

*The COVID-19 pandemic has worsened preexisting inequalities. It has laid bare inequalities in access to basic services, which, in turn, may cause income gaps to persist generation after generation. For the recovery to benefit all and to strengthen trust in government, action is needed to reduce gaps in incomes and in access to services. For most countries, this will require mobilizing additional revenues and improving service delivery while fostering inclusive growth. In the period ahead, access to vaccines and the progress in vaccination will be decisive. Policymakers should also be responsive to public sentiment that, as a result of the pandemic, may be shifting toward greater demand for inclusive policies.*

## Introduction

COVID-19 has exposed and exacerbated preexisting inequalities in incomes and access to basic public services, such as health care and vaccination, both within and across countries.<sup>1</sup> Disruptions to education threaten social mobility by leaving long-lasting effects on children and youth, especially those from poorer households. These challenges are being compounded by accelerated digitalization and the transformational effect of the pandemic on the economy, posing low-skilled workers with difficulties in finding employment. Against this backdrop, societies may experience rising polarization, erosion of trust in government, or social unrest. These factors complicate sound economic policymaking and pose risks to macroeconomic stability and the functioning of society.

<sup>1</sup>The chapter uses several inequality-related concepts: inequality of income, mainly measured using a conventional Gini coefficient in which 0/1 represents perfect equality/inequality; wealth inequality, measured as the share of wealth attributed to the top 1 or 10 percent of the population; inequality of opportunity, which is income inequality driven by factors outside the control of individuals (such as parental education and income, race, gender, and place of birth); intergenerational mobility, which measures the extent to which parental income or education determines their children's income or education; and access to basic (public) services, which includes typical services governments provide for public consumption, with primary focus on education, health, social protection, and infrastructure.

Governments need to provide everyone with a fair shot—enabling all individuals to reach their potential—and to strengthen vulnerable households' resilience, preserving social stability and, in turn, macroeconomic stability. The pandemic has confirmed the merits of equal access to basic services—health care, quality education, and digital infrastructure—and of inclusive labor markets and effective social safety nets. Better performance in these areas has enhanced resilience to the pandemic and is key for the economic recovery to benefit all and to strengthen trust in government.

Meanwhile, policies to reduce income gaps and improve access to services face a more challenging economic and social environment. Public finances have been weakened in most countries as a result of the pandemic. To finance these critical policies and foster inclusive growth, many countries will need to raise additional revenues and improve spending efficiency. Measures will thus need to support inclusive growth in a context of tighter fiscal space. At the same time, policymakers should be aware of public attitudes, which may be shifting toward greater demand for inclusive policies.

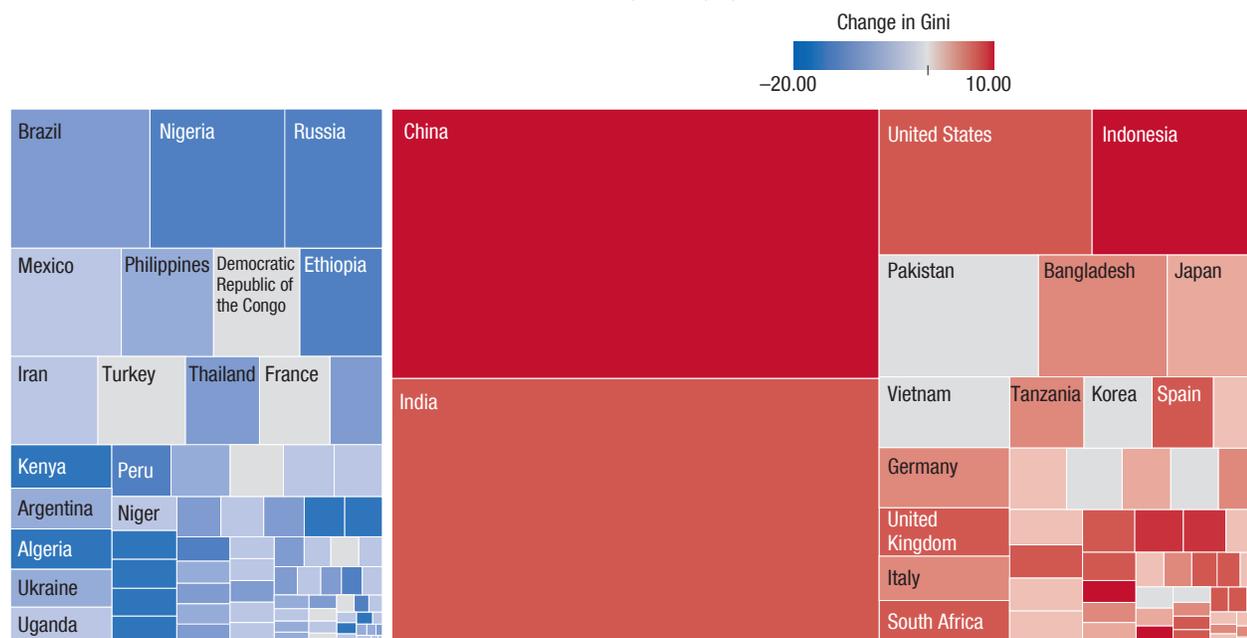
To discuss these policy challenges, this chapter first reviews trends in inequality before the pandemic, highlighting the tight connections among inequalities in income, wealth, access to basic services, and opportunities. It then reports early evidence that preexisting inequalities have exacerbated poor health and income outcomes from the COVID-19 crisis and that, in addition, the pandemic is worsening inequality, poverty, and educational attainment. The chapter then considers two groups of policies: predistributive (policies that affect the distribution of market income) and redistributive; both are needed to tackle inequalities in the postpandemic world. The chapter then explores how to garner popular support for distributive policies.

## Trends in Inequality before the COVID-19 Pandemic

Before the pandemic, within-country income inequalities had been rising or remained high in many countries—in some cases, contributing to occasional

**Figure 2.1. Change in Inequality (Gini Index), 1990–2019**

Income inequality has increased in many advanced economies and large emerging market economies in the past three decades.



Sources: IMF Income Gini database; and World Economic Outlook database.

