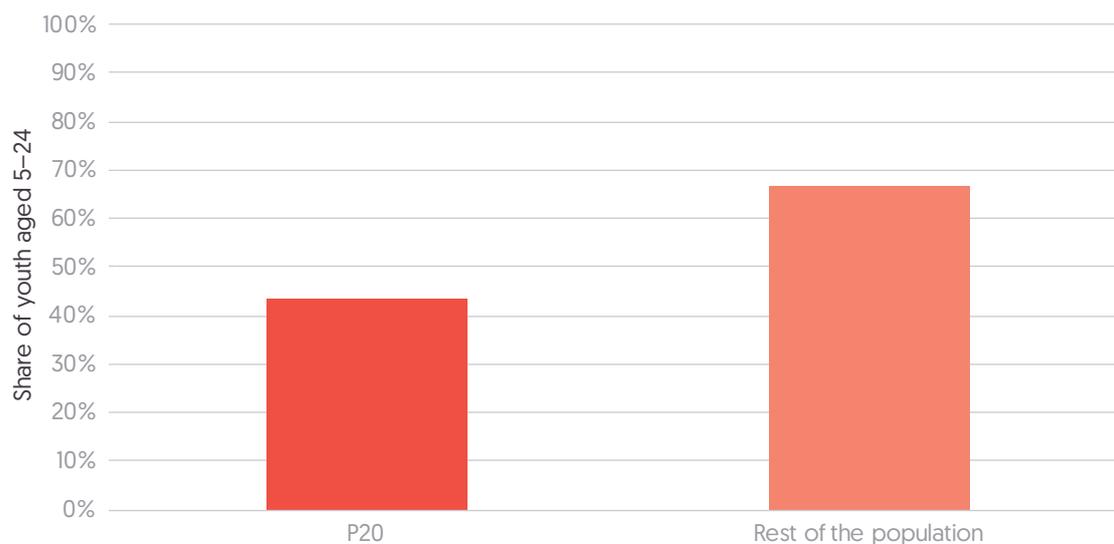
Source: Development Initiatives based on PovcalNet as well as Benin DHS 2006

On the positive side, data suggests progress is being made for youth in the P20. In the younger generation (aged 15–25), the percentage of those in the P20 with primary education is 57%, compared with 33% for those aged over 25.

Disaggregating data is important for all sectoral analyses but is especially important for evaluating progress in education and understanding where additional emphasis is required. Gender is a critical lens for education as girls are often at risk of not accessing the same educational advantages as boys.[35] But other factors such as income quintile, rural and urban settings, and even birth order are also significant. Figure 20[36] uses disaggregated data to show national average out-of-school rates. It reveals very different proportions of out-of-school girls and boys, rural and urban children, showing that more out-of-school children are girls, rural based and living among the poorest families, and that identity – in this case ethnicity – results in further exclusion.

Figure 20
Education inequality in Nigeria

Average years of education in Nigeria: 6.7 years

For the richest people: 9.7 years

For the poorest people: 3.5 years

Richest rural people: 10 years

Richest urban people: 9.6 years

Poorest urban people: 6.4 years

Poorest rural people: 3.3 years

Hausa (ethnicity) rural people: 1.9 years

Richest rural boys: 10.3 years

Richest urban boys: 9.8 years

Poorest urban boys: 6.4 years

Poorest rural boys: 4.1 years

Hausa rural boys: 1.4 years

Richest rural girls: 9.7 years

Richest urban girls: 9.4 years

Poorest urban girls: 6.4 years

Poorest rural girls: 2.6 years

Hausa rural girls: 0.3 years

Source: UNESCO, 2009. Deprivation and Marginalization Report. Available at:
http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/GMR/html/dme-5.html
Note: 'Richest' and 'poorest' are determined using wealth indicators (top and bottom national quintiles) Nigeria's DHS.

Intersection between nutrition and education

In addition to the overlapping inequalities of income and education, there is a relationship between a lack of education and poor nutrition, manifested as stunting. Figure 21 indicates that maternal education tends to be lower among those in the P20 and, in most countries, children in the P20 who have a mother with no education are especially likely to suffer from stunting. Those people who have been malnourished in the womb are also more likely to be left behind in educational attainment with some studies showing first and second generation offspring of malnourished women attaining lower scores in major tests and school entrance exams. ,

Figure 21

The prevalence of stunting in children under 5 years, comparing mothers with no education and mothers with some education
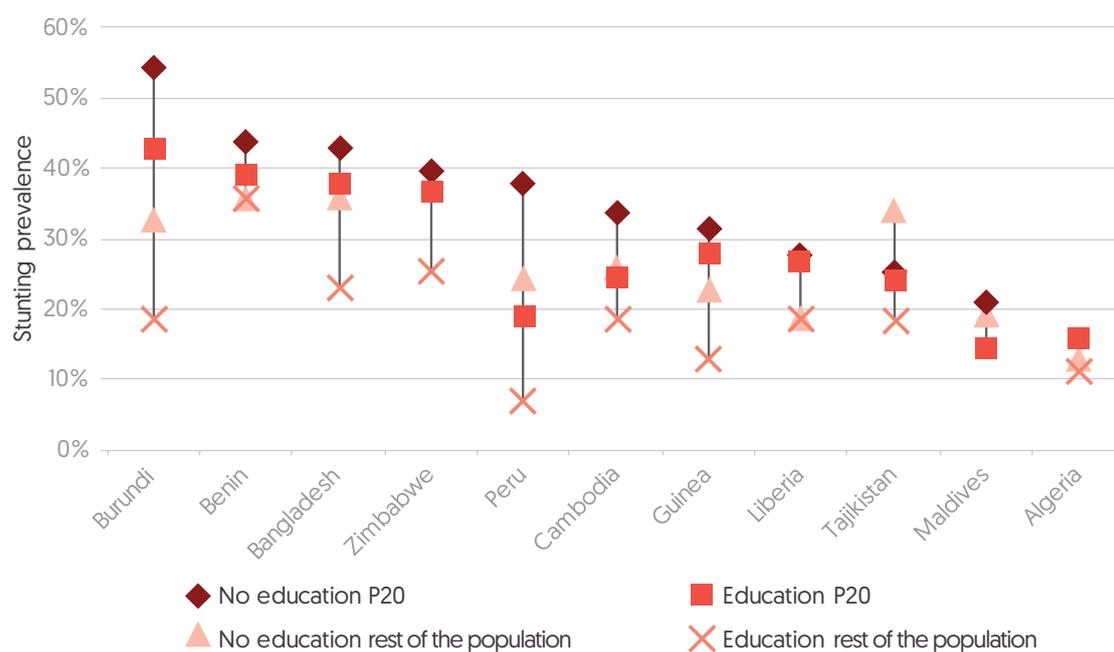
Legend:
◆ No education P20
■ Education P20
▲ No education rest of the population
✕ Education rest of the population

Source: Development Initiatives based on PovcalNet as well as selected DHS and MICS
[see sources table [www.devinit.org/p20-initiative-data-to-leave-no-one-behind] for more details]

Health

Agenda 2030 covers a broad array of health targets across a number of goals and is much more ambitious than the MDGs. SDG 3 and its 13 targets focus on ensuring healthy lives and wellbeing for people of all ages. The state of maternal and child health is itself a measure of a functioning health system[39] and is fundamental for progress of the P20.

> **"Poor health is not simply a consequence of poverty, it is a profound cause. Millions of households are only one illness away from chronic poverty."[40]**

Tracking progress under the MDGs revealed that aggregate data can show overall progress even while some of the poorest people are being left behind. This is often because the data that counts individual people is not available, forcing reliance on modelled data.

Taking the example of reducing maternal mortality, SDG target 3.1 calls for the global maternal mortality ratio to be reduced to less than 70 per 100,000 live births by 2030. In many countries, a major challenge to accurately measuring maternal mortality is the absence of death registration systems. Official international estimates on maternal mortality in 106 countries are based on a formula that gives the result in the form of a prevalence rate – how many women per 100,000 are likely to die a maternal death.[41] As the data is not comprised of headcounts it cannot identify the people or places in the greatest need. To ensure that the P20 are not left behind, more and better disaggregated data that counts people is needed.

Maternal mortality and data

Many measures of progress are based not on counting real people, but on estimates of prevalence. Maternal mortality is a good example. Progress is currently measured using an algorithm comprised of three elements – GDP per capita, fertility rates and the availability of a skilled birth attendant. These factors predict the likelihood of mortality for women living in particular countries. Real people's names and cause of death in a specific time and place are not recorded. National prevalence data says nothing about which population groups are suffering more from maternal mortality. Without this information, it is hard to target actions effectively.

In Uganda, where the campaigner picture is advocating for improved maternal healthcare, communities and families know the names of the women who have died in childbirth. But the data that is currently used to monitor progress is calculated using a model that just shows the probability that a certain percentage of women will suffer maternal mortality.

In order to track maternal deaths, all deaths and vital statistics around them need to be recorded so that resources and policies can be better targeted to where the problems are most intense. There are real difficulties: many deaths are the result of backstreet abortions or unattended childbirth, when no one is there to register the outcome. But leaving no one behind requires data that counts real people and supports targeting of resources to the people who need them most.

Maternal mortality rate algorithm

The model was fitted with three selected covariates (GDP, GFR and SAB) and random intercept effects for countries and region. It can be described as follows:

$$\log(PM_i^{na}) = \beta_0 + \beta_1 \log(GDP_i) + \beta_2 \log(GFR_i) + \beta_3 SAB_i + \alpha^c_{j[i]} + \alpha^R_{K[i]} + \varepsilon_i$$

where the following are associated with each observation i, within country j[i], within region k[i]:

- PM_i^{na} = proportion of maternal among non-AIDS deaths in women aged 15–49 years (non-AIDS PM)
- GDP_i = gross domestic product per capita (in 2011 PPP dollars)
- GFR_i = general fertility rate (live births per women aged 15–49 years)
- SAB_i = skilled attendant at birth (as a proportion of live births)
- $\alpha^c_{j[i]}$ = variable intercept component for country j
- $\alpha^R_{K[i]}$ = variable intercept component for region k
- ε_i = error

Survey data shows more about who benefits and reveals the disadvantage faced by the P20. The survey data does not track maternal mortalities but it does track the presence of skilled birth attendants. While these attendants alone are not the only link to improved outcomes, studies have shown their presence can reduce infant mortality by 43%[42] and prevent up to two-thirds of all maternal deaths.[43] Among the P20, just 36% of all children had a skilled attendant present at birth, compared with 74% for the rest of the population.

Figure 22

Absence of skilled birth attendant at birth
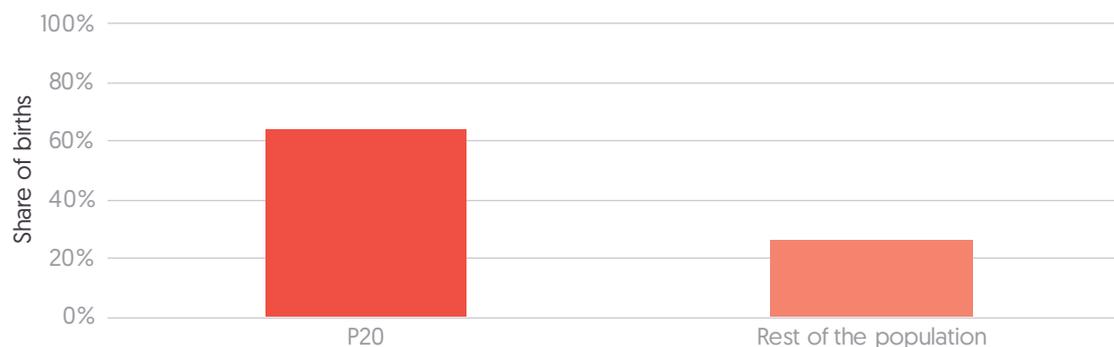
Source: Development Initiatives based on PovcalNet as well as selected DHS and MICS
[see sources table (www.devinit.org/p20-initiative-data-to-leave-no-one-behind) for more details]
Notes: The data above tracks presence of a skilled birth attendant at births of children aged 5 and under at the time of the survey.

Another piece of observed data that emerges from household surveys is that women in the P20 are three times more likely to report having a sister who has recently died in childbirth than are women in the rest of the population. This is a rare occurrence and so the proportions are relatively low but the difference in rates between the P20 and the rest of the population still reveals a greater burden on those in the P20.

The need for improved data on health is inextricably linked to the need for improved CRVS systems. If births and deaths are not recorded, then it will be impossible to move to a more individualised system of tracking health outcomes.

Figure 23

Women who report having a sister who has died in childbirth
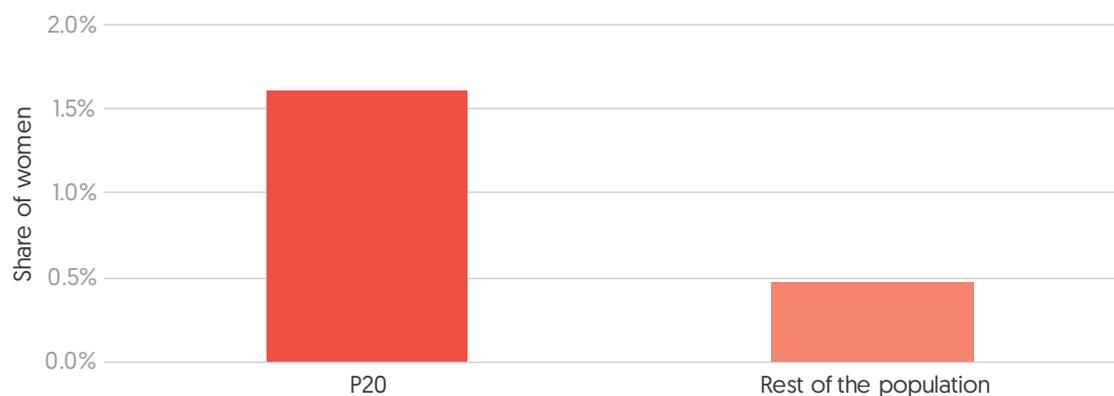
Source: Development Initiatives based on PovcalNet as well as selected DHS
[see sources table (www.devinit.org/p20-initiative-data-to-leave-no-one-behind) for more details]