Note: The size of the rectangle corresponds to the relative size of the population of the country. The colors correspond to the difference in the Gini index between the value in the most recent available year and the 1990s. Red (blue) denotes worsening (improvement) in Gini, and gray points to little change.

episodes of social unrest (April 2020 *Fiscal Monitor*).

Over the past three decades, income inequality has increased in most advanced economies and large emerging market economies (Figure 2.1). By contrast, in many emerging market economies and low-income developing countries, income inequality has declined, albeit from high levels. Both country-specific and global factors, such as technological innovation, globalization, and commodity price cycles, have shaped trends in income inequality. Meanwhile, global income inequality, measured across all individuals and abstracting from national borders, has declined steadily, reflecting that some of the largest emerging market economies have caught up with advanced economies (October 2017 *Fiscal Monitor*). Global extreme poverty, accordingly, had been declining since the 1990s (World Bank 2020b).

The wealth distribution is more unequal than the income distribution. The wealth share of the top 10 percent of the population is well above the income share of the top 10 percent in countries for which data are available (Figure 2.2). High wealth and income inequality create differences in opportunities and persistent disparities in access to basic services, such as education, health care, electricity, water, and internet. Intergenerational persistence in education—the extent

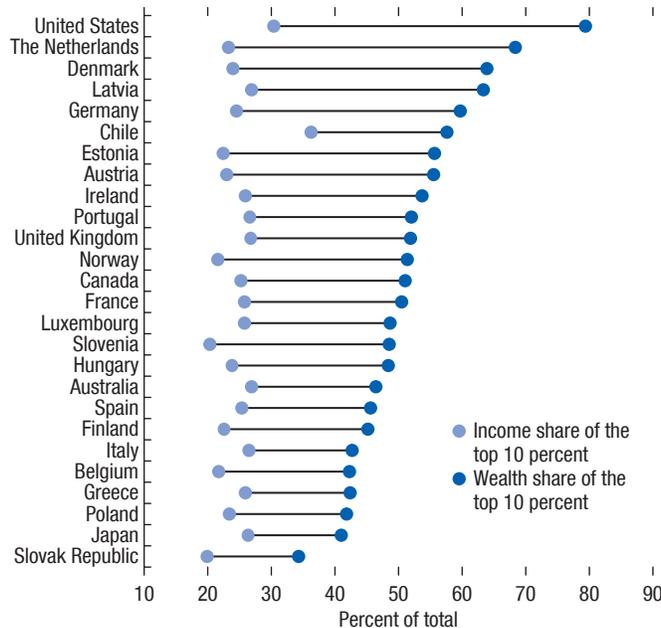
to which the education of parents determines the education of their children—declined from the 1940s cohorts to the 1960s cohorts and effectively stalled thereafter, particularly in emerging market economies and low-income developing countries (Figure 2.3).

These various aspects of inequality (income, wealth, access to services, and opportunities) are mutually reinforcing (see, for example, Balboni and others 2020). Income inequality, an outcome, reflects individuals' choices and opportunities. Inequality of opportunities, which measures income inequality driven by factors outside the control of individuals (such as parental education and income, race, gender, and birthplace), stems, in part, from disparities in access to basic services, such as education and health care. For example, the differential access proxied by a country's index of progress in achieving the Sustainable Development Goals (SDGs) is closely associated with inequality of opportunity (Figure 2.4, panel 1).<sup>2</sup> In turn, inequality of opportunity is closely related to intergenerational persistence in income (Narayan and

<sup>2</sup>The SDG index tracks country performance on the SDGs with equal weight to all 17 goals and signifies a country's position between the worst (0) and the best or target (100) outcomes.

**Figure 2.2. Income and Wealth Shares of the Top 10 Percent of the Population**

*The wealth distribution is even more unequal than the income distribution.*



Source: Organisation for Economic Co-operation and Development.  
 Note: Data are taken from the most recent available year, ranging from 2013 to 2017.

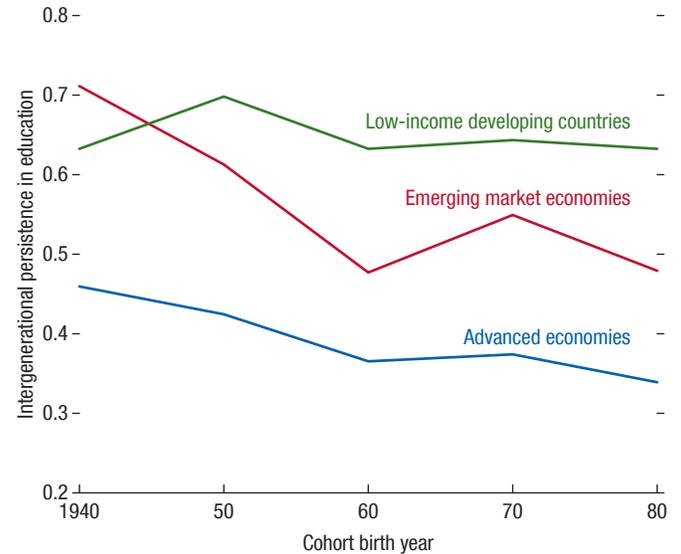
others 2018). Furthermore, income inequality has an adverse feedback loop to disparities in access and intergenerational mobility. Higher-income parents can give their children better access to good education and job opportunities, thus leading to intergenerational persistence in income. Income inequality and intergenerational persistence in income are significantly associated (Figure 2.4, panel 2).<sup>3</sup>

Income inequality is also related to intergenerational persistence in education. Access to education is an important determinant of intergenerational mobility in education, along with access to information and communication technology and income inequality (Online Annex 2.1). For example, for the 1960s cohort, an increase of 2¾ years in education is associated with an improvement from the third quartile to nearly the median of the distribution of intergenerational mobility in education. Moreover, an increase in income inequality by 9 Gini points is associated with a reduction of educational attainment by 0.9 years, as measured in 1980.

<sup>3</sup>This association between income inequality and its persistence across generations shown in panel 2 of Figure 2.4, with several countries of all income levels, was previously documented for advanced economies by Corak (2013).