Water and sanitation

Income and access to water and sanitation are closely linked.[44] About 41% of the P20 surveyed had inadequate water sources compared with 29% of households in the rest of the population.[45] The differences between the P20 and the rest of the population in the countries surveyed is even greater when looking at access to adequate toilets. About 87% of the P20 surveyed did not have access to adequate toilets, compared with about 41% of the rest of the population in their countries.
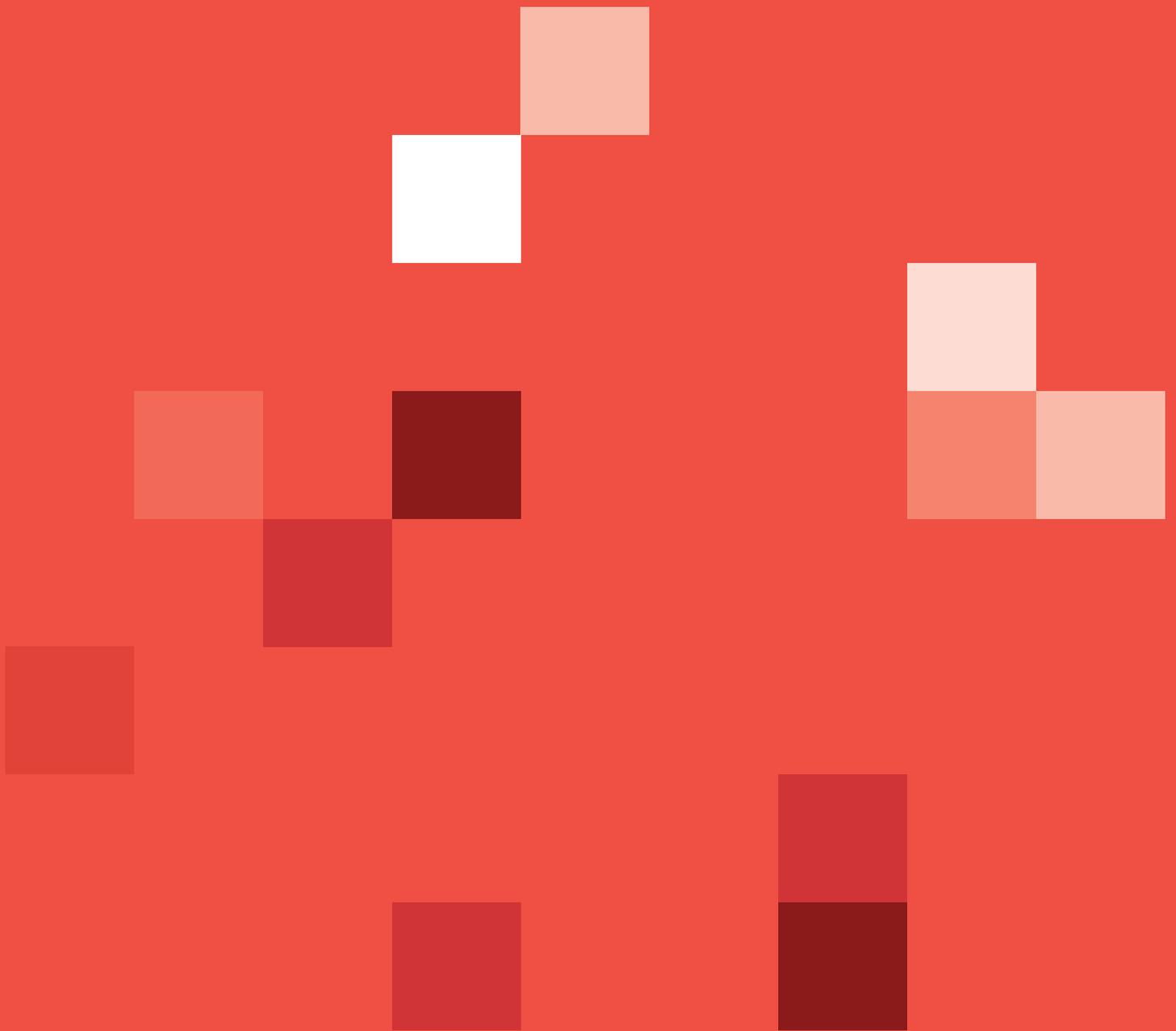
disaggregated
data to leave
no one behind

Disaggregated data to leave no one behind

This report presents the best available data on the global P20, the people who are most at risk of being left behind. The urgency of making progress means using the data that does exist despite its shortcoming. However, to accurately measure progress on reducing inequalities disaggregated data on people is needed. To know who is left behind you have to know who is missing – and to know who is missing you have to have comprehensive data on the population. The P20 Initiative aims to promote the production and use of disaggregated data and comprehensive civil registration systems to understand who is left behind and target policies and resources accordingly.
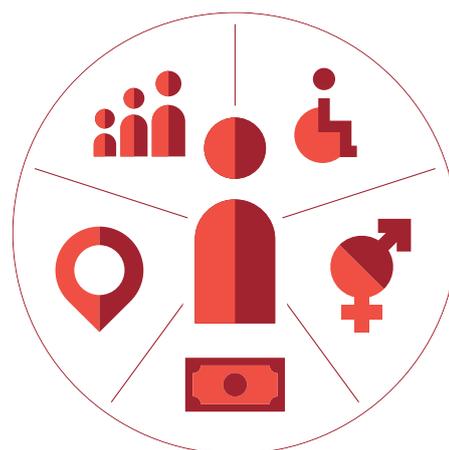
At a minimum, data should be disaggregated by quintile, geography, gender, age and disability (QGGAD). This requires going beyond the household level to understand the status and circumstances of individuals. Within communities and even within households, people are of different ages and sexes, have different capacities and disabilities and differ in terms of their sexual orientation and beliefs. Understanding these and other differences is crucial to making effective policies. Identity is often at the root of discrimination that prevents people from accessing information or taking up opportunities.

The current data landscape does not provide enough detailed data about individuals. Civil Registration and Vital Statistics systems (CVRS) are not sufficiently widespread or comprehensive. Surveys that measure wealth at the household level often mask disparities between people in a household. Not everyone has equal access to family resources – women, older and disabled people are often bypassed. Just as within households, poverty can be invisible within communities and countries; some of the poorest people can be excluded from surveys because of some aspect of their identity or because they are not living in households but are homeless or in an institution. The dominance of aggregated data masks these inequalities.

Table 3

Disaggregation by quintile, gender, geography, age and disability in major global datasets

Data source	Income quintile	Sex and gender	Geography	Age	Disability
PovcalNet	Yes, with great precision; though income and consumption are treated the same	No	China, India and Indonesia show urban/rural split but no countries have province data	No	No
DHS	Wealth but not income	Yes, but wealth defined at household level. Most questions focus on women and children. Most questions focus on sex, not gender identity	Yes, almost all countries provide GPS coordinates	Yes, for education. Few questions on people ages 5–14 and over 49	11 of the 56 DHS surveys on our sample have some questions on disability
MICS	Wealth but not income	Yes, but wealth defined at household level. Most questions focus on women and children. Most questions focus on sex, not gender identity	Yes	Yes, for education. Few questions on people ages 5–14 and over 49	5 of the 41 MICS surveys in our sample have some questions about disability

Additionally, survey data is not good at capturing information about small groups – the sample size has to be unfeasibly large to get good data about issues that may be severe but only affect a small group of people. A lot of measures of progress are not based on counting real people, but on *estimates* of prevalence. While new technologies, increased political effort, more resources and the energy of the data revolution may drive real improvements in the availability and use of data at the level of the individual, the fact remains that many of the SDGs are being monitored by survey data or prevalence estimates.

The urgency of making progress means that it is important to make the most of the data that does exist now while investing in better data for the future. But even when advocating for investments in better data, fast progress is needed in disaggregating the data that exists. Data disaggregated by quintile, geography, gender, age and disability (QGGAD) is vital and a first step towards a standard for disaggregation that provides an evidence-led basis for policymaking that delivers for everyone.

Sex, gender identity and sexual orientation

Some of the poorest people are disadvantaged more than others due to their sex, gender identity or sexual orientation. For example, women and girls have been, and remain, disadvantaged in many areas – what they earn, the work they do, their ownership of property, their chances of completing education and their political participation.[46] The SDGs and their corresponding targets acknowledge the importance of collecting sex-disaggregated data to monitor the effective implementations of policies across a broad range of issues such as inequality and decent work, as well as sectors from water and sanitation to education and health.

Figure 24 illustrates just how critical it is to have data that is disaggregated by sex in the education sector. Girls are often at risk of not accessing the same educational advantages as boys. For every woman who has completed primary school in developing countries there are 1.3 men. But the gap for the P20 is greater with two men for every woman.

Figure 24
Sex-disaggregated data showing women and men who have not completed primary education
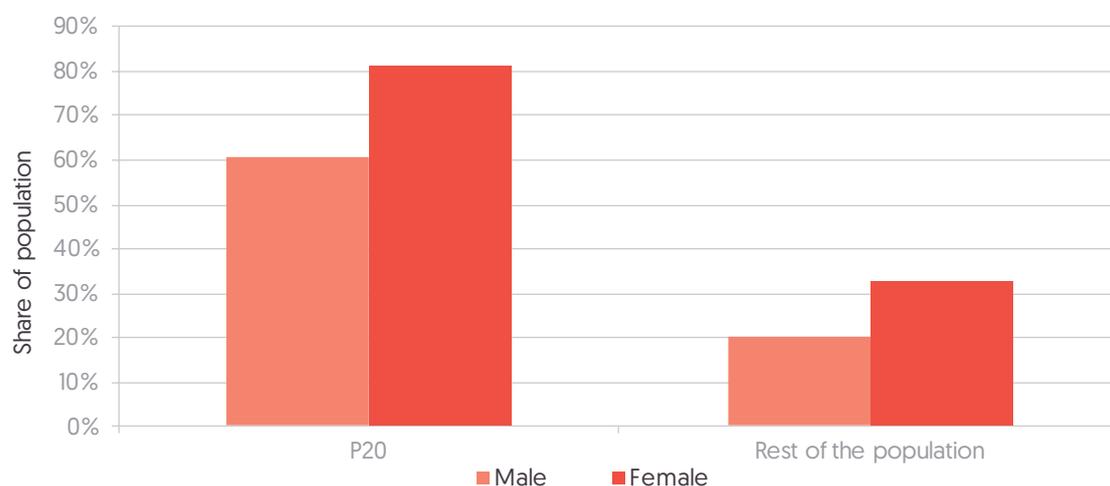
Source: Development Initiatives based on PovcalNet as well as selected DHS, MICS, CFPS, and PNDS
[see sources table [www.devinit.org/p20-initiative-data-to-leave-no-one-behind] for more details]

Sex disaggregation is an essential lens through which to see how an individual may be being held back. While disaggregation is an important principle, it is also necessary to ensure that data is being collected on the right issues. Numerous data gaps remain in areas that are specific to women and girls and the challenges that are unique to their experiences. Data2X, whose mission is to improve the quality, availability and use of gender data, has identified 28 critical data gaps covering health, education, economic opportunities, political participation and human security.[47] Additionally, data on marriage and divorce is missing because of low levels of civil registration and there are big gaps in data on the social, political and legal barriers disaggregated by sex.

Exclusion and marginalisation based on someone's identity go beyond sex but most major surveys do not provide much information on gender identity or sexual orientation. The exclusion suffered by the lesbian, gay, bisexual and transgender community is becoming increasingly evident but there is very little data and clear barriers to data collection.[48]

Geography

National-level monitoring of progress can hide disparities between different places in a country – different districts, counties or constituencies. Without data disaggregated by geographic area, it is difficult to effectively target resources on those that need them most. The example of Colombia shows how important subnational data is to understanding who and where the P20 are.

On global maps Colombia's poverty rate will be represented as a national average. Having national-level income data allows for international comparisons. But within Colombia there are 32 different 'departments' (administrative regions) each with different averages of poverty rates and income data.

Looking in even greater detail, it is possible to drill down into the data and place dots on the map that represent clusters of households. This shows that within each of the 32 departments there are also significant differences.

Colombians in the global P20 live in departments such as Amazonas where the poverty rate is reported to be the highest. But people in the P20 also live in departments with a low poverty rate. The household cluster level gives much better information on where people who are most likely to be left behind live, allowing resources and policies to be targeted to better futures for the most marginalised and excluded families and communities. Comparing the two maps in Figure 25 shows the much more disaggregated picture of households in poverty and the presence of households in the global P20 in even the richest areas.

Figure 25

Survey data from Colombia used to estimate where people in the global P20 are located
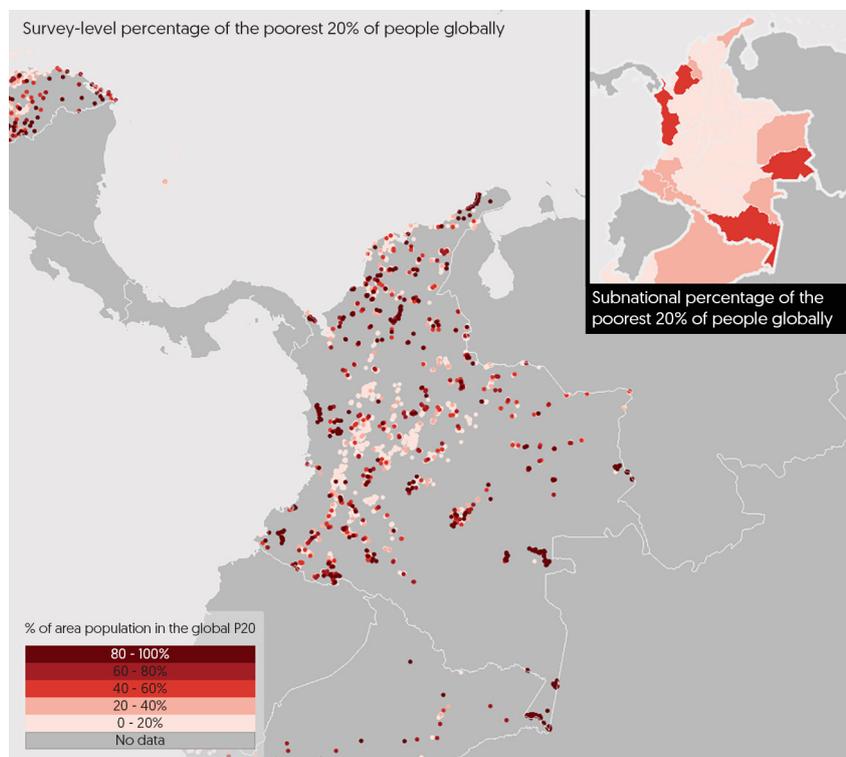
Source: Development Initiatives based on Colombia 2010 Standard DHS

Technical developments

There is a growing field of research on the potential of satellite imagery and machine learning to provide better data on poverty. This is a relatively new area and there is vigorous debate about the quality of satellite data compared with household survey data. Satellites could provide valuable estimates where survey enumerators have limited access, which are likely to be areas with high concentrations of people in the P20. As this technology improves and the price of accessing satellite data decreases, there is great potential for providing hyper local estimates of the location of those in the P20.

Age

Existing survey data from the two major surveys, the Demographic and Health Survey (DHS) and the Multiple Indicator Cluster Survey (MICS) shows:

- the age and sex of every household member

- their level of education

- the economic status of the household.

The Living Standards Measurement Survey (LSMS), which is used for calculating international data on poverty, includes data collected on parental characteristics (such as mother's and father's ages, health status and educational attainment), but is much less accessible than the DHS or MICS.[49]

These sources provide useful data on age disaggregation:

- the very old and the very young are disproportionately represented among the P20

- unsurprisingly, educational status declines with each age group – older people have had much less education than younger people.

Figure 26

Level of education by age group in Uganda
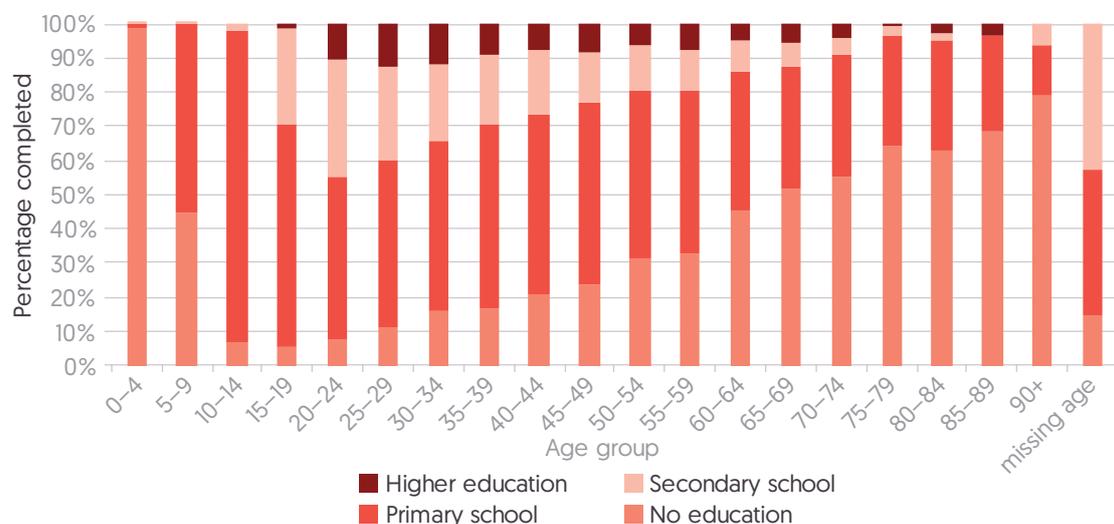
Source: Development Initiatives based on Uganda DHS 2011

But existing survey methodologies that focus on the 15–49 year old age group mean that while 4,160 variables are recorded for every person between 15 and 49, just under 400 are recorded for the entire age range. So the data says nothing about violence against women over 49. Furthermore, there is little information about incidence of particular diseases and health conditions or access to nutrition for older people. Relying on methodologies designed to address one particular problem, such as stunting, will not gather the data that might identify the extent to which older people or adolescents are also suffering from malnutrition. The danger is that 'no data' can be wrongly interpreted as meaning 'no problem'.

Assumptions about relevance to different age groups also influence the data that is collected and result in significant data gaps. HelpAge International reports that data for its Global AgeWatch index[50] is worst for economic indicators and income. Assumptions that older people are dependent and not working may lead to a lack of survey modules on their economic activity and unrealistic cut-off ages, after which questions about economic activity are not asked. This means that the many older people who survive only by their own effort and whose labour is very poorly rewarded remain invisible in the data and their contributions under-reported.

The Stakeholder Group on Ageing[51] has argued for continuous age data rather than grouping everyone over a certain age. But there is also the need for a standard to be developed for consistent application for age disaggregation – in the same way that a standard has been developed for collecting data on disability.

Disability

Agenda 2030 references disability in five goals, seven targets and numerous indicators[52] and there is a clear commitment to ensuring that people with disabilities are not left behind in global progress.

Looking at four areas of disability: seeing, hearing, walking/climbing and communicating, the data shows that the P20 are disproportionately affected across all areas compared with the rest of the global population. There are a number of ways that the relationship between poverty and disability could be understated by this method. For instance, people in the P20 generally are younger and disabilities are generally more common in older ages.[53,54]

Figure 27
Severity of disability in Uganda

Cannot do at all ■ A lot of difficulty ■ Some difficulty ■ No difficulty
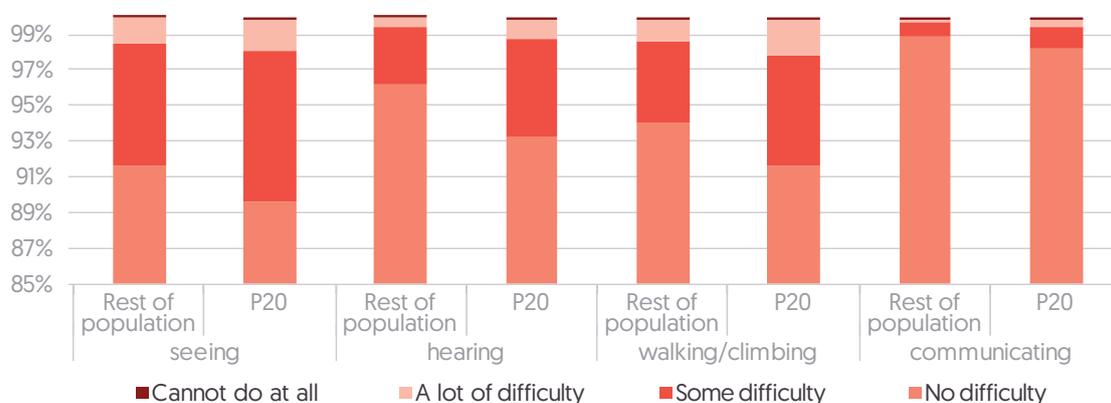
Source: Development Initiatives based on Uganda DHS 2011
Notes: Severity of disability calculated via six DHS questions that capture disability. Possible responses are 'No difficulty', 'Some difficulty', 'A lot of difficulty', or 'Cannot do at all' for various daily tasks.

One of the big challenges faced in collecting disability data is the way in which a person's disability status is determined. A person's disability status is not necessarily permanent or static and how people define and self-identify will differ and vary over time. Binary questions about whether people are disabled or not tend to result in much lower incidences of reported disability than questions that explore functioning and capability. Such binary questions also lead to assumptions that underestimate the contribution of people with disabilities.

However, following effective and sustained advocacy on the issue of disability and subsequent political interest, investment in disability data has started to pay off. The UN Statistical Commission group on disability is larger than any other. Its painstaking work to develop internationally comparable census questions on the severity of disability has meant that there are now standard questions that can be, and are, applied in lots of settings and by lots of organisations.

The census questions mean better data on the number of people with disabilities while making the impact of disability much more visible. Significantly, they seek to identify the impact of disability not in an on/off sense by asking whether somebody is a person with a disability or not, but by capturing the extent and severity of a person's difficulty with sight or hearing, mobility, care or language so the data shows the impact of impairments on people's lives.

"When I was in primary school, I would tell the teacher that I could not see. I would ask him to read for me. But the teacher would tell me 'If you don't see, why do you come to school then?'"[55]

Additionally, the census questions on disabilities enable the data to be joined up. Indicators that can now be disaggregated by disability include data on people below the international and national poverty lines, the use of safe drinking water, the population with access to electricity and the proportion of youth not in education, employment or training.

Short set of question for disabilities

Because of a health problem:

1   Do you have difficulty seeing even if wearing glasses?

2   Do you have difficulty hearing even if using a hearing aid?

3   Do you have difficulty walking or climbing stairs?

4   Do you have difficulty remembering or concentrating?

5   Do you have difficulty with [self-care such as] washing all over or dressing?

6   Using your usual language, do you have difficulty communicating [for example understanding or being understood by others]?

Response categories:

No difficulty; Some difficulty; A lot of difficulty; Cannot do at all

People can suffer exclusion as a result of their individual identity, their membership of a marginalised group or both. As individuals are typically members of many different groups – for example national, racial, ethnic, religious, gender and age – they may face multiple, intersecting disadvantages, Understanding how these different aspects of identity can combine and reinforce each other is essential in designing policies to promote inclusion.

The progress on disability demonstrates the value of having a common standard and, at a minimum, the SDG indictors all need to disaggregate by quintile, gender, geography, age and disability (QGGAD), but this is a first step towards data that can help to reveal the links between identities and inclusion – and support more effective actions.

Figure 28

Experience of areas of disability in the P20 and rest of the population by sex in Uganda

■ male rest of population ■ male P20 ■ female rest of population ■ female P20

People reporting at least some difficulty seeing, even with glasses

7.6% 9.1% 8.9% 11.6%

People reporting at least some difficulty hearing, even with an aid

3.2% 6.2% 4.4% 7.3%

People reporting at least some difficulty walking/climbing

4.8% 7.0% 7.1% 9.6%

People reporting at least some difficulty with remembering

4.9% 6.3% 5.8% 7.6%

People recording at least some difficulty with self care

2.1% 2.4% 2.1% 2.7%

People reporting at least some difficulty communicating in their own language

1.0% 1.9% 1.2% 1.7%

P20 next steps

P20 next steps

Publication of this baseline report completes the first phase of the P20 Initiative. During this phase, we have:

- engaged and consulted with a wide range of individuals and organisations who have expertise in this area, and begun to raise awareness of the P20 concept

- presented the P20 concept in various forums, including the UN High Level Political Forum, the UN General Assembly and the World Data Forum

- developed a methodology for defining the P20 and the three bellwethers for measuring their progress, ensuring that this remains consistent with the SDGs and is mindful of other efforts to measure multidimensional poverty

- published this baseline report, setting out what is known (and what is not known) about the P20 on the basis of the best available data, as well as making the case for greater investment in disaggregated data and for moving away from survey data and towards collecting data at the level of the individual

- developed a series of accompanying infographics and data visualisations aimed at making complex data on poverty easily accessible for those who want to use it

- collaborated with governments, politicians, think tanks and civil society organisations, including Civicus and Project Everyone as members of the Leave No One Behind Partnership, to find ways of working together to keep political attention on people left out progress and to harness the energy of the data revolution.

The P20 Initiative was established with a 15-year time horizon to mirror the SDG target of eradicating extreme poverty by 2030. In the next phase from 2017–2020, we plan to:

- promote common ownership of the P20 idea as a key means of maintaining political attention on the poorest 20% of the global population

- publish data each year on the status and progress of the P20, improving the methodology and drawing on new data sources to show how more and better disaggregated data can be used to understand who is being left behind, and contributing to a stronger evidence base on the policies and interventions that lead to improvements in the lives of the P20

- make the case for greater investment in disaggregated data as a key aspect of tackling poverty, with an emphasis on initiatives based on counting people, including civil registration and vital statistics plus registry and administrative data, as well as getting the most out of existing data and exploring new data sources

- broaden the scope of work to include data on the P20 at national and province level, for example building on pilot work on community-level data in Kenya and supporting national dialogue on the 'leave no one behind' agenda

- make the P20 as relevant and useful as possible to all who share a commitment to eradicating extreme poverty by 2030 and who are working to ensure that the poorest people are included in progress and opportunity.

For more information please see devinit.org/p20i or email us at p20i@devinit.org
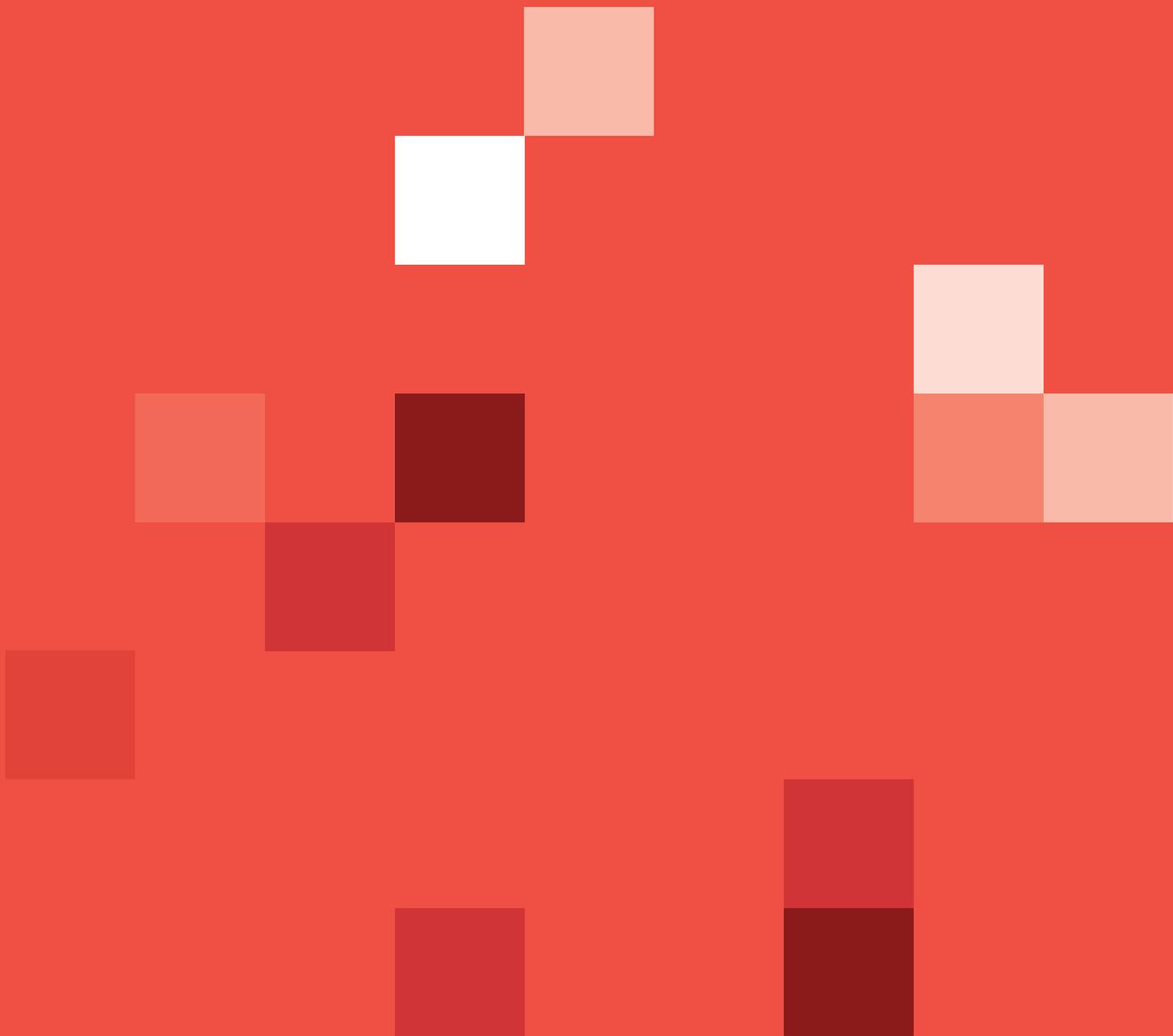
acknowledgements

Acknowledgements

acronyms

Acronyms

CAR	Central African Republic
CFPS	China Family Panel Studies
CRVS	Civil registration and vital statistics systems
DHS	Demographic and Health Survey
DRC	Democratic Republic of the Congo
GDP	Gross domestic product
GFR	General fertility rate
IMF	International Monetary Fund
LSMS	Living Standards Measurement Survey
MDG	Millennium Development Goal
MICS	Multiple Indictor Cluster Survey
P20	People in the poorest 20%
PM	Proportion of maternal deaths
PNDS	Brazil National Demographic and Health Surveys
PPP	Purchasing power parity
QGGAD	Quintile, geography, gender, age and disability
SAB	Skilled attendant at birth
SDGs	Sustainable Development Goals
TB	Tuberculosis
UN	United Nations
WHO	World Health Organization
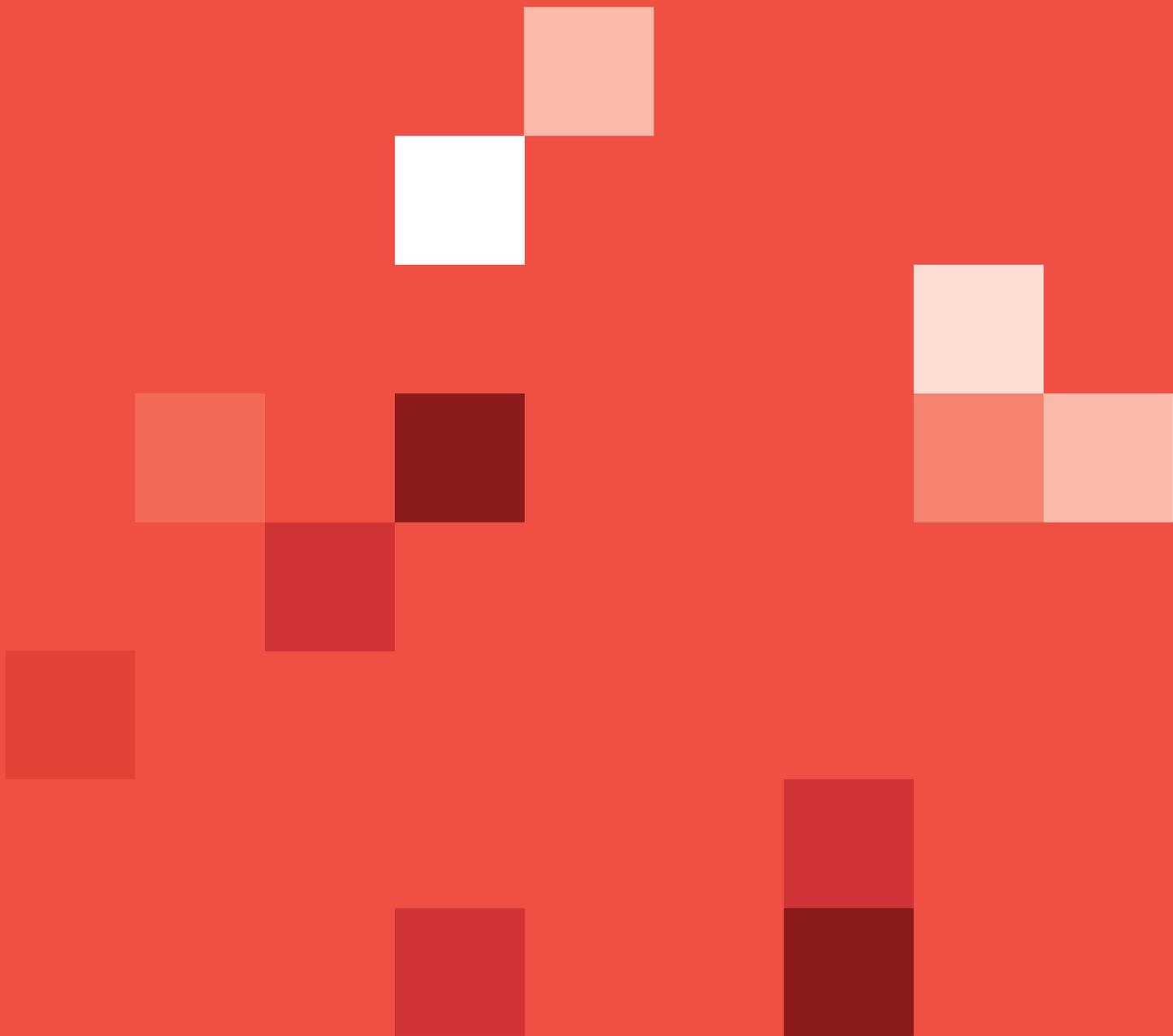
notes

Notes

1   All monetary amounts are reported in 2011 $ purchasing power parity (PPP).

2   Development Initiatives' calculation from World Bank World Development Indicators.

3   All monetary amounts are reported in 2011 $PPP.

4   The Chronic Poverty Research Centre (CPRC) was an international partnership of universities, research institutes and NGOs that completed its 10-year programme in 2011. Its research aimed to deepen understanding of the causes of chronic poverty, and provide analysis and policy guidance on the reduction of chronic poverty. The CPRC was funded by the UK Department for International Development. The CPRC publications database contains over 400 publications across different research themes, policy areas and countries and can be found at www.chronicpoverty.org. The Chronic Poverty Action Network continues and applies the work of CPRC and its outputs can be found at www.chronicpovertynetwork.org.