**Figure 2.3. Intergenerational Persistence in Education, 1940–80**

*Progress has slowed for intergenerational mobility in education.*



Sources: World Bank Global Database of Intergenerational Mobility 2018; and IMF staff calculations.  
 Note: Values of intergenerational persistence are coefficient estimates from the regression of children’s years of education on the education of their parents. Higher values indicate great intergenerational persistence or lower mobility.

This chapter focuses on disparities in access to basic services, which contribute to uneven lifetime opportunities. This emphasis on disparities in access or in opportunities not only has the virtue of broader acceptance, but also alleviates concerns about trade-offs between equity and efficiency.<sup>4</sup>

## The Pandemic and Inequality

### Effects of Preexisting Inequalities on Adverse Health Outcomes from the COVID-19 Pandemic

Preexisting inequalities, both across and within countries, have affected health outcomes from the COVID-19 pandemic.<sup>5</sup> Considering differences across countries, better access to health care, proxied

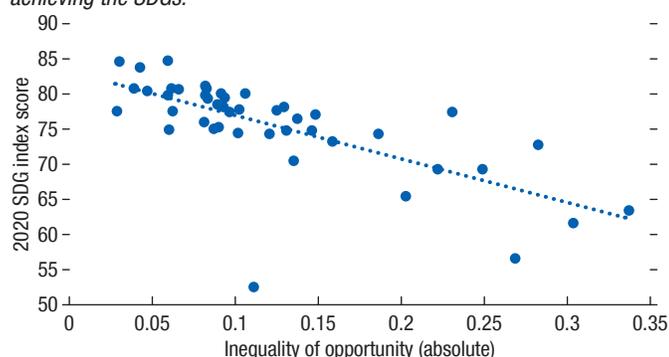
<sup>4</sup>Although empirical evidence on the relationship between income inequality and growth is not conclusive, some researchers report evidence that inequalities driven by uneven opportunities are negatively associated with growth (Marrero and Rodriguez 2013; Aiyar and Ebeke 2019). Reducing disparities in access to public services could thus also foster economic growth.

<sup>5</sup>In addition to its direct effect on wellness, COVID-19 has disrupted normal health care services. These disruptions could cause a substantial medium-term increase in deaths from other diseases such as HIV, tuberculosis, and malaria (Hogan and others 2020).

## Figure 2.4. Relationships between Various Aspects of Inequality

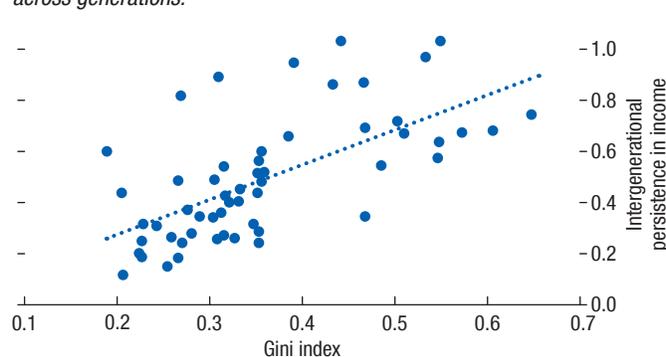
### 1. SDG Index and Inequality of Opportunity

*Inequality of opportunity is closely related to a country's progress in achieving the SDGs.*



### 2. Income Inequality and Intergenerational Persistence in Income

*Also closely related are income inequality and the persistence of income across generations.*



Sources: Sachs and others 2020; World Bank Global Database of Intergenerational Mobility 2018; and the World Database on Equality of Opportunity and Social Mobility (Equalchances).

Note: Panel 1 covers 45 countries of all income levels. Panel 2 covers 55 countries of all income levels. The first available income (or consumption) Gini is from 1965–85, and intergenerational persistence of income is for the 1960 or 1970 cohort, whichever is available. SDGs = Sustainable Development Goals.

by the number of hospital beds, is associated with lower age-adjusted mortality rates per capita.<sup>6</sup> In the period ahead, the availability of vaccines and the vaccination process will be even more decisive for health and economic outcomes. Turning to within-country income inequalities, which can be linked to inequality in access to services, cross-country analysis shows that both infection and death rates correlate positively with relative poverty, defined as the share of the population living below 50 percent of a country's median income. The association with relative poverty is stronger the larger the urban share of the population, suggesting higher infection rates among poorer urban households (Online Annex 2.2). Studies focusing on a single country confirm the link between health outcomes and income, inequality, and poverty. For example, COVID-19 death rates per capita have been almost twice as high in the *United States* in counties with poverty rates of more than 20 percent compared with those with less than 5 percent (Chen and Krieger 2020). US counties with higher income inequality have experienced higher infection rates (Brown and Ravallion 2020). In *France*, mortality rates have been

<sup>6</sup>This association between access to health care and mortality rates also holds when using the number of physicians as an alternative proxy for access to health care. Note, however, that having more hospital beds or more physicians does not always imply a better health care capacity. Higher numbers of COVID-19 deaths in advanced economies reflect, in part, an older population. According to clinical data, mortality rates were much higher for the older population (Yanez and others 2020).

twice as high in municipalities below the 25th income percentile than in municipalities above this threshold (Brandily and others 2020).

Several factors explain the link between inequality and COVID-19 outcomes. Poorer individuals, who, on average, have fewer teleworkable jobs, less job security, and less financial savings, are less likely to be able to practice social distancing (Chiou and Tucker 2020). Poorer people also more often live in crowded neighborhoods and houses; have inferior access to hygiene and basic public services, such as water and sanitation; and rely more on public transportation, making them more susceptible to infection (Papageorge and others 2020). Higher county death rates in the *United States* are associated with higher public transport use relative to telecommuting (Knittel and Ozaltun 2020). Moreover, minority groups have been experiencing even worse outcomes than predicted on the basis of income alone, reflecting inequities in access to basic services and differences in occupation. Based on a meta-analysis of 50 studies in the *United States* and the *United Kingdom*, Sze and others (2020) find a higher risk of COVID-19 infection for Black and Asian people than for White people. In São Paulo, *Brazil*, Black people have been 62 percent more likely to die from COVID-19 than White people. In *France*, excess mortality is higher in the Seine-Saint-Denis department, where many minorities live (Office of the United Nations High Commissioner for Human Rights 2020).