5   Dabla-Norris, E, Kochhar, K, Suphaphiphat, N et al, 2015. *Causes and Consequences of Income Inequality: A Global Perspective*. SDN/15/13 MF Discussion Paper 2015.

6   Chronic Poverty Advisory Network, 2014. *The Chronic Poverty Report 2014–2015: The road to zero extreme poverty*. ODI, page 2, Figure 1.

7   Continuous data is not restricted to defined, separate values, but can have any value across a continuous range. Civil registration data is continuous data on a person from birth to death.

8   Development Initiatives, 2015. *Investments to End Poverty*. Available at:
    http://devinit.org/wp-content/uploads/2015/09/Investments-to-End-Poverty-Report-2015_online.pdf

9   For a fuller explanation, please refer to the methodological annexes to this paper.

10 For instance, the Indicator 2.1.1 'prevalence of undernourishment' is generally calculated based on Food and Agriculture Organization (FAO) Food Balance Sheets, which heavily rely on estimates of national food crop production. Maternal mortality estimates face similar problems, which are discussed in greater detail below.

11 USAID's Demographic and Health Surveys (DHS) and UNICEF's Multiple Indicator Cluster Surveys (MICS).

12 There are clear differences between income and consumption. For the purposes of this analysis the PovcalNet definition of wealth is used, which relies on income and consumption measures. Purchasing power parity (PPP) rates go beyond market exchange rates, adjusting for relative buying power across different countries so enabling international comparisons.

13 Development Initiatives' calculation based on India's National Family Health Survey, 2005–2006.

14 Martin Ravallion has a method for estimating the consumption floor. We have replicated his methods with updated data and find that this floor did not rise between 1990 and 2013. While there have been some slight fluctuations, the consumption floor in 2013 ($1.00) was the same as in 1990 ($1.00). Even if we use alternative methods that generate a much lower consumption floor of about $0.50 in 1990, we find it remains at about $0.50 in 2013. In other words, the poorest of the poor are as poor in 2013 as they were in 1990. They have been left behind. Ravallion, M, 2016. 'Are the world's poorest being left behind?' *Journal of Economic Growth* 21(2): 139–164.

15 Ravallion, M, 2016. 'Are the world's poorest being left behind?' *Journal of Economic Growth* 21(2): 139–164.

16 Emre, O., Hill, K, Subramanian S.V. 2010. 'Association of maternal stature with offspring mortality, underweight, and stunting in low- to middle-income countries'. *JAMA* 303(15): 1507–1516.

17 International Food Policy Research Institute, 2016. *Global Nutrition Report 2016: From Promise to Impact: Ending Malnutrition by 2030*. Available at:
    http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/130354/filename/130565.pdf

18 Veenendaal, M.V., Painter, R.C., Rooij, S.R. et al, 2013. 'Transgenerational effects of prenatal exposure to the 1944–45 Dutch famine'. *BJOG: An International Journal of Obstetrics & Gynaecology*, 120(5): 548–554.

19 Seonghoon, K, Fleisher, B, Ya Sun, J, 2016. 'The Long-term Health Effects of Fetal Malnutrition: Evidence from the 1959-1961 China Great Leap Forward Famine', *Health Economics*.

20   Chih Ming, T, Zhibo, T and Zhang, X, 2014. Sins of the Father: The Intergenerational Legacy of the 1959-1961 Great Chinese Famine on Children's Cognitive Development, IFPRI Discussion paper 01351.

21   UN Department of Economic and Social Affairs, 2014. *Principles and Recommendations for a Vital Statistics System: Revision 3*.

22   AbouZahr, C, de Savigny, D, Mikkelsen, L et al. 'Civil registration and vital statistics: progress in the data revolution for counting and accountability,' *The Lancet* 386: 1373.

23   Plan International, UN Human Rights Office of the High Commissioner and UNICEF, 2015. *Birth registration and the right of everyone to recognition everywhere as a person before the law*. Available at: https://plan-international.org/publications/birth-registration-and-right-everyone-recognition

24   For more details, see sources table (www.devinit.org/p20-initiative-data-to-leave-no-one-behind) and UNICEF, 2013, *Every Child's Birth Right: Inequalities and trends in birth registration*. Available at: https://www.un.org/ruleoflaw/files/Embargoed_11_Dec_Birth_Registration_report_low_res.pdf

25   UNICEF, 2013. *Every Child's Birth Right: Inequalities and trends in birth registrations*. Available at: https://www.un.org/ruleoflaw/files/Embargoed_11_Dec_Birth_Registration_report_low_res.pdf

26   Data is sourced from the World Development Index indicator 'Completeness of birth registration', for 2000 to 2015. Due to the incomplete nature of this data, linear interpolation was used between data points and extrapolation was performed using the closest non-missing value in order to obtain a global aggregate for all years.

27   To identify each country on the graph and their rate of progress, please see http://data.worldbank.org/indicator/SP.REG.BRTH.ZS

28   AbouZahr, C, de Savigny, D, Mikkelsen, L et al. 'Civil registration and vital statistics: progress in the data revolution for counting and accountability,' *The Lancet* 386: 1373.

29   Mikkelsen, L, Phillips, D.E, AbouZahr, C et al, 2015. 'A Global Assessment of civil registration and vital statistics systems: monitoring data quality and progress'. *The Lancet* 386: 1395.

30   UNESCO, 2013. *Improving Child Nutrition: The achievable imperative for global progress 2013*. Available at: https://www.unicef.org/publications/files/Nutrition_Report_final_lo_res_8_April.pdf

31   MQSUN Report, 2016. *Analysis of Nutrition-Sensitive Budget Allocations: Experience form 30 countries*. Available at: http://docs.scalingupnutrition.org/wp-content/uploads/2016/04/MQSUN-Report-Nutritionsensitive-Allocations-160311.pdf

32   Stewart, F. *Horizontal Inequalities as a cause of conflict*, Bradford Development Lecture: November 2009. Available at: http://www.bradford.ac.uk/social-sciences/media/socialsciences/BDLStewart.pdf

33   UNESCO, 2009. *Deprivation and Marginalization Report*. Available at: http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/GMR/html/dme-5.html

34   UNESCO, 2011. *Education Counts: Towards the Millennium Development Goals 2011*: http://unesdoc.unesco.org/images/0019/001902/190214e.pdf

35   *Global Education Monitoring Report: Gender Review 2016* Available At: http://unesdoc.unesco.org/images/0024/002460/246045e.pdf

36   Data for this figure is taken from a presentation by Friedrich Huebler to the Expert Group Meeting on Data Disaggregation, New York, June 2016: *Data disaggregated by sex for monitoring of the education SDG*. Available at: http://unstats.un.org/sdgs/files/meetings/egm-data-dissaggregation/PPT7_UNESCO-Huebler.pdf

37   Kim, S., Fleischer, B. And Sun, J.Y. 2016, 'The Long-term Health Effects of Fetal Malnutrition: Evidence from the 1959-1961 China Great Leap Forward Famine.' *Health Economics*.

38   Ampaabend, S.K. and Tan, C.M., 2013, 'The Long-Term Cognitive Consequences of Early Childhood Malnutrition: The Case of Famine in Ghana.' *Journal of Health Economics* 32(6): 1013-1027.

39   Huntington, D, Banzon, E and Recidoro, Z.D, 2012. 'A systems approach to improving maternal health in the Philippines.' *Bulletin of the World Health Organization* 90(2): 104-110.

40   Krishna, A, 2010, *One Illness Away: Why People Become Poor and How They Escape Poverty*, Oxford University Press.

41   WHO, UNICEF, UN Population Fund, World Bank and the UN Population Division, 2014.*Trends in Maternal Mortality: 1990 to 2013*: Estimates by World Health Organization, UNICEF, United Nations Population Fund, the World Bank and the United Nations Population Division.

42   Save the Children, 2014. *Ending Newborn Deaths: Ensuring Every Baby Survives*.

43   United Nations Population Fund, 2012. *Delivering Hope and Saving Lives: Investing in Midwifery*.

44 Access to adequate water and toilets plays a major part in the wealth index used by DHS and MICS to identify how wealthy a household is. See Martel, P. 2016, *Review of options for reporting water, sanitation and hygiene coverage by wealth quintile*, MICS Methodological Papers, No. 4, Data and Analytics Section, Division of Data, Research and Policy, UNICEF. Available at: http://mics.unicef.org/s?job=W1siZiIsIjIwMTYvMTAvMTQvMTkvMTkvMD UvNzYzL01JQ1NfTWV0aG9kb2xvZ2ljYWxfUGFwZXJfNC5wZGYiXV0&sha=165238a5fb55ac47

45 This excludes many high income countries.

46 World Bank. 2012. *World Development Report 2012: Gender Equality and Development*. World Bank. Available at: https://openknowledge.worldbank.org/handle/10986/4391

47 Data2X identified key gaps in gender data based on need, population coverage, and policy relevance. See http://data2x.org/what-is-gender-data/gender-data-gaps/ for the analysis of data gaps

48 Badgett, M.V.L. 2014. *The Economic Cost of Stigma and Exclusion of LGBT People: A Case Study of India*. World Bank. Available at: https://openknowledge.worldbank.org/handle/10986/21515

49 The data licenses for DHS and MICS are provided in bulk, while LSMS is done on a country-by-country basis and sometimes requires large licensing fees.

50 The HelpAge International Global AgeWatch Index ranks countries by how well their older populations are faring, see http://www.helpage.org/global-agewatch/.

51 The Stakeholder Group on Ageing https://sustainabledevelopment.un.org/topics/employment/index.php?page=view&type=6&nr=10874&menu=139

52 United Nations, 2016. *Disability in the SDGs Indicators*. Available at: http://www.un.org/disabilities/documents/2016/SDG-disability-indicators-march-2016.pdf

53 Mitra, S, Posarac, A, Vick, B.C, 2011. *Disability and Poverty in Developing Countries; A Snapshot from the World Health Survey*, World Bank. Available at: http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1566&context=gladnetcollect

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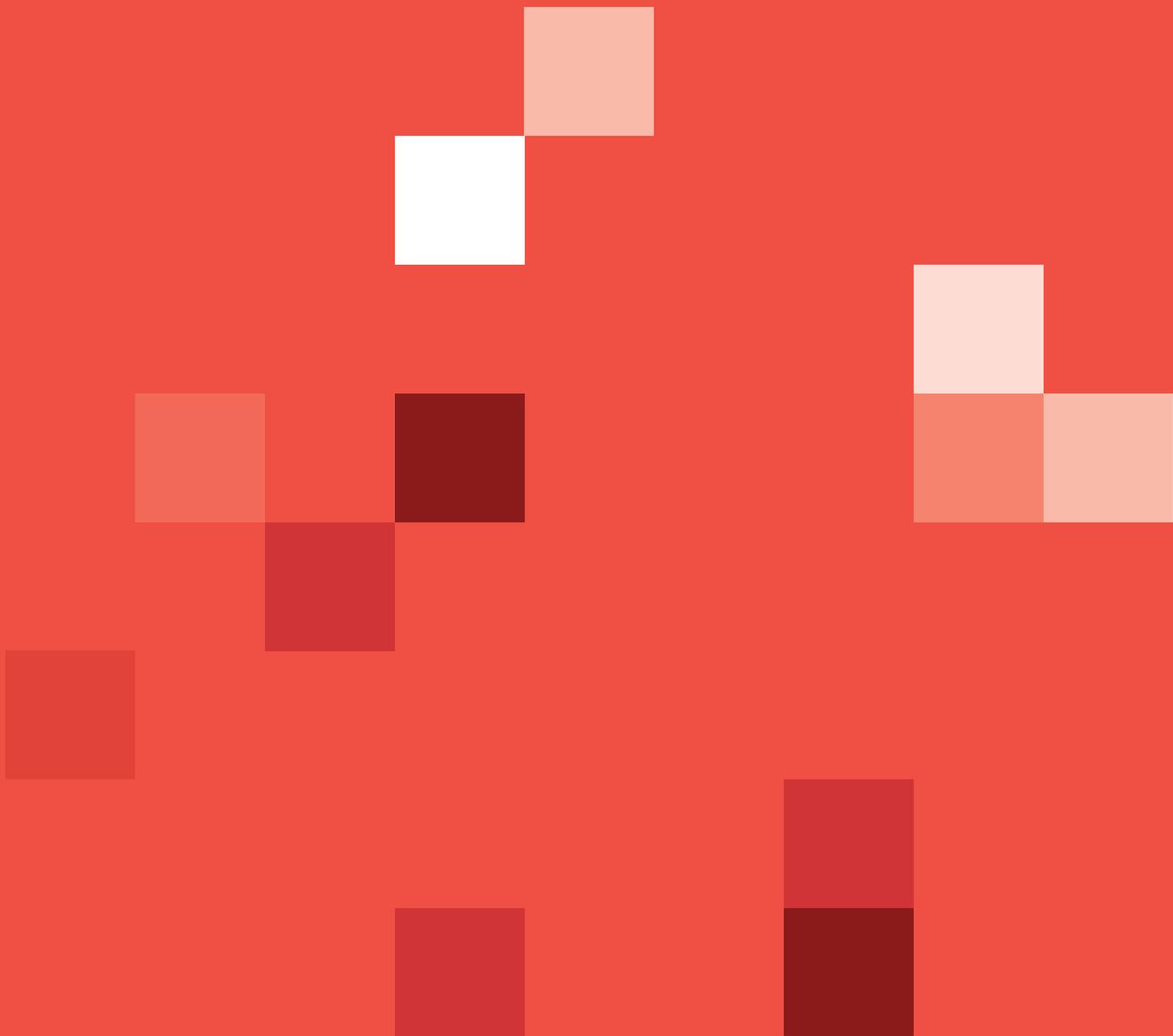
annexes

Annex 1: Income methodology

The P20 Initiative is an effort to draw attention to the status of a group we feel face particularly large chances of being left behind from international progress. Measuring poverty has become a major area of research within economics, with many new efforts to do so. The research and new datasets on poverty have greatly advanced our understanding. There remain many debates about the best way to measure poverty. The ongoing debates inform our methods but ultimately, we are methodologically agnostic. Regardless of how poverty is defined, we are interested in tracking the wellbeing of the people in the poorest 20% (P20) on an annual basis. We also have sought methods to understand as well as possible how disaggregating indicators on the wellbeing of the P20 by wealth quintile, gender, geography, age, and disability allows us to better understand the lives of these people. Hopefully new datasets and new methods will enable us to explore many different ways to assess the wellbeing of this group.

For the analysis in this baseline report we have sought methods that are straightforward and based on comparable international data. There are many more sophisticated methods for measuring poverty and we have explored some of them. Ultimately, we believe our results provide a good approximation of what much of the poorest 20% experience. This paper explores some of the basis for this.