### Effects of the COVID-19 Pandemic on Inequality and Poverty

Because COVID-19 disproportionately affects the most vulnerable groups, poverty and income inequality are projected to rise. Global estimates point to an increase of 95 million people in extreme poverty in 2020 relative to the pre-COVID-19 projections (Chapter 1 of the April 2021 *World Economic Outlook*). Empirical evidence on previous pandemics, less widespread than COVID-19, indicates increases in inequality after a few years, especially where fiscal policy is constrained (Furceri and others, forthcoming). Technological change may accelerate, inserting further upward pressure on income inequality (October 2020 *Regional Economic Outlook: Asia and Pacific*). Many people are expected to suffer from the long-term effects of COVID-19 (Huang and others 2021), which may adversely affect their employment prospects.

The effect of the pandemic on labor markets has been staggering in depth and breadth. Developing economies, low-skilled workers, informal workers, and youth have experienced the most pronounced effects. Losses in working hours are estimated at an average of 8.8 percent in 2020 relative to the fourth quarter of 2019, with lower-middle-income countries showing an estimated decline in working hours of 11 percent (ILO 2021). The drop in employment has been sharper for low- and medium-skilled occupations. In the *United States*, high-wage workers' employment losses lasted only a few weeks, whereas low-wage workers experienced much larger job losses that persisted several months (Chetty and others 2020). Informal sector employment fell more steeply than formal sector employment (October 2020 *Regional Economic Outlook: Western Hemisphere*). Young workers experienced larger increases in unemployment (Chapter 3 of the April 2021 *World Economic Outlook*).

Women have been particularly affected by the pandemic in contrast with past recessions, when men more often lost their jobs (Rubery and Rafferty 2013). In emerging market and developing economies, women's unemployment rate increased more than men's, whereas for advanced economies there is not much difference (Chapter 3 of the April 2021 *World Economic Outlook*). Women are overrepresented in the sectors most affected by COVID-19, accounting for about 60 percent of workers in accommodation and retail services across member countries of the Organisation for Economic Co-operation and Development (OECD).

Women also make up the bulk of first responders in health care—more than three-quarters of the world's medical doctors and nursing personnel combined are women (Boniol and others 2019). Working mothers have also borne the brunt of childcare during closures of schools and childcare centers.

High-frequency data confirm the large effect of the pandemic on poverty and inequality and the role of government support in mitigating its impact.<sup>7</sup> In *Spain*, according to Aspachs and others (2020), the post-transfer wage income Gini increased from 38.4 in February 2020 to 49.2 in December 2020, according to commercial bank account data, while Cantó Sánchez and others (2021) found that fiscal measures had helped to cushion the immediate impact on the loss of income. In *Mexico*, the share of the population in working poverty jumped from 35.7 percent in the first quarter to 44.5 percent in the third quarter (CONEVAL 2020). In *France*, bank data show that low-income households experienced a severe decrease in consumption, a decrease in savings, and an increase in debt (suggesting a significant drop in income), unlike the richer households, whose net financial wealth increased (Bounie and others 2020). In *Uruguay*, the poverty rate in the first three months of the pandemic rose from 8.5 percent to 11.8 percent. Government cash transfers had a positive but limited effect in mitigating this spike (Brum and De Rosa 2020).

In contrast, in the *United States*, with government support, the share of people below the federal poverty level declined from 11 percent in February 2020 to 9.3 percent in June 2020. However, the share rose to 11.8 percent in December 2020 when some benefits expired (Han, Meyer, and Sullivan 2020).<sup>8</sup> In *Brazil*, the new Emergency Aid social assistance more than compensated for the negative effect of COVID-19 on poverty and inequality, but the program ended in December (Al Masri, Flamini, and Toscani 2021). In *Ethiopia*, participation in the Productive Safety Net Program—the flagship social assistance program—largely offset the adverse effect of the pandemic on food security (Abay and others 2020).

<sup>7</sup>The timeliness and granularity of cross-country inequality data could be improved. This is a priority of the G20 Data Gaps Initiative and of the ongoing international effort to update the System of National Accounts.

<sup>8</sup>Han, Meyer, and Sullivan (2020) considers total income reported by respondents for the previous 12 months.

### Effect of School Closures during COVID-19 on Instructional Losses

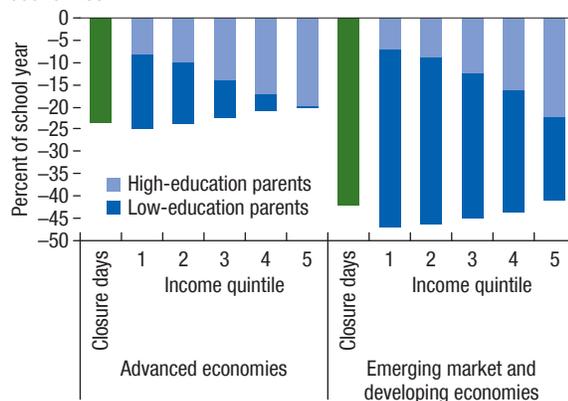
Future inequalities may be larger because school closures have led to an unprecedented global disruption to education. Country-specific studies on the effect of school closures on instructional losses paint a grim picture. In *the Netherlands*, average learning loss, measured by changes in nationally standardized test scores, was equivalent to one-fifth of a school year for primary school students, nearly the duration of school closure, and losses were larger among students from less-educated homes, highlighting the role of parents during remote learning (Engzell, Frey, and Verhagen 2020). School closures are expected to be the main reason for education losses, with the pandemic-induced income shock to parents playing a secondary role (Fuchs-Schündeln and others 2020).