We have adopted a dashboard-style approach to providing data on the P20. While many definitions of poverty are important, the measurement of income is one of the best methods to track progress among the P20. There are significant limitations to this measure, which is why we have included two other bellwether indicators: nutrition and civil registration. However, income and wealth is one of the strongest predictors of many outcomes related to wellbeing across many sectors.

The global P20: Why 20%?

The P20 Initiative has been created within the context of the 'leave no one behind' agenda inherent in the Sustainable Development Goals (SDGs). Many groups are particularly vulnerable to be left behind and many have proposed focusing on them within the context of the leave no one behind agenda. The World Bank's new flagship report *Poverty and Shared Prosperity*[1] focuses on people below the international poverty line of $1.90 per person per day.[2] Ensuring no one lives below the line is the first of the SDGs. (The World Bank has a more modest goal of reducing the share of the global population below the international poverty line to 3%.)

The World Bank has also set the goal to boost income growth among the poorest 40% of each country. While efforts to eliminate extreme poverty focus on low income countries, this goal is meant to apply to all countries. This frame of analysis is important and the poorest 40% of the national populations of wealthier countries must be included in growth in order to achieve the goal of leaving no one behind.

We have chosen a different group for our analysis. We think that it is reasonable to say that one in five people in the world are vulnerable to being left behind over the next 15 years. The larger segments of the population would have wider ranging needs and addressing their challenges becomes more complex. There is some evidence that some people in the P20 live in high income countries.[3]

Income as a key bellwether

Income[4] poverty is correlated with many of the kinds of challenges that many people face. Access to adequate money is closely related to meeting basic needs, having the opportunity to make decisions about how to live, and even accessing human rights. How people live, where they live, and what they do is heavily influenced by how much money they have. Money can also more easily be quantified and compared and tracked over time than can other theoretical concepts for which it serves as a proxy.

Chronic poverty

While the specific point estimates may not be completely accurate, we know that hundreds of millions of people struggle with many daily challenges. Many of these people experience extreme poverty for a period of their life or more than one period but also experience periods with greater wealth.[5] There are, however, many groups that experience poverty for several generations or for several decades. The Chronic Poverty Research Centre found that between 20% and 60% of people who escaped poverty in six countries fell back within 10 years.[6]

Of course, there are many problems with poverty measurement. Income measurement can be distorted by sampling frames,[7] inadequately trained staff,[8] respondent recall,[9] groups that are systematically excluded from surveys,[10] the definition of urban and rural areas,[11] survey error and many other factors.

Even if we assume that income has been adequately measured and assessed at national level, international comparisons are very complicated and problematic. The world's largest statistical program, the International Comparison Project, generates estimates of the purchasing power parity (PPP$) of currencies across the world. These PPP$ adjustment factors are then used to convert income and consumption figures collected in household income surveys to make comparable poverty rates. There are many reasons why PPP$ numbers may be biased and these biases may be very significant. Even when comparing the prices of thousands of goods across many countries in the world, it is very difficult to compare price changes over time and across places with very different consumption patterns. Deaton and Aten,[12] for instance, estimated that standard errors for price comparison between the US and India or China were 20–30%. This indicates the limits to this analysis and suggests that poverty lines should not be taken as completely accurate. Nevertheless, there are many valuable insights that can be drawn from analysis of people who tend to be at the bottom of the distributions. We note that most other efforts to measure challenges faced by poor people have severe limitations as well.

Alternative measures of poverty and wellbeing

There are a number of datasets on global wellbeing or poverty that could help shed light on the status of the P20.

Table A1
Datasets on global wellbeing or poverty

Dataset	PovcalNet	Multidimensional Poverty Index	World Wealth and Income Database (Piketty and co-authors)	Global Wealth Report	International Wealth Index	GNI per capita	DHS/MICS wealth index	Household final consumption expenditure
Publisher	World Bank	Oxford Poverty & Human Development Initiative	Wid.world	Credit Suisse	Nijmegen Center for Economics (NiCE)	World Bank	DHS/MICS	World Bank
Disaggregated	No	Yes	Some	No	Yes	No	Yes	No
Adjustable poverty line	Yes, with great precision	No	Yes	Yes, if data released	No	No	Yes	No
Frequency of updates	Yearly	Country data updated once every few years	Rarely	Yearly	Country data updated once every few years	Yearly/ quarterly	Country data updated once every few years	Yearly/ quarterly
Source data	Household Income and Expenditure Survey	DHS/MICS	Household surveys, income tax data, national accounts data	Some surveys but regression-based estimates for most low-income countries	DHS/MICS	National accounts	DHS/MICS	National accounts
Internationally comparable	Yes (but missing some high-income countries)	Yes (but only for countries with DHS/MICS surveys)	Partly	Yes	Yes (but only for countries with DHS/MICS surveys)	Yes	No[13]	Yes

Notes: DHS: Demographic and Health Surveys; MICS: Multiple Indicator Cluster Surveys.

To best monitor progress of the P20, we need datasets that allow us to disaggregate data on a yearly basis with comparable data. As Table A1 indicates, there is not currently a dataset that allows us to do that. This highlights a critical gap in the need for data to leave no one behind.

Our analysis of income trends among the P20 draws from PovcalNet. We also use PovcalNet to know which countries the P20 live in. PovcalNet misses many of the wealthiest people in the world, particularly because it has no data on South Korea and several other high income countries. Consequently, we have estimated the wealth of the rest of the population using the household final consumption expenditure numbers published by the World Bank. These numbers are part of national accounts and may not be more accurate than PovcalNet in countries where both data sources are available; however, we believe that they are the best source of data for estimating the wealth of the rest of the population.

Besides their average wealth and which countries they live in, PovcalNet does not provide much information about the P20. The survey data powering PovcalNet belongs to the countries that carried out the surveys. Hopefully, more data is released. Until it is we are required to use a different method.

Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) also have series of questions to find out the household's means of human waste disposal, source of drinking water, roofing materials, flooring materials and wall materials, and include questions about whether the household has certain assets (for instance, a car, chair, watch and telephone). The questions on household assets and household materials have been used to create a relative wealth index for each household. The wealth index was started by DHS and has been adopted by MICS. A 'principal components analysis' is applied to the assets and building materials recorded for each household to estimate the wealth of a country. This analysis creates an index for a set of variables that captures the largest amount of information about those variables.[14] The wealth is estimated at a household level. Like PovcalNet, the wealth index does not attempt to measure the extent to which individual members of a household have access to the household wealth.

The DHS/MICS wealth index does not have a simple monetary equivalent and is not currently internationally comparable but has been shown to correlate well with the kinds of deprivations associated with poverty. It is a widely-used tool for estimating how wealth interacts with various indicators. For instance, UNICEF reports birth registration by wealth quintile using this index. DHS and MICS have provided microdata for nearly every survey including the wealth index number for each household.

To better understand the P20, we assume that the people with the lowest wealth index scores in a country compare with the people with the lowest incomes in PovcalNet in a country. If we had information on income levels and wealth index scores, we certainly would not find a perfect correlation but, in broad terms, we assume that these groups are roughly equivalent. This assumption, like the assumption that those in income poverty experience the same challenges as those in consumption poverty, has serious limitations.[15] Nevertheless, it is the best that we can do with the data available currently.

We use the percentage of people in the P20 in each country in PovcalNet and find a wealth index score threshold that includes an equivalent proportion of people in each DHS or MICS survey. For instance, PovcalNet says that 47% of Ugandans would be in the P20. We therefore looked at the wealth index score in Uganda's latest survey and identified a wealth score cut off that would include 47% of Uganda's population. We then analysed the characteristics of the people below that wealth score in Uganda. Again, we stress that PovcalNet and the DHS wealth index are measuring different things. This method does not provide for analysis of *the* poorest 20% of the population ranked by income but it does provide information about many of the poorest people in the world in a global distribution that follows the general trends shown by PovcalNet.

We hope that better and more open data will provide alternatives to our methods but for now see them as a reasonable approximation for our purposes. We could wait for years for ideal datasets to emerge without being able to say anything on the status of the most vulnerable people but we feel that it is more important to make reasonable use of data that is available now for decision-making.

We have sought to replicate some of the research the World Bank has produced on the profile of poor people according to the data used for PovcalNet. Our preliminary results suggest that our methods produce a population that is slightly more rural and younger than that of the World Bank's Global Microdata Set.

Monitoring Global Poverty, the report of the World Bank's Commission on Global Poverty identifies four different possible types of poverty measurement: the international poverty line, a basic needs-based indicator, a capability approach and a minimum rights approach.[16] The latter two types of poverty measurement are not fully developed yet and considerable work needs to be done to develop globally monitorable measures over time.

As previously mentioned, we are not only interested in monetary poverty. We are interested in other indicators as well. Our three bellwethers cover three major dimensions of poverty: income, nutrition and CRVS. One option would be to combine these indicators into a single indicator using an arbitrary index. The dashboard approach, by contrast, displays the indicators separately. The P20 analysis has opted for a dashboard approach. Income is particularly useful for defining who is in poverty because it is measurable with a fair degree of precision that can also be adjusted. It is far more difficult to think of ways to consistently find the 20th percentile of people according to CRVS status or stunting.

The Multidimensional Poverty Index and the P20

The Global Multidimensional Poverty Index (MPI) is an excellent tool for understanding the various dimensions of poverty. The index evaluates each household according to whether or not it has certain characteristics of health, education and living standards. This exercise avoids some of the challenges faced by international comparisons of monetary wealth. While there may be local variations, it is far easier to determine if a person in Haiti and a person in Viet Nam both have access to adequate toilets than if they are both living on PPP$1.90. Once that is determined, the index gives equal weight to health, education and living standards (even though more indicators are available for living standards than the other two categories). If the household is determined to be poor in enough categories, it is considered multidimensionally poor. If it is poor in even more categories, it is considered deprived. The index then multiplies the number of people defined as poor in a country by the number of deprivations experienced and creates a single index score for each country. This method can be applied for subnational regions as well.

MPI is an index based on a series of thresholds. It is not possible to rank order individuals based on their MPI poverty. If you abandon the weighting scheme and rank order people according to how many MPI indicators assess them as being poor, you cannot reliably find the 20th percentile of those most deprived. This is because the MPI assesses people across 11 indicators. This is a lot of indicators but it is still too coarse to clearly distinguish between the 1.45 billionth poorest person and 1.46 billionth poorest person.

An additional challenge to the MPI for our purposes is that the global numbers are adjusted biannually but country updates are only possible after a new survey is produced. This means that India's MPI score has not been updated since DHS 2006, the latest survey for which microdata are available. PovcalNet poverty thresholds can be more easily updated between surveys based on national accounts data. PovcalNet numbers for India have been updated five times since then.

Figure A1

Percentage of people MPI poor by country

Population in multidimensional poverty (H) (%) - MPI Poor - All Countries

■ 0.02 - 1.28	■ 1.29 - 5.19	■ 5.2 - 13.84	■ 13.85 - 34	■ 35 - 53.32	■ 53.33 - 69.78	■ 69.79 - 91.1	■ Missing Value
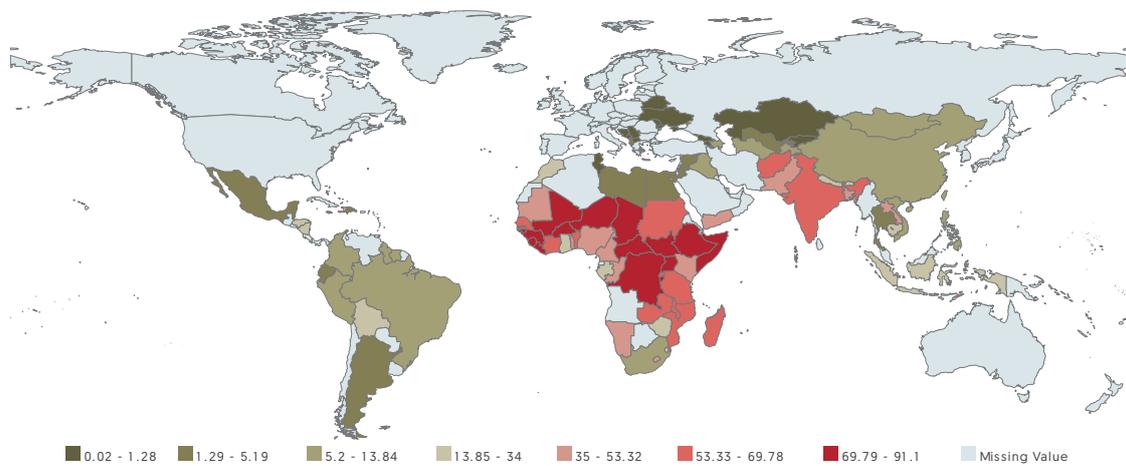
Source: Oxford Poverty & Human Development Initiative, downloaded 25 January 2017

Figure A2

Percentage of people in the P20 by country

% of area population in the global P20

■	80 - 100%
■	60 - 80%
■	40 - 60%
■	20 - 40%
■	0 - 20%
■	No data
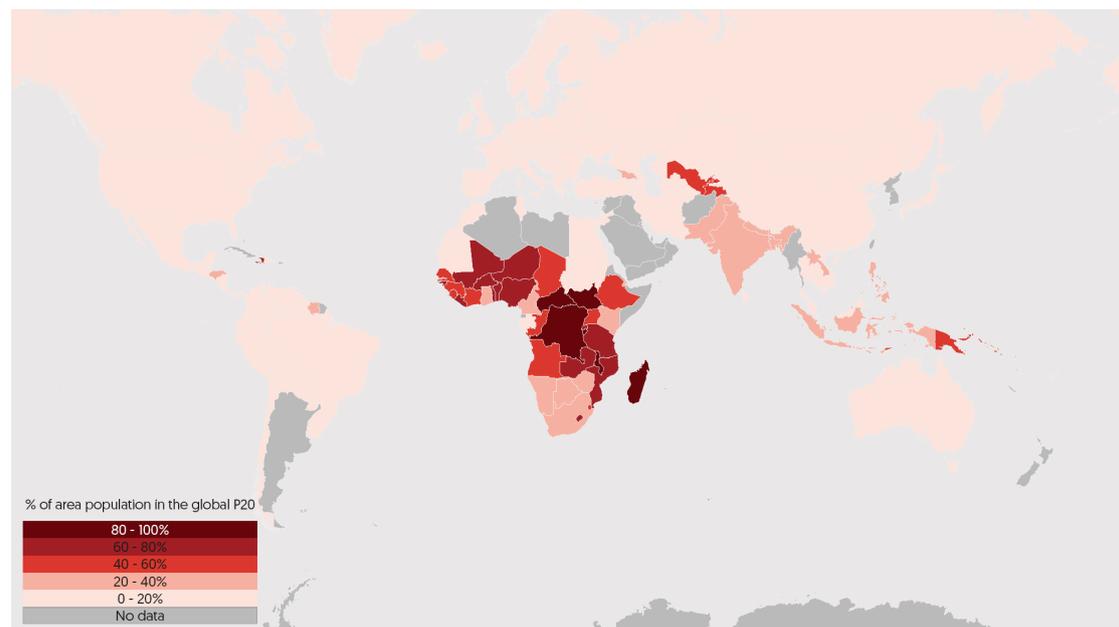
A comparison between the MPI and the P20 maps provides some insight into the differences between the two approaches. For instance, both methods indicate that poverty is most severe in Sub-Saharan Africa. However, the P20 headcounts show Central Africa as having particularly acute poverty. The MPI Index shows acute poverty slightly north, with Niger, Chad, and Ethiopia standing out slightly more. Future analysis of the microdata will allow for more detailed understanding about the MPI status of those in the P20.