A grim “COVID-19 slide” (loss in education) also occurred in the *United States*, with stark differences across race and income (Dorn and others 2020). In *England*, poorer children had a larger reduction in learning time, less access to learning resources (such as computers and dedicated study space), and less active school support during lockdowns (Andrew and others 2020). Daily learning time during school closures in *Germany* is estimated to have fallen by one-half, and the fall was larger for low-achieving students and boys (Grewenig and others 2020). Children in lower-income countries were less likely to engage in educational activities during school closures than in higher-income countries, according to phone surveys conducted by the World Bank (World Bank 2020a). Disruptions to education systems were particularly large in countries with limited infrastructure (Chapter 1 of the April 2021 *World Economic Outlook*).

Learning losses will be especially large in emerging market and developing economies and for children from poorer families and rural areas lacking access to digital infrastructure. Based on a cross-country analysis, realized education losses from required school closures as of December 31, 2020, are estimated at 20 percent to 25 percent of the school year in advanced economies and between 40 percent and 50 percent in emerging market and developing economies, depending on income quintile and parental education (Figure 2.5 and Online Annex 2.3). Considering both mandatory and recommended school closures, losses could be much larger. These estimates assume that some children will be engaged in remote learning, which will partly mitigate the learning losses, whereas others who do not engage in remote learning would suffer larger education losses.

### Figure 2.5. Education Losses from School Closures and Remote Learning Efficiency in 2020

Learning losses reached about a quarter of children’s normal annual learning progress in advanced economies and almost double this amount in emerging market and developing economies.



Sources: Engzell, Frey, and Verhagen 2020; Oxford COVID-19 Government Response Tracker; United Nations Educational, Scientific, and Cultural Organization; World Development Indicators and COVID-19 phone surveys; and IMF staff estimates.

Note: Data shown are simple averages. Green bars denote shares of a school year that schools at all grades were subject to mandatory closures between March 1 and December 31, 2020. Blue bars denote children’s estimated learning losses by income quintile and are based on estimated learning efficiency varying by parents’ education.

In addition to the supply-side effect of school closures, the COVID-19 shock could reduce demand for education. Reduced demand is especially relevant for developing countries and households whose income has fallen. Considering past recessions and the expected GDP growth for emerging market and developing economies in 2020, net school enrollment rates could fall by 1 percentage point in 2021 (Online Annex 2.3). Children who drop out of school are expected to suffer lifelong losses in income and opportunities.

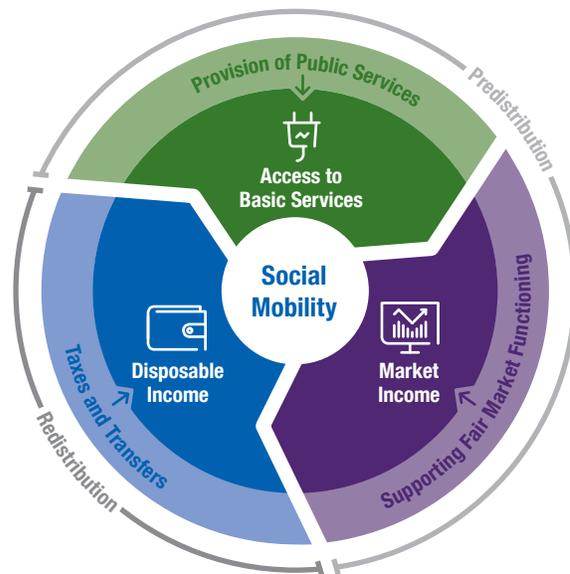
### Policies to Tackle Rising Inequality: Predistribution and Redistribution

#### Policy Interventions

Policymakers would be well advised to focus on the social safety nets and health care and education services that came under severe stress from COVID-19. Governments should provide near-term emergency financing to the health care sector, including for vaccination campaigns, as well as to the education sector to support students’ remote learning; encourage reenrollment (prioritizing students at higher risk of dropping out,

**Figure 2.6. Policies: Conceptual Framework**

*Predistributive and redistributive policies work together in multiple and reinforcing ways.*



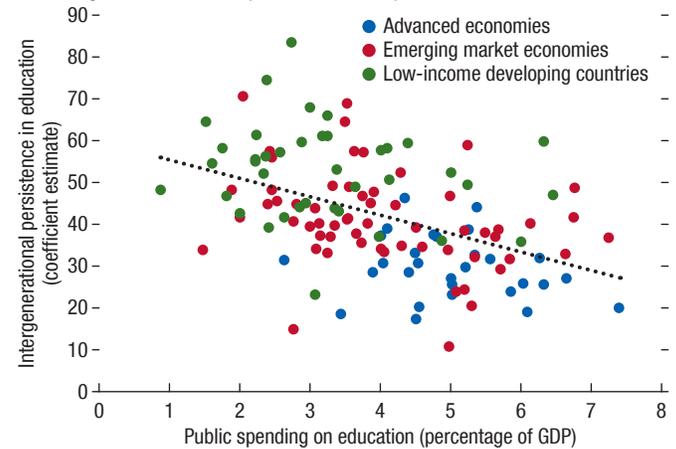
Source: IMF staff.

including girls); and offset learning losses by adjusting curriculums, modifying school calendars, and providing teachers with development and guidance (World Bank 2020c). Even so, most public policies to reduce inequality and enhance opportunities will be similar to those that would have been appropriate before the pandemic. Predistributive policies reduce market income inequality (before taxes and transfers) and foster inclusive growth by (1) enhancing opportunities and increasing human capital before individuals enter the labor market, and (2) supporting participation in labor markets. Redistributive policies, in turn, can reduce poverty and disposable income inequality (after taxes and transfers) and improve access to basic services in the short term by redistributing income toward lower-income households. Similar to predistributive policies, redistributive policies can also enhance long-term growth, particularly by increasing school enrollment among children from disadvantaged backgrounds (Figure 2.6). Governments should take a holistic view in identifying sources of low intergenerational mobility and high inequality, tailoring policies to country-specific circumstances. For example, if education and access to basic services are adequate but mobility is low, then market functioning should be improved.<sup>9</sup>

<sup>9</sup>An example of a problem in market functioning is discrimination in labor markets, including by race, ethnicity, or disability.

**Figure 2.7. Spending on Education and Intergenerational Mobility**

*Higher spending on public education is associated with more years of schooling for children compared with their parents.*



Sources: UNESCO; World Bank Global Database of International Mobility; and IMF staff estimates.