Comparative wealth index

As mentioned previously, the wealth index used in the DHS and MICS surveys is based on a principal component analysis of assets owned by those in each country. It is established at a country level and is not meant to be internationally comparable. A 2014 paper by Rutstein and Staveteig[17] has generated a comparative wealth index. The aim of the paper is to adjust national income data to understand where it fits in the global spectrum. The basic intuition behind their procedure is to take a country with a median distribution and identify the frequency with which people in that population have a certain set of assets or a basic set of living standards. After identifying four assets to cover basic living standards and four assets to capture higher living standards, they suggest that comparisons can be made by regressing the 8 cut points onto a separate population. Rutstein and Staveteig only employed comparisons for a small number of countries. We sought to replicate this on a global scale. Our results produced some counter-intuitive results. For instance, the poorest family in our global analysis had a car and a refrigerator. Further research is necessary to better explore how to build on Rutstein and Staveteig's research.

One method we attempted was to replicate the principal component analysis conducted at a country level by Filmer and Pritchett to generate the country wealth score on a global level. Our preliminary analysis suggests that these results provide more intuitive results. However, further research is needed.

Conclusion

To best monitor the status of people in the poorest 20% more research is needed. We have selected procedures that face a number of challenges. We have sought to maximise our ability to measure the data as well as possible. There is strong disagreement about what exactly the population of the poorest people in the world look like. Our methods seem to identify a group that is largely consistent with other methods but differs in significant ways. We hope that more data, better research and more open data will allow us to conduct future analysis with greater certainty.

Notes

1   World Bank Group, 2016. *Poverty and Shared Prosperity 2016: Taking on Inequality*, World Bank. Available at https://openknowledge.worldbank.org/handle/10986/25078

2   The Bank determined that $1.90 (PPP 2011) should be the IPL by averaging the national poverty lines of 15 low income countries. Countries establish poverty lines using a variety of methods but generally they are meant to capture the minimum amount of money required to subsist in that country. The 15 countries included in the World Bank average show a fair amount of variance. Tanzania's national poverty line was the lowest among the group at PPP$0.88 2011.

3   Edin, K and Shaefer, L, 2015. *$2.00 a Day: Living on Almost Nothing in America*, Houghton Mifflin Harcourt.

4   In this case, we refer to income when, in fact, many official poverty numbers are measuring consumption. There is vibrant debate about what best captures poverty. Those who are poor as measured by income may be different from those as measured by consumption. Ultimately, we determine to rely on the World Bank methodology to make use of the best poverty survey available for each country, regardless of whether it is measuring income or consumption.

5   Krishna, A, 2010, *One Illness Away: Why People Become Poor and How They Escape Poverty*, Oxford University Press.

6   Chronic Poverty Advisory Network. The Chronic Poverty Report 2014–2015: The road to zero extreme poverty. ODI 2014, page 2, Figure 1.

7   Datt, G. and Ravallion, M., 1992. Growth and redistribution components of changes in poverty measures: A decomposition with applications to Brazil and India in the 1980s. *Journal of development economics, 38*(2), pp.275-295

8   Jerven, M., 2013. *Poor numbers: how we are misled by African development statistics and what to do about it.* Cornell University Press

9   Deaton, A. and Kozel, V., 2005. Data and dogma: the great Indian poverty debate. *The World Bank Research Observer, 20*(2), pp.177-199.

10   Carr-Hill, R., 2013. Missing millions and measuring development progress. *World Development, 46*, pp.30-44.

11   Deaton, A. and Kozel, V., 2005. Data and dogma: the great Indian poverty debate. *The World Bank Research Observer*, 20(2), pp.177-199

12   Deaton, A, and Aten, B, 2015, *Trying to Understand the PPPs in ICP 2011: Why Are the Results So Different?* NBER Working Paper No. 20244.

13   Rutstein and Staveteig (2014) have proposed a methodology for making international comparisons with national wealth index numbers. They have only demonstrated its techniques across a small set of countries. There are a number of potential challenges when making the comparison broader.

14   Filmer, D and Pritchett L, 2001. 'Estimating Wealth Effects without Expenditure Data – Or Tears: An Application to Educational Enrollments in States of India', *Demography, 38*(1): 115–132.

15   We have conducted some preliminary analysis of the correlation between these measures. On the individual level, there seems to be little agreement about who are the poorest in an upper middle income country as calculated using income, consumption and wealth indexes.

16   World Bank, 2017. *Monitoring Global Poverty: Report of the Global Commission on Global Poverty*, World Bank, page 112. Available at: https://openknowledge.worldbank.org/handle/10986/25141

17   Rutstein, S.O. and Staveteig. S, 2014. *Making the Demographic and Health Surveys Wealth Index Comparable.* DHS Methodological Reports No. 9. Rockville, Maryland, USA: ICF International. Available at: http://dhsprogram.com/publications/publication-MR9-Methodological-Reports.cfm#sthash.iO4wAmOG.dpuf

Annex 2: Nutrition and wellbeing methodology

Measuring whether people are getting better nourished

Better nutrition underpins health and the ability to learn and earn. Stunting – a lifelong consequence of malnutrition – is both a symptom of past deprivation and a predictor of future poverty. The second SDG is to end hunger and ensure access to safe and nutritious food for all, especially people who are poor and in vulnerable situations, and to end malnutrition in all its forms, including achieving the targets for reducing stunting. That is why nutrition, and specifically stunting, have been chosen as bellwether indicators, able to reveal whether people in the P20 are getting better nourished.

There is a long history of food consumption and nutrition being identified as a key measure of wellbeing. One of the first major antipoverty programmes was the Speenhamland system in England (begun in 1795), which sought to ensure that low income families would have enough money to purchase bread.[1] Estimates of the money required to purchase food adequate to survive continue to play a major role in the development of national poverty lines, which in turn influence the international poverty line.[2] The latest estimates suggest that the minimum amount of money required to provide adequate calories and a balanced diet would be 2011 PPP$1.59 per person per day.[3] However, trends in nutrition can diverge with trends in income.[4] Nutrition can be closely linked to political circumstances, cultural preferences, weather, water and sanitation, disease incidence, plans for the future, gender norms, activity levels and many other factors that may be quite independent of income levels.

The SDGs give a much higher priority to nutrition than the Millennium Development Goals did. The goal of SDG2 is to end malnutrition in all its forms everywhere, including ending hunger, achieving food security and improving nutrition and promoting sustainable agriculture. It includes nine indicators. The first indicator, the prevalence of undernourishment, is calculated based on 'food balance sheets'. Calories available at the national level are estimated and then a model is used to calculate what food might be available based on inequality estimates in the country. These inequality measures are not based on observed nutritional inequality but on income or consumption inequalities, whereas the evidence shows that nutritional patterns differ significantly from income patterns. The method is also based on national-level data that are highly modelled making it impossible to disaggregate by different parts of the population with much accuracy. As a result the data does not reveal whether people in the poorest 20%, or women or older people, are consuming fewer calories than the rest of the population.

SDG indicator 2.1.2 measures food insecurity using the Food Insecurity Experience Scale (FIES). This scale, developed by the Food and Agriculture Organization (FAO), includes eight questions that can be implemented during a survey. The FIES module has been part of government surveys in several countries and has been included in the Gallup World Poll in conjunction with the FAO. Unfortunately, the data for this measure is not easily available and it is not clear to what options are available to link household wealth to FIES data. It is also not clear what disaggregations are possible with the data.

Wasting

One of the longest-standing and most widely-measured indicators of nutrition is wasting – low weight for age. Wasting is technically defined as being two standard deviations[5] below the median weight for age (WAZ) for children under 5. Children are not compared against the median weight for their country or for the world but the median height compared with a standard developed by the World Health Organization (WHO). The current standards were set based on a WHO study carried out from 1997 to 2003. The WHO Multicentre Growth Reference Study drew on data from 8,500 children from Brazil, Ghana, India, Norway, Oman and the US to update the standards first set in the 1950s.[6] The group in the study excluded children at high risk of malnutrition. Consequently, the WHO reference group median is likely to be well above the actual global median for height and weight.

Wasting is an indicator of acute (as opposed to chronic) under-nutrition. While people may experience wasting for long periods of time, wasting may also be a temporary condition. When children are underweight, they are more likely to experience illness, suffer from other forms of malnutrition and face a higher risk of death. Wasting is generally measured using WAZ; however, it can also be assessed using mid upper arm circumference. Data on wasting is collected as part of DHS and MICS surveys with some frequency but is generally not measured as frequently as stunting.

Stunting

Stunting – low height for age – is probably the most widely analysed indicator of nutritional wellbeing and is included as SDG indicator 2.2.1. Stunting is defined as being two standard deviations below the median in the WHO guidelines. Unlike wasting, stunting is generally regarded as a chronic condition. Those who experience stunting before the age of two are likely to be shorter for the rest of their life[7] and to have reduced cognitive development, school achievement and labour productivity.[8] Stunting is also known to be related to poor neural development, though it is not clear exactly how.[9] A woman experiencing stunting is more likely to have complications with childbirth because she is more likely to have a smaller pelvis. She is also more likely to have children with smaller birth weights, creating intergenerational risks.

Malnutrition is not only about being underweight. In many counties there is a double burden of malnutrition including both people who are underweight and who are overweight. There is also data that suggests that people who are living with stunting are more likely to suffer obesity later in life.[10]

The relationship between income and nutrition is complicated. The economist Angus Deaton explains that height is determined by a combination of genetics and net nutrition. Income can contribute to the gross nutrition consumed but nutrition can be lost through high activity levels, diarrheal diseases or other diseases that consume nutrients.[11] In fact, there is some evidence that among developing countries higher average incomes are associated with lower average heights, suggesting that a range of factors are likely at play in determining stunting.[12] Since the P20 measure can readily be applied to different measures of wealth, income and consumption, a natural question is whether it can as easily be applied to height-for-age measurements – in other words whether it is possible to identify the poorest 20% of people ranked by height for age. The main measures used in DHS and MICS surveys do not actually show where a child falls within any real population. Rather, each child is compared against the WHO growth recommendations for healthy children based on a subset of healthy children in a few countries.

It would be fairly straightforward to adjust the z-scores to reflect the actual distributions observed in a country, but it would be a much bigger challenge to create a global distribution of heights-for-age. The surveys used in our analysis were conducted anytime between 1996 and 2014 and not all of them have measured heights. Additional data from countries not surveyed would also be required to create a global distribution of heights for age.

The P20 Initiative is about focusing political attention on people who are missing out on progress. To do that, it is useful to have data that is regularly updated, so that policymakers and others can have early warning where things are not going in the right direction. PovcalNet allows for adjustments to P20 headcounts each year in most countries so we can trace what is happening to the incomes of people in the poorest 20%. DHS and MICS surveys only produce new stunting estimates every few years when new survey data has been released. The methods used for this analysis do enable stunting comparisons between the P20 and the rest of the population to be produced every year.

As a specific example, the China Family Panel Studies (CFPS) 2012 survey reports a national stunting rate of 15.9%. The survey has not produced data for 2013. However, the 2013 consumption data in PovcalNet suggests that 6.2% of China's population is in the P20. Therefore, an analysis of the bottom 6.2% of people in the CFPS compared with the rest of the population can produce a reasonable approximation of the difference in stunting between the P20 and the rest of the population in 2013. For China, this method indicates that 37.5% of the children under 5 in households in the P20 experience stunting, compared with 15.3% for the rest of the population in 2013. Of course, between 2012 when the CFPS was conducted and 2013, stunting rates likely changed both within the P20 and elsewhere. However, data limitations do not allow for clear methods for filling these gaps.

The P20 bellwethers are not comprehensive or conclusive findings – but signals that sound a warning bell if things are not moving in the right direction. There is a large gap in stunting incidence rates between the P20 and the rest of the global population. Some 44% of children under 5 in the P20 experience stunting. The latest estimates from the joint UNICEF, WHO and World Bank dataset indicate that 23% of children globally experience stunting. This suggests that the P20 represents 35% of the share of stunting despite being only 20% of the population. Furthermore, in almost every country, better educated mothers are less likely to have stunted children and the P20 show higher stunting rates than the rest of the population.

Based on the trends seen between 1990 and 2015 and the WHO projections, dramatic change would be required to eliminate stunting by 2030. Extending WHO projections forward, stunting is not on track to be eliminated until 2078.

As an additional assessment of the health status of those in the P20, the body mass index can be calculated for surveys where adults were measured. This data was collected for some surveys, providing estimates for 45 countries with a combined female population aged 15–49 of 1.15 billion. Based on WHO weight categories, women have been identified as being in a normal range, thin, pre-obese or obese.

The results indicate that, at least among this subset of women in the P20 and women the rest of the population, those in the P20 experience higher rates of mild, moderate and severe thinness. Our preliminary analysis of an even smaller subset of 13 countries that weighed men in their DHS modules, representing about 685 million men, suggests that men in the P20 are much more likely to be thin or severely thin than those in the rest of the population.

Table A2

WHO weight category among adults for the P20 and the rest of the population

	Women		Men	
	P20	**Rest of population**	**P20**	**Rest of population**
Severe thinness	5.7%	3.3%	6.8%	4.6%
Moderate thinness	7.8%	4.6%	10.7%	6.3%
Mild thinness	18.9%	11.2%	26.8%	16.0%
Normal range	59.0%	51.9%	53.6%	58.7%
Pre-obese	6.9%	19.4%	1.9%	12.2%
Obese class I	1.3%	7.0%	0.1%	1.8%
Obese class II	0.3%	1.9%	0.0%	0.2%
Obese class III	0.2%	0.7%	0.0%	0.1%

DHS and MICS also collect some data on other nutrition-related indicators. For instance, in some surveys, they test salt used in the household for iodine. They also take blood samples for anaemia, vitamin A supplementation, breastfeeding, and the introduction of solid foods among infants. In future analyses, we will explore these measures in further depth.

Notes

1   For an extensive discussion of this programme, see Ravallion, M, 2016. *The Economics of Poverty: History, Measurement, and Policy*.

2   For an extended discussion of nutrition requirements and poverty measurement see World Bank, 2017. *Monitoring Global Poverty*, pages 124–34.

3   Kakwani, N. and Hwa Son, H, 2016. *Measuring Food Insecurity: Global Estimates, Social Welfare Functions and Development*, pages 253–94.

4   Coffey, D, Deaton, A, Dreze, J, Spears, D and Tarozzi, A, 2013. 'Stunting Among Children: Facts and Implications.' *Economic and Political Weekly*, 48(34): 68–70.

5   A standard deviation is defined as the square root of the variance (a measure of the distance from the mean). In a normal distribution, two standard deviations above and below the mean provides the 95% confidence interval. The Z score indicates how many standard deviations a point is from the mean. For example, in a normal population, someone with a z-score of -2.0 would be at the 2.5 percentile.

6   The WHO Multicentre Growth Reference Study (MGRS), Available at: http://www.who.int/childgrowth/mgrs/en/

7   Victora, C.G, de Onis, M, Hallal, P.C, Blössner, M and Shrimpton, R, 2010. 'Worldwide timing of growth faltering: revisiting implications for interventions.' *Pediatrics* 125(3): e473–80. peds-2009.

8   Dewey, K.G and Begum, K, 2011. 'Long-term consequences of stunting in early life.' *Maternal & Child Nutrition* 7(s3): 5–18.

9   Prendergast, A.J and Humphrey, J.H, 2014. 'The stunting syndrome in developing countries.' *Paediatrics and International Child Health* 34(4): 250–65.

10   See, for instance, Somalia's Population Estimation Survey 2014. Available at: http://www.analyticalreports.org/

11   Deaton, A, 2007. 'Height, health, and development., *Proceedings of the National Academy of Sciences*, 104(33), 13232–7

12   Coffey, D, Deaton, A, Dreze, J, Spears, D and Tarozzi, A, 2013. 'Stunting Among Children: Facts and Implications.' *Economic and Political Weekly*, 48(34): 68–70.

Annex 3: Civil registration and vital statistics methodology

Income and nutrition focus to a large extent on meeting basic needs and enabling people to take up opportunity. However, the third P20 bellwether, civil registration and vital statistics (CRVS), represents a basic political right and an essential building block for data to leave no one behind. Birth registration by a civil authority is an SDG indicator under Goal 16 for building peaceful and inclusive societies, while achieving 100% birth registration and 80% death registration is the final indicator of the SDGs under Goal 17 to strengthen the means of implementation.

For everyone to be included in progress, everyone needs to be counted – and to count in the eyes of their government. CRVS systems are the bedrock of population data and the basis for legal identity and for citizens to be recognised by their government.

A functioning civil registration system provides continuous data on the population and allows services to be planned and delivered. It tracks key events in the lives of a country's citizens and typically includes birth registration, death registration, marriage and divorce. The P20 bellwether, used to see if progress is going in the right direction, is birth registration. It is the most basic element of CRVS systems and the most widely-available indicator. The P20 bellwether can only feasibly be carried out as a comparison of CRVS status for those in the P20 and the rest of the population. Conceptually, it would not be possible to identify the 20% of people most deprived of CRVS status.

Birth certificates and government records of a birth are frequently required as proof of citizenship and children should receive a certificate soon after their birth. The right to nationality is part of the Universal Declaration of Human Rights[1] yet many children never receive a birth certificate. In some cases this is part of government policy for political reasons[2] but more often the consequence of inadequate resourcing and the absence of a functioning CRVS system.

UNICEF collects data on birth registration based on reports from national systems. This will typically include the data from the national statistical offices or administrative data systems. Countries may collect this data using household surveys, administrative data systems or censuses. For about 100 countries, the data is taken from household surveys, indicating that the administrative data systems are not adequate to report the rates. The DHS and MICS surveys include the most widely used way of measuring this data: they ask if the birth has been registered. Secondarily, the surveys ask if the family has a birth certificate and the interviewer then asks to see the birth certificate.

Only 34% of children under 5 in the P20 have a birth certificate compared with 65% of the global population based on the most recent estimates from UNICEF. The P20 account for 55% of the unregistered births of children under 5 worldwide.

Studies of CRVS systems have pointed out that women and girls who are not registered can face particular disadvantages. When marriages are not registered, women may not be able to register their children's births[3] or inherit property. Disaggregated data reveals that while gender gaps in birth registration are minimal in most countries, in some contexts, boys are more likely to have identity cards than girls.[4] Similarly, gender inequality can be particularly pronounced in death registration.[5]

Another important dimension of CRVS is the registry of deaths. Many deaths are never reported and the causes of death are rarely discovered. As a result of the poor state of CRVS systems, deaths are usually estimated using approximations, including surveys, combined with national-level data such as GDP.

An area of optimism in the domain of CRVS system improvement is the development of identification cards. India's biometric ID system has increased the official registration of millions of new people.[6] The World Bank has committed significant energy to promoting identity for development,[7] and identification programmes can be a powerful tool for ensuring that births, deaths, marriages and divorces are registered.

Improved performance in functioning CRVS system is often best facilitated by improved administrative systems. A well-functioning ministry of health, for instance, is more likely to monitor births and deaths and to identify causes of deaths. Developing these administrative data systems is a sustainable investment in improved population data and statistical capacity.

Although civil registration confers legal identity, being counted through a government system does not always lead to more responsive government and greater access to government services. Governments have used identity cards and registration systems to exclude and oppress certain ethnic or religious groups[8] as well as to target and plan services. As with most other indicators, we will track progress on this indicator within the broader context. The risks of certain groups being excluded despite being tracked through CRVS should be apparent through the disaggregation of the other bellwether indicators.

Notes

1   Universal Declaration of Human Rights, Article 15 states 'Everyone has the right to a nationality.'

2   For instance, children of Haitian descent born in the Dominican Republic or the Rohingya in Myanmar may be particularly likely to be excluded from CRVS systems for political reasons.

3   Plan International, 2012. *Mother to Child. How Discrimination Prevents Women Registering the Birth of their Child.* Available at: https://plan-international.org/publications/mother-child-discrimination-and-child-registration

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5   Silva, R, 2016. *Disentangling Sex-Differentials in Death Registration Mortality Estimates: Preliminary Findings from Morocco & Kuwait*, Presentation for Expert Group Meeting on Methodology and Lessons Learned from CRVS Assessments, UN DESA, 3 November 2016. Available at: http://www.un.org/en/development/desa/population/events/pdf/expert/26/presentations/Session3/silva-DDMs-slides-2016-11-03.pdf

6   Gelb, A, and Clark, J, 2013. *Identification for Development: The Biometrics Revolution.* CGD Working Paper 315. Washington, DC: Center for Global Development. Available at: http://www.cgdev.org/content/publications/detail/1426862

7   World Bank, Identification for Development (ID4D) Available at: http://www.worldbank.org/en/programs/id4d#1

8   Longman, T, 2011. 'Identity cards, ethnic self-perception, and genocide in Rwanda.' In (eds.) Caplan, J. and Torpey, J. *Documenting Individual Identity: The development of state practices in the modern world*: 345–57.

Annex 4: Disaggregated data

Disaggregated data is a critical component of the goal to leave no one behind. People can be excluded from progress as a result of many dimensions of poverty. But they can also be excluded because of their identity. Leaving no one behind requires data that goes beyond the level of the household, to identify individual people and groups likely to be excluded as a result of identity.

SDG target 17.18 requires significant increase in the availability of high quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts. The P20 Initiative is focused on a minimum set of standard disaggregations that would enable data to be joined up to reveal who is being included in progress. This minimum set is quintile, gender, geography, age and disability – QGGAD for short. These five elements are widely recognised as important and although there are real data challenges, they are less politically sensitive and easier to define than some other dimensions. They therefore represent a good starting point for measuring progress.

Disaggregated data reveals the differences between people – between women and men for instance, or between older and younger people. But there are also significant data gaps. If data is not collected in the first place, it cannot be disaggregated and there are issues of significance to some groups that require different data to be collected.

Disaggregated data also needs to be joined up. People do not just have one identity – we have many and they intersect with each other. People are advantaged or disadvantaged as a result of their sex or gender identity, their age, their income, where they live, their ethnicity or religion so the data needs to be capable of being used in a way that reveals a more holistic picture of the forces shaping people's choices and opportunities.

There are two dimensions of inequality that are relevant to measuring progress: vertical and horizontal. Vertical inequality is a measure of differences between households. Horizontal inequality measures differences between groups of people. Vertical inequality is measured by comparing the status of households but horizontal inequality is primarily measured through disaggregated data that reveals the status of individual and groups based on their identity. Horizontal inequalities are frequently masked by national or household averages. They can be uncovered by disaggregating the data and seeking to fill the data gaps.

The P20 Initiative will be monitoring the extent to which QGGAD disaggregations are included in the major datasets. The baseline starting point is set out in Table A2.

Table A3

Do the major datasets include QGGAD disaggregations?

Data source	Income	Sexand gender	Geography	Age	Disability
PovcalNet	Yes, with great precision, although income and consumption are treated as the same	No	China, India and Indonesia show urban/rural split but no countries have subnational data	No	No
DHS	Wealth but not income	Yes, but wealth defined at household level. Most questions focus on women and children. Most questions focus on sex, not gender identity	Yes, almost all countries provide GPS coordinates	Yes, for education. Few questions on people aged 5–14 and over 49	11 of the 56 DHS surveys in our sample have some questions about disability
MICS	Wealth but not income	Yes, but wealth defined at household level. Most questions focus on women and children. Most questions focus on sex, not gender identity	Yes, but GPS coordinate data is not provided	Yes, for education. Few questions on people aged 5–14 and over 49	5 of the 41 MICS surveys in our sample have some questions about disabilities

These data sources were set up with different objectives and the extent of disaggregated data partly reflects the purposes for which they were established. However, they are all major sources for measuring progress under the SDGs and need to be able to reveal who is included and who is left behind.

- PovcalNet is not based on a standard dataset. The microdata underlying PovcalNet is taken from household income and expenditure surveys carried out by national statistical offices or other government agencies. These surveys are reviewed by a committee at the World Bank that determines whether the methods are sufficiently sound and comparable to be included in PovcalNet. Living Standards Measurement Study (LSMS) survey microdata allow for disaggregation by age, sex, geography and potentially disability. However, the World Bank does not own the microdata, it is owned by the countries in which these surveys were conducted and the World Bank is restricted from making it publicly available.[1] The World Bank disseminates some of the microdata from a few surveys used for PovcalNet through its LSMS[2] but the presentation of the data in PovcalNet does not allow disaggregation by gender, geography (except rural/urban distinctions for three countries), age or disability.

- Household income and expenditure surveys measure income or consumption or wealth at the household level, rather than the individual level. Consequently, when household wealth, consumption or incomes are calculated they show equal wealth levels between men and women. But household averages can miss inequalities across groups; among families in Senegal, for instance, household averages are reported to misidentify about a quarter of people who are poor.[3] Similar issues, though likely to a lesser extent, apply to age and disability. It is clearly difficult to determine how evenly household wealth is shared among members of the household and significant changes will be required to gather this data.[4] The World Bank Commission on Global Poverty encourages the World Bank to support additional research on this topic.

- The DHS and MICS surveys were not set up with the main objective of providing data to compare progress of groups. Both are primarily focused on young children and women of reproductive age. Consequently, the surveys ask few questions about men, children older than 5 and women older than 49. In order to disaggregate data to leave no one behind, new methods and new tools are required – including standards for disaggregation that will allow different sources of data to be joined up.

Income quintile

The basic premise of the P20 requires disaggregation by quintile because it is about identifying the poorest 20% of the world's population. The SDGs are universal; they are not achieved unless achieved for everyone, so identifying those who are and are not included in economic progress is essential. As the methodological note on income describes, this is not readily done with most existing datasets, particularly when comparing across countries and time (see Annex 1: Income methodology).

Gender

Understanding the differences that arise from sex and gender identities is fundamental to policies and investments that reach everyone. Sex disaggregation reveals the differences between men and women; gender identity covers a wider range of issues.

The three main data sources do not disaggregate household wealth and income by gender or sex. DHS and MICS surveys are focused on sex not gender, and primarily on women, rather than on data that disaggregates progress and shows the difference between men and women. There are questions about gender relations, but not gender identity, in these surveys. It is rare for surveys or censuses to record gender identity.[5]

The current data does not show a clear gap between men and women in the three bellwethers of income, nutrition and birth registration – but this in itself reflects the limits of the data that is currently collected and available. Data2X has produced a list of 28 gender data gaps across a range of sectors.[6]

Examples of differences revealed by sex and income disaggregation include the following:

- Among men and women over 25, women are less likely to have completed primary education. The gap between men and women is wider among the P20 than the rest of the population.

- Preliminary research shows that women in the P20 are more likely to have had a sister who died as a result of pregnancy or childbirth.

- In some countries, women in the P20 are more likely to have experienced female genital mutilation/cutting; in other countries, the opposite trend is observed.

- Among countries with DHS surveys, men in the P20 and men in the rest of the population were equally likely to report that they were working but there was a significant difference among women – 48% of women in the P20 reported that they were working compared with 39% of women in the rest of the population.

- 65% of the women in the P20 report that they worked in agriculture compared with 58% of the men and with 29% of women in the rest of the population.

Other dimensions including time use surveys and measures of political rights and economic empowerment can expose gaps that may not be apparent across other indicators.

Geography

National averages can mask significant inequalities within geographical divisions. For instance, people in rural areas are much more likely to be in the P20 than those in urban areas. The DHS wealth index is calculated separately for urban areas and rural areas and then adjusted to make the two more comparable. Even so, the wealth index estimates larger differences between urban and rural areas than PovcalNet. PovcalNet has substantial difficulty distinguishing between the cost of living in urban areas and rural areas. This is a particular challenge in areas with large suburban populations. There is also some evidence that urban areas are significantly miscounted in many household surveys.[7]

There are also important geographical differences between subnational geographic regions.

- PovcalNet does not publish any data on poverty disaggregated by subnational units.

- Some LSMS surveys include GPS coordinates for where surveys were conducted.

- Most LSMS surveys include some data on the subnational location.

- Sampling procedures for DHS and MICS surveys are such that they are designed to be representative of populations in subnational survey regions. Survey regions are defined differently in different countries. Uganda has more than 100 districts (1st administrative level) but 11 survey regions. In India every state or territory (1st administrative level) has its own survey region with a couple of exceptions. The number of survey regions is determined by the country.

Many DHS surveys also provide GPS coordinates for each survey cluster. To protect the privacy of respondents, the GPS coordinates are randomised within a 3km radius for urban cluster and within a 5km radius for rural clusters. It is not possible to know where a cluster falls within a city; however, the GPS points provide a much more detailed image of what variation exists within an area. Mapping the P20 headcounts for each cluster on a world map shows the high degree of variation that exists. This method also highlights some of the shortcomings with the methods used for this analysis. For instance, the subnational data calculated shows that Kampala, Uganda does not have anyone in the P20. In truth, Kampala has people below the national poverty line and international poverty line.[8]

Geographic estimates of poverty have significantly expanded in recent years through the use of satellite and call data records. Satellite data is promising because it is globally available without the logistical problems of fielding a survey and satellite images are not subject to the kind of biases faced by survey enumerators.

Although satellite data adds value,[9] it will not be able to provide as nuanced an image of household consumption patterns as sitting down with a family for two or three hours and it cannot provide any disaggregation by income, gender, age or disability. What it can do is provide some valuable information on countries that do not currently have data, particularly those with few national surveys. In Somalia[10] satellite data was used to increase the speed with which a household survey could be done.

Data from cell phone use has been applied to try to estimate poverty headcounts in some countries.[11] This tool can also provide precise geographic estimates of where some people live but cannot yet provide very precise estimates of their welfare.

A census can provide information on poverty disaggregated to the smallest geographic unit: the household. This provides a powerful tool for policymakers but there are limitations to this source of data. As a matter of policy or practice, censuses can miss many groups of people who are likely to be left behind. Censuses generally use proxy means testing which asks a few questions that are taken as being good predictors of whether or not someone is in poverty. These proxies are valuable for targeting, even if they are not as accurate at measuring poverty as income or consumption measures.

Making this wide range of subnational data accessible and interoperable is already offering much better information for designing policies and prioritising investments than has previously been available.

Age

Data on the age of the population and on the status of different age groups is necessary to include everyone in progress. Different data is also needed for different age groups and there are currently significant gaps in the data required to ensure that everyone of every age is included.

Poverty is sometimes seen as applying differently to younger and older people. For instance, older people and children may not require as many calories as middle-aged adults. Therefore, some measures of poverty will have a lower poverty line for children than for adults. PovcalNet does not make such adjustments and as a result, poverty measurements in the P20 Initiative are currently reported in simple per capita numbers.

Because wealth, income and consumption are defined at the household level, it is difficult to disaggregate by age and show income for different age groups. However, there is some evidence that households in the P20 are more likely to include children and older people than households in the rest of the population.

Many of the measures in the DHS and MICS focus on women between the ages of 15 and 49 but some specific questions target all members of the household.

- For each member of a household, DHS and MICS will record their age, relationship to head of household, marital status, whether they regularly stay in the household and highest level of schooling completed.

- For children under 5, additional questions are asked in many surveys about immunisations, breastfeeding, height, weight, birth registration status, birth certificate and a number of other indicators.

- Women and men aged between 15 and 49 are asked many questions about reproductive health and domestic violence. But there is data on these issues for children younger than 15 and people older than 49.

In almost all countries, the data on older people is limited. Older people tend to be a small proportion of the total population, particularly in sub-Saharan Africa. To collect better data on them, larger sample sizes would likely be required. Furthermore, older survey interviewers are needed to improve survey responses, particularly around sensitive questions. All of this requires more resources. However, in some countries, this work has been done. In Namibia, the Maldives, Haiti, Cameroon and South Africa, DHS surveys have or will have expanded their sampling frames to include people over the age of 49 in their women's or men's questionnaires.

There are other issues of concern for older people and children that are not covered by these surveys. Issues related to neglect, abuse, disability, non-communicable diseases and social pensions are all data gaps that are important for older people.[12] UNICEF has produced a clear outline[13] of the data availability and data challenges related to the progress of children under Agenda 2030.

An alternative to adding these questions to DHS and MICS surveys is to create new survey tools. For instance, WHO's Study on Global Ageing and Adult Health (SAGE) focuses primarily on people over 50. This programme has led to nationally representative surveys in China, Ghana, India, Mexico, Russia and South Africa. In future work, the connection between P20 data and SAGE data will be explored in further depth.