Note: Education spending (during school years) in percentage of GDP and education persistency in adulthood for the cohort born in the 1980s (derived as the regression coefficient in a simple regression of child's education on parental education).

Public spending on basic services can be a priority where access gaps are large and children's education is determined by their parents' education.

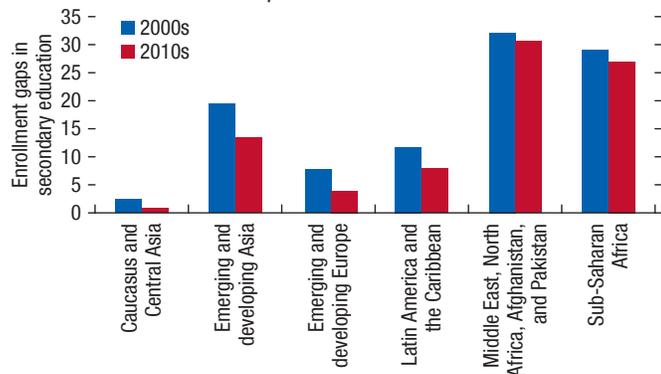
### *Policies to Enhance Access to Basic Services (Predistribution)*

Public spending on education, health care, and infrastructure can improve access to basic services and human capital accumulation. Public spending can, in part, compensate for the gap in private investments in children between rich and poor parents. For example, cross-country evidence shows that government spending on education can reduce the importance of family background (Figure 2.7). Reducing market income inequality through better access to education may also diminish the need for fiscal redistribution.

Much remains to be done. Despite expanded access to services over the past few decades, large within-country gaps remain between higher- and lower-income households—for example, in access to education. Gaps between rich and poor households in enrollment rates—which are crude measures of educational attainment—are especially large in the Middle East, North Africa, and sub-Saharan Africa, where they reach 25 percentage points to 30 percentage points (Figure 2.8). More and better spending on education can reduce these gaps. For example, an increase

**Figure 2.8. Differences in Enrollment Rates between the Richest and Poorest Households**  
(Percentage points)

The Middle East and Africa have especially large gaps in school enrollment between rich and poor households.



Sources: United Nations Educational, Scientific, and Cultural Organization; and World Bank.

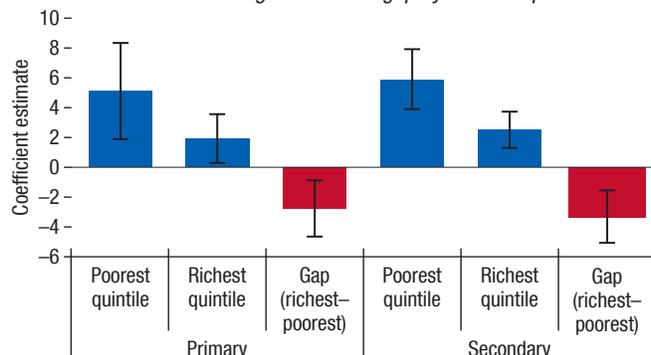
in government spending on primary education of 1 percent of GDP could reduce the gap in enrollment rates between the highest- and the lowest-income quintiles by 2.8 percentage points, or almost one-third of the average enrollment gap (Figure 2.9 and Online Annex 2.4). The effect is similar for secondary education. Reducing large inefficiencies in education spending can also improve education outcomes (Sutherland, Price, and Gonand 2009; Grigoli 2015). In advanced economies, school enrollment gaps are small, but students from disadvantaged backgrounds have lower test scores and are less likely to complete upper secondary education or to aspire to tertiary education (OECD 2015). Large gaps also remain between advanced economies and developing countries in the acquisition of higher-level cognitive skills (Hanushek, Peterson, and Woessmann 2012).

Gender gaps in education remain despite some improvement over the past few decades. Gender inequality in education reduces human capital and, hence, productivity and growth. Countries with higher gender gaps in education also have lower life expectancy, GDP per capita, and measures of state capacity (Evans, Akmal, and Jakiela 2020). Moreover, better-educated women are more informed about nutrition and health care, have fewer children, marry at a later age, and are more likely to join the formal labor market and earn higher incomes (Dufflo 2012; Keats 2018).

Focusing on teacher quality and on early childhood development can improve education outcomes.

**Figure 2.9. Effect of Public Education Spending on School Enrollment Rates**

Increasing government spending on primary education by 1 percent of GDP could reduce the average enrollment gap by about 30 percent.



Sources: World Bank; United Nations Educational, Scientific, and Cultural Organization; and IMF staff calculations.

Note: Estimated coefficients from panel regressions. Data cover 38 emerging market economies over 2000–18.

Teacher quality has a strong effect on students' lifetime earnings (Card, Domnisoru, and Taylor 2018). Higher salaries help attract, retain, and motivate better teachers. Some countries give priority to smaller class sizes, which they can fund by holding down teacher salaries. However, in advanced economies, prioritizing teacher quality is associated with better student outcomes (OECD 2016). In developing economies, improvements in infrastructure and instructional materials may be necessary before investments in teacher quality can take full effect (OECD 2013). Moreover, better public schoolteachers may not be rewarded with higher wages (Bau and Das 2020). Returns to investment in early childhood education are especially large because cognitive skills are developed early in life, boosting school returns in subsequent education stages (Cunha and Heckman 2007; Attanasio 2015).

Health care investments also foster growth and human capital accumulation, reducing inequality and increasing social mobility. Economic circumstances strongly predict children's health outcomes, which are related to human capital accumulation, adult health, and productivity (Case, Lubotsky, and Paxson 2002; Currie 2009). Government health care spending can reduce the importance of family background and thus can increase intergenerational mobility (Aizer 2014). Health care must begin before birth because maternal health determines health at birth, and in utero deprivations can reduce the effect of postnatal health care (Narayan and others 2018).

Tax policy can affect incentives for human capital investment, especially in one's children. Particularly in countries with more developed tax systems, child tax credits to lower-income households can have large effects on children's school attendance, performance, and future earnings (Chetty and others 2015) by allowing parents to buy more learning- and health-related items, but also by relieving the stress of income insecurity, enabling parents to focus on developmental activities. In contrast, there is little evidence that tax incentives encourage individuals to invest in new skills (Bulman and Hoxby 2015).