One particularly common tool for analysing age data is Whipple's Index. The index is a test of the quality of age data in a dataset. Data with inaccurate ages is more likely to see ages that end in a 0 or a 5. For instance, if a person's age is incorrectly recorded, it is more likely to be reported as 40 rather than 39 or 41 or it will be reported as 35 rather than 34 or 36. The Whipple Index finds the share of ages that end in a 0 or a 5 and multiplies them to get an index. A Whipple Index between 100 and 105 would generally be considered clean data. A Whipple Index of 175 would be very messy. Among the DHS and MICS surveys in our dataset the total Whipple Index is 141. For the P20, the Whipple Index is 153 while for the rest of the population in our survey data, it is 124. This suggests that the data is notably less accurate for those in the P20 than among the rest of the population. This could be related to the relatively smaller number of people in the P20 who have had their births registered and their actual age not being known for certain.

Disability

Data on disability measurement has been greatly enhanced by the Washington Group 'short set of questions' on disability measurement. These questions are focused on the level of difficulty people report in carrying out a number of activities. The questions cover seeing, hearing, communicating, remembering, taking care of oneself and mobility. This set of questions does not cover all disabilities but provides a basic framework to understand the impact of disability.

To date these questions have generally not been included in DHS or MICS surveys but in Uganda they were included in a DHS survey. This data reveals the differences between people in the P20 and the rest of the population (see figures 27 and 28). Sampling error and chance mean that there are large confidence intervals for the disabilities in the sample.

There is a complex relationship between disability and other aspects of identity such as age as well as with the environment and poverty so it is important to be able to disaggregate by a range of different, intersecting issues. Disability can be strongly linked with old age and if poverty results in significant gaps between the life expectancy of the P20 compared with the rest of the population, the correlation between poverty and disabilities could be weakened or flipped. Researcher Daniel Mont has found that in Viet Nam, disability is more closely linked with poverty when limiting the scope to a smaller age group. He has also found that geography has a lot to do with how disability is experienced.[14]

The DHS Program has officially adopted a disability module. The module will be part of the DHS surveys for Angola, Haiti, South Africa, Timor Leste and Uganda.[15] Similarly, the MICS program has developed a module with the Washington Group on child disability. Future analysis of the P20 by disability status will benefit significantly from these new data sources.

Notes

1   Dykstra, S, Dykstra, B, and Sandefur, J, 2014. *We Just Ran Twenty-Three Million Queries of the World Bank's Website*.

2   World Bank, Living Standards Measurement Survey, http://go.worldbank.org/JF4LVHJBS0

3   DeVreyer, P, and Lambert, S. *Intrahousehold Inequalities and Poverty in Senegal*. Technical report, 2016. Available at: http://pubdocs.worldbank.org/en/407221466181742385/intrahh-inequality-and-poverty-juin2016-2.pdf

4   Castaneda, A, Doan, D, Newhouse, D et al, 2016. *Who Are the Poor in the Developing World?* Policy Research Working Paper 7844, World Bank, Available at: http://documents.worldbank.org/curated/en/187011475416542282/Who-are-the-poor-in-the-developing-world

5   Shresth, M, 2011. *Nepal Census Recognizes 'Third Gender'*, CNN, 31 May 2011. Available at: http://www.cnn.com/2011/WORLD/asiapcf/05/31/nepal.census.gender/index.html

6   Buvinic, M, Furst-Nichols, R and Koolwal, G, 2014. *Mapping Gender Data Gaps*, Data2X.

7   Carr-Hill, R., 2013. Missing millions and measuring development progress. *World Development*, 46, pp.30-44.

8   See 'National percentage of the poorest 20% of people globally' at data.devinit.org. The World Bank's Poverty Assessment Report for Uganda reports that in 2013, 1% of Kampala's residents were below the national poverty line (approximately 2005 PPP$1.00). The poverty assessment report does not provide numbers for the precise threshold to be in the P20; however, clearly many more people in Kampala would be between the national poverty line and the cutoff to be in the P20. https://openknowledge.worldbank.org/handle/10986/26075

9   Jean, N, Burke, M, Xie, M et al, 2016. 'Combining satellite imagery and machine learning to predict poverty.' *Science* 353(6301): 790–4.

10 See, for instance, Somalia's Population Estimation Survey 2014. Available at: http://www.analyticalreports.org/

11 Steele, J.E., Sundsøy, P.R, Pezzulo, C, 2017. 'Mapping poverty using mobile phone and satellite data.' *Journal of The Royal Society Interface* 14(127): 20160690.

12 Gelders, B, 2015. *Good Practices and Barriers in the Use of Data for Policy and Advocacy on Ageing in Asia-Pacific*. HelpAge International and UNFPA. Available at: http://ageingasia.org/eaprdc0033/

13 UNICEF, 2017. *Is Every Child Counted? Status of Data for Children in the SDGs*. Available at: https://data.unicef.org/wp-content/uploads/2016/09/SDGs-and-Data-publication.pdf

14 Mont, D, and Nguyen, C, 2013. *Spatial variation in the disability-poverty correlation: Evidence from Vietnam*. Leonard Cheshire Disability Working Paper 20. Available at: http://addc.org.au/documents/resources/130806-spatial-variation-in-the-disability-poverty-correlation-evidence-from-vietnam_1436.pdf

15 USAID, 2016. *Collaboration Yields New Disability Questionnaire Module*, press release, 2 December 2016. Available at: http://dhsprogram.com/Who-We-Are/News-Room/Collaboration-yields-new-disability-questionnaire-module.cfm

Annex 5: Country data

Country	Number of people in the world's poorest 20% in each country	Country's share of the global P20	Percentage of national population in global P20	Percentage of children under 5 in the P20 with no birth certificate	Percentage of children under five in P20 who are stunted	Percentage of people in the P20 over 25 with no education
Angola	9,726,314	1%	41%		70%	
Albania	91,977	0%	3%	2%	63%	44%
Armenia	264,510	0%	9%	0%	72%	4%
Azerbaijan	80,729	0%	1%	0%	72%	10%
Burundi	9,067,707	1%	87%	26%	46%	85%
Benin	6,800,286	0%	66%	24%	56%	92%
Burkina Faso	11,163,048	1%	65%			
Bangladesh	49,771,747	3%	32%	83%	61%	78%
Bosnia and Herzegovina	10,324	0%	0%		0%	59%
Belarus	-	0%	0%			
Belize	63,400	0%	18%	5%	66%	47%
Bolivia	1,104,473	0%	11%	34%	57%	92%
Brazil	14,032,619	1%	7%		88%	4%
Bhutan	36,374	0%	5%	0%	57%	97%
Central African Republic	4,126,083	0%	88%	42%	57%	82%
China	84,067,130	6%	6%	32%	56%	51%
Cote d'Ivoire	9,023,065	1%	42%	47%	70%	82%
Cameroon	8,555,741	1%	39%	57%	59%	78%
DRC	62,032,696	4%	86%	77%	60%	50%
Congo	2,202,001	0%	50%	12%	73%	45%
Colombia	4,776,844	0%	10%		83%	69%

Comoros	185,744	0%	25%	8%	66%	85%
Costa Rica	136,957	0%	3%	4%		56%
Dominican Republic	581,928	0%	6%	51%	89%	84%
Ethiopia	40,527,719	3%	43%		57%	98%
Gabon	237,816	0%	14%	4%	69%	64%
Georgia	849,615	0%	21%	9%		
Ghana	5,758,791	0%	22%	42%	80%	78%
Guinea	6,703,235	0%	56%	51%	68%	94%
Gambia	1,105,565	0%	59%	26%	77%	81%
Guinea-Bissau	1,380,583	0%	79%	64%		100%
Guyana	93,607	0%	12%	10%	70%	43%
Honduras	2,220,499	0%	28%	7%	68%	77%
Haiti	6,600,894	0%	63%	23%	79%	79%
Indonesia	67,842,435	5%	27%	55%		47%
India	490,048,069	34%	38%	71%	48%	79%
Jamaica	135,888	0%	5%			18%
Kazakhstan	15,390	0%	0%	0%	100%	8%
Kenya	17,407,244	1%	40%			
Kyrgyzstan	713,616	0%	12%	4%	82%	13%
Cambodia	1,256,044	0%	8%	43%	62%	88%
Kosovo	34,410	0%	2%	25%	85%	38%
Lao	2,104,937	0%	32%	32%	42%	51%
Liberia	3,125,808	0%	73%	76%	71%	68%
Saint Lucia	79,449	0%	44%	14%	97%	15%
Lesotho	1,417,940	0%	68%	59%	68%	61%
Moldova	19,146	0%	0%	0%	100%	31%
Madagascar	19,854,959	1%	87%			
Maldives	43,011	0%	12%	3%	80%	79%
Macedonia	97,824	0%	5%	0%	81%	57%
Mali	11,599,535	1%	70%	19%	61%	96%

Montenegro	12,056	0%	2%	0%	94%	41%
Mongolia	37,169	0%	1%	2%	66%	50%
Mozambique	19,789,510	1%	75%	54%	59%	92%
Mauritania	609,948	0%	16%	67%	60%	94%
Malawi	13,264,570	1%	82%			
Namibia	751,613	0%	32%	13%	74%	62%
Niger	12,280,243	1%	67%	40%	61%	98%
Nigeria	112,952,876	8%	65%	81%	59%	66%
Nepal	6,942,044	0%	25%	44%	47%	80%
Pakistan	44,192,886	3%	24%	93%	43%	84%
Peru	2,102,904	0%	7%		65%	73%
Philippines	24,734,420	2%	25%			43%
Palestine	22,534	0%	1%	0%	84%	27%
Rwanda	8,205,545	1%	74%	44%	63%	74%
Sudan	7,518,147	1%	20%	63%	56%	77%
Senegal	7,697,849	1%	54%	37%	81%	94%
Sierra Leone	3,290,242	0%	53%	20%	64%	90%
Serbia	67,032	0%	1%	0%	71%	72%
South Sudan	9,369,217	1%	82%	70%	67%	92%
Sao Tome and Principe	91,120	0%	50%	22%	68%	81%
Suriname	112,718	0%	21%	2%	87%	58%
Swaziland	683,725	0%	55%	56%	64%	43%
Chad	6,492,705	0%	49%	0%	64%	88%
Togo	4,498,817	0%	65%		72%	76%
Thailand	175,374	0%	0%	0%	50%	90%
Tajikistan	3,638,184	0%	45%	9%	76%	6%
Turkmenistan	398,247	0%	8%	6%		
Timor Leste	528,068	0%	47%	47%	41%	80%
Trinidad and Tobago	7,550	0%	1%	13%		

Tunisia	312,562	0%	3%	4%	70%	80%
Tanzania	32,146,655	2%	64%	91%		55%
Uganda	19,599,678	1%	54%			
Uruguay	27,945	0%	1%	0%		32%
Uzbekistan	12,841,456	1%	44%	0%		
Viet Nam	7,100,129	0%	8%	14%		66%
Vanuatu	68,760	0%	27%	82%		
Zambia	10,838,443	1%	71%	92%	63%	56%
Zimbabwe	4,539,449	0%	30%	82%	67%	17%
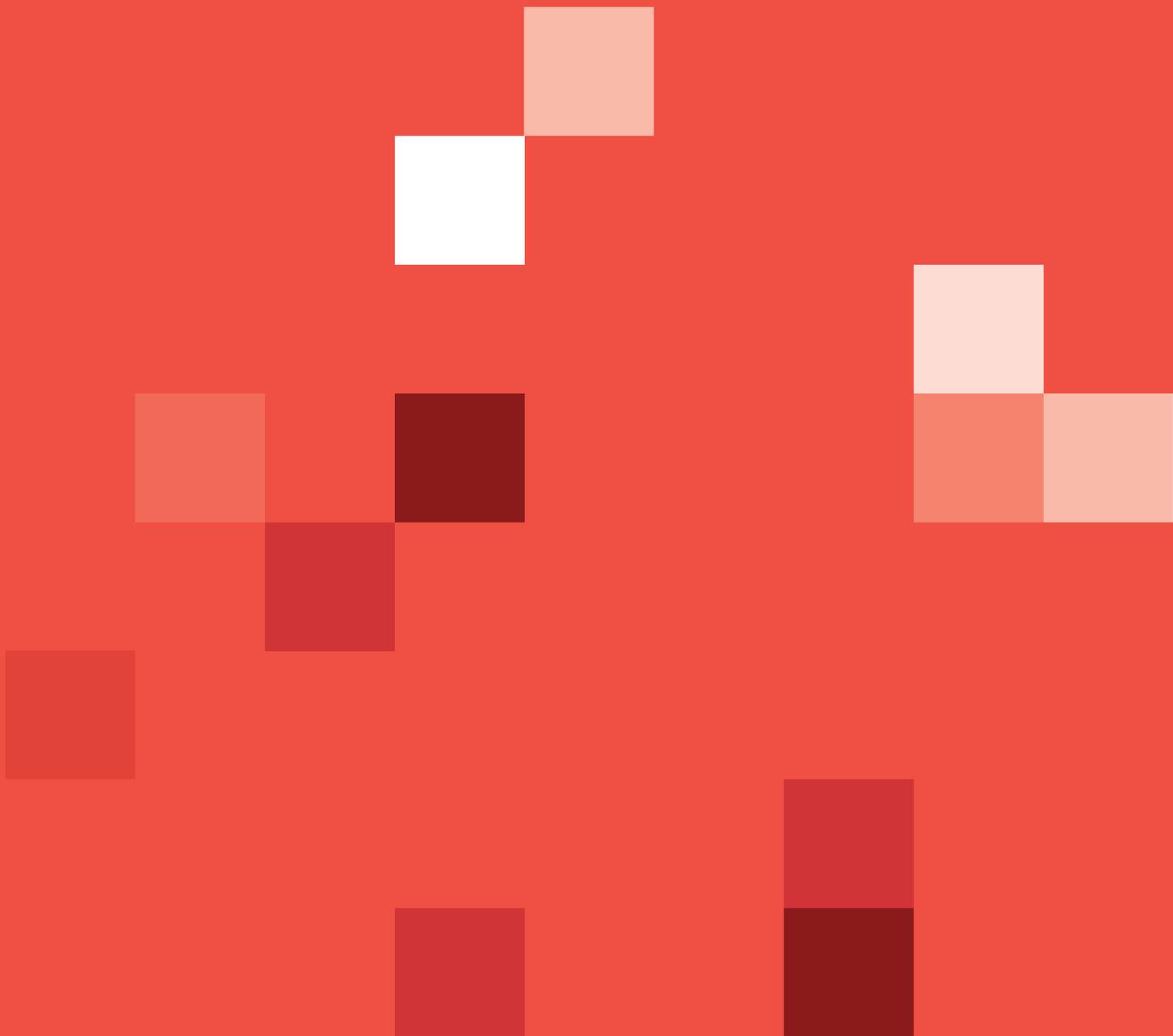
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the P20 initiative — data to leave no one behind

The P20 Initiative is focused on how the Sustainable Development Goals (SDGs) set out in the 2030 Agenda for Sustainable Development (Agenda 2030) can work with the data revolution to deliver progress for the poorest 20% of the world's population – the P20.

Agenda 2030 includes specific commitments to end extreme poverty and ensure that no one is left behind. The logic is clear: for these goals to be met, it is essential to know who the people in the poorest 20% are and whether they are included in global progress.

Existing statistics help to track national averages but they do not focus enough on who is included and who is left behind. In any country, if the status of the P20 fails to improve, success on Agenda 2030 will be out of reach – regardless of overall progress at national level.

The P20 Initiative promotes data that puts people first. It focuses on simple measures, drawn from the SDG framework, that assess the progress of the people in the poorest 20% of the world's population to ensure that those furthest behind are benefitting from efforts to tackle poverty and improve growth.

The P20 Initiative puts forward three 'bellwether' indicators to maintain a focus on one big question – are the poorest 20% of people getting their share of global progress? To answer this question, the P20 Initiative will track over time if the people in the poorest 20% of the world's population are better off, better nourished and counted by their governments.

We encourage dissemination of our work provided a reference is included.

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