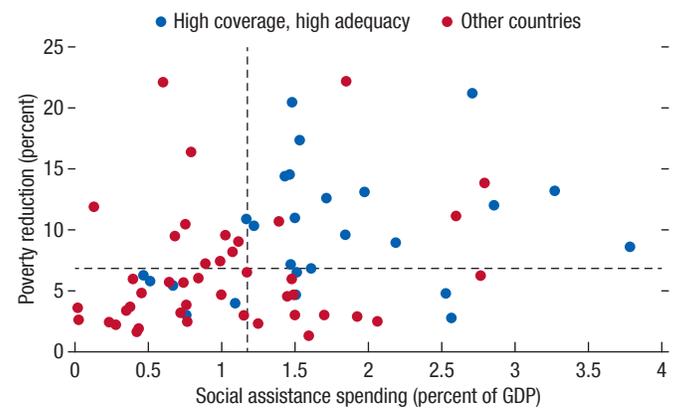
### *Policies to Support Free and Competitive Markets (Predistribution)*

The economic transformation accelerated by the pandemic is calling for greater policy efforts to help workers to adapt to shifts toward jobs requiring higher-level cognitive skills (Chapter 3 of the April 2021 *World Economic Outlook*). As the pandemic is brought under control, policies should gradually shift to protecting people rather than jobs. A focus on skills acquisition at all levels and on adapting labor market institutions to new forms of work would help workers adjust to and gain from digital change (OECD 2018a). In the short term, governments should invest in active labor market policies—vocational training, job search assistance, wage subsidies, or public work programs—and extend support to microentrepreneurs or independent workers. It will also be critical to avoid discouraging new businesses. For example, limiting the use of tax loss offsets by start-up firms in their first years of operation increases the marginal cost of new investment (Rosenberg and Marron 2015). Simplified small business regimes can ease administration and encourage formalization of small companies, particularly in low-income developing countries.

Reducing gender gaps in labor markets can boost growth and enhance equality of opportunities. Making childcare more widely available and affordable, increasing the transparency of pay, decreasing gender gaps in salaries, and providing more parental leave can create a level playing field that allows women to work and develop their potential (Elborgh-Woytek and others 2013). In addition, refundable tax credits for low-income families and individualization of personal income tax filing could reduce the implicit gender bias against females and encourage female labor force participation (Eissa and Liebman 1996).

**Figure 2.10. Effectiveness of Social Assistance Spending (Percent)**

*Poverty reduction is higher where both coverage and adequacy are high.*



Sources: World Bank ASPIRE database; and IMF staff calculations.

Note: Poverty reduction is defined as the difference between poverty headcount after and before transfers divided by poverty headcount before transfers. Data are taken from the most recent available year, ranging from 2008 to 2018. High coverage/adequacy is defined as the level above the median.

### *Tax and Transfer Policies (Redistribution)*

Direct taxes and transfers have, in the long term, reduced income inequality by more than one-third in advanced economies. This redistribution accounts for 85 percent of the difference in disposable income inequality between advanced economies and emerging market and developing economies (October 2017 *Fiscal Monitor*). Three-quarters of fiscal redistribution in OECD countries is achieved through direct transfers and the remainder through taxes (Causa and Hermansen 2018); the former helps reduce inequality mostly at the bottom, and the latter at the top.<sup>10</sup>

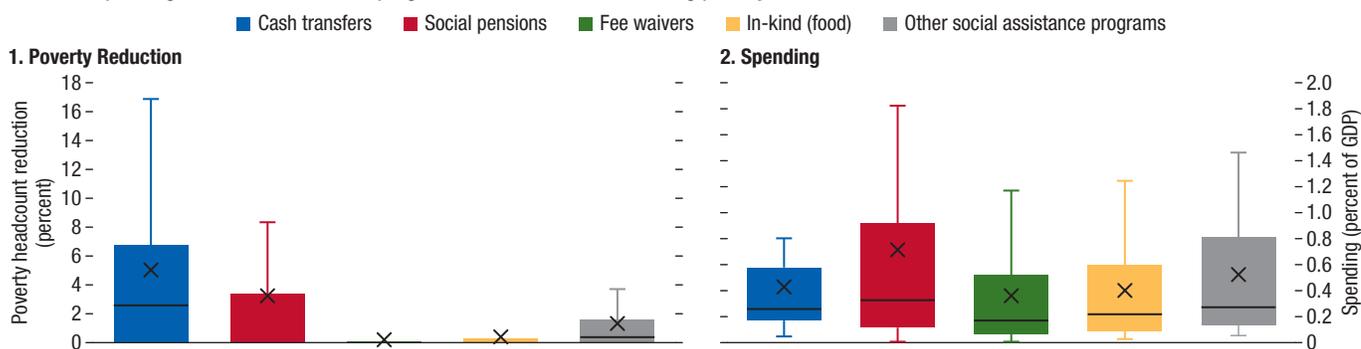
Coverage and adequacy determine the effectiveness of social assistance programs in reducing poverty and inequality.<sup>11</sup> These programs are particularly important in developing economies, where high labor market informality limits social insurance. Countries where both coverage and adequacy are high are more effective in fighting poverty and tend to reduce poverty more for a given amount of social assistance spending (Figure 2.10). Low coverage is a weakness exposed by COVID-19, preventing many countries from providing

<sup>10</sup>Beyond direct transfers, the distribution of indirect taxes and in-kind transfers also matters.

<sup>11</sup>Coverage is defined as the share of low-income households that benefit from social assistance. Adequacy is defined as the ratio of social assistance benefits relative to an individual's income before the transfer.

**Figure 2.11. Effectiveness and Allocation of Social Assistance Programs**  
(Percent)

The most spending is not allocated to the programs most effective in reducing poverty.



Sources: World Bank ASPIRE database; and IMF staff calculations.

Note: Each box shows the 25th and 75th percentiles of the variable of interest. The midline/× corresponds to the median/mean. Poverty reduction is defined as the percentage change in poverty headcount. Data cover 110 emerging market and developing economies for the most recent available year during 2010 to 2018. Examples of in-kind (food) include food stamps, vouchers, nutrition programs, school feeding, school supplies, and in-kind/nonfood emergency support. Examples of fee waivers include reduced medical fees, education fee waivers, subsidies for utilities and agricultural inputs, and transportation benefits.

timely lifelines to vulnerable households. To improve coverage, governments need comprehensive social registries, including those that cover the informal sector. A reliable citizen identification system, such as a biometric ID, integrated with socioeconomic databases, is essential (Prady 2020). Identification systems need to be complemented by effective payment mechanisms, such as e-payments (Una and others 2020). Where access to bank accounts is limited, governments can use mobile money transfers (Davidovic and others 2020).

Some social assistance programs better reduce poverty than others and could encourage human capital accumulation. Cash transfer programs tend to have the largest effect of all social assistance programs in reducing poverty (Figure 2.11, panel 1). Cash transfer programs, moreover, may improve human capital accumulation and help households to smooth income shocks, reducing future inequality. This is especially true when benefits are conditional on requirements such as children's school attendance or regular health checkups (Parker and Vogl 2018; Barrera-Osorio, Linden, and Saavedra 2020). In contrast, fee waivers have little effect on poverty, because these programs are not usually well targeted. Spending is not always allocated to the programs with the largest effect on poverty (Figure 2.11, panel 2), suggesting that governments have significant room to increase the allocative efficiency of social assistance spending.

More progressive taxation, along with higher revenue mobilization (especially in countries with lower tax capacity) that finances social spending, has significant potential to reduce inequality, especially in countries

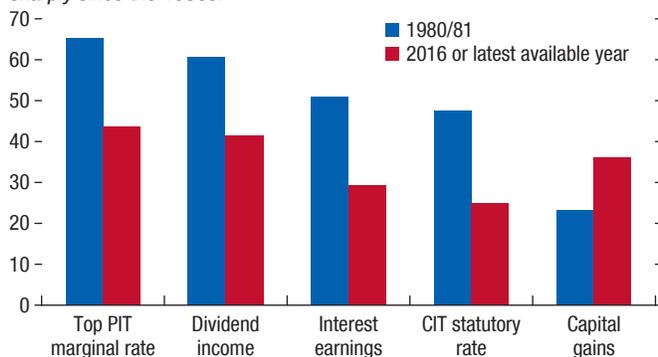
where taxation and its progressivity are relatively low. Since the 1980s both the average market income inequality and the capital share of income at the top of distribution have risen (Saez and Zucman 2016). Tax policy has meanwhile become less progressive, with significant declines in top marginal tax rates for both labor and capital incomes (Figure 2.12).<sup>12</sup> Various other more complex measures also point to a declining trend in tax progressivity—the degree to which the average tax rate rises with income (October 2017 *Fiscal Monitor*; Gerber and others 2020).

Several countries may readily increase top marginal income tax rates (October 2013 *Fiscal Monitor*; Kindermann and Krueger, forthcoming), although balance needs to be struck against labor supply and investment distortions, as well as potential tax avoidance and evasion from higher taxes. Tax deductions that predominantly benefit higher incomes can also be reformed, such as some universal deductions proportional to taxpayers' incomes or mortgage interest deductions. Countries with flat tax rates could grant (in-work) tax credits for low-income households to heighten progressivity. Should they wish to increase progressivity also at the top of the distribution, they could consider raising tax rates on higher incomes. Addressing loopholes in the

<sup>12</sup>In addition to the decline in statutory rates, tax expenditures can often further weaken the progressivity of the benchmark system. For example, about 75 percent of the benefit of the preferential rates on long-term capital gains and qualified dividends in the *United States* is estimated to accrue to the top 1 percent of households by income (Toder and Baneman 2012).

**Figure 2.12. OECD: Top Income Tax Rates***(Percent)*

The top marginal tax rates for both labor and capital income have declined sharply since the 1980s.



Sources: Carey, Chouraqui, and Hagemann 1993; and Harding and Marten 2018.  
 Note: CIT = corporate income tax; OECD = Organisation for Economic Co-operation and Development; PIT = personal income tax.

taxation of capital income (interest, dividends, capital gains) can also increase effective progressivity. Because income from capital is skewed toward the rich, taxing interest, dividends, and capital gains will be progressive, even with a proportional tax rate. It is important to strengthen enforcement to prevent tax avoidance and evasion, particularly by high earners.

In parallel, more progressivity can be achieved by raising additional tax revenues to finance further social spending. Value-added taxes and excises are major revenue sources for most governments, in part owing to their relative ease of enforcement and collection. Consumption taxes can support equity if they are used to finance basic public services, such as health care, education, and infrastructure, because poor households benefit more from these services than rich households, in proportion to their incomes. Carbon taxes, a key tool in curbing incentives for greenhouse emissions, can also provide sizable revenues, which, in turn, can be redeployed to reduce other taxes that may be less progressive or more distortionary, or to fund social spending and needed public investment (October 2019 *Fiscal Monitor*).<sup>13</sup>

Wealth taxes have become less prevalent, largely owing to implementation challenges. Recently, the

<sup>13</sup>Unlike most advanced and emerging market economies, the burden of carbon taxes in many developing countries falls more on higher-income deciles, whose energy expenditure share is larger (Dorband and others 2019). Carbon taxes can also promote intergenerational equality of opportunity in the sense that younger generations will have to bear a greater share of the negative externalities accruing from carbon emissions over their lifetimes.

rising concentration of wealth has spurred renewed calls for wealth taxation.<sup>14</sup> Countries should, however, carefully assess trade-offs (Scheuer and Slemrod 2021). In addition to mechanically reducing wealth inequality, wealth taxes<sup>15</sup> could also increase the probability of intergenerational mobility. A study of *Norway* suggests that labor income inequality would have been 1 Gini point higher without a recurrent wealth tax (Box 2.1). In addition, using wealth data from 21 advanced and 3 emerging market economies, this chapter finds that absent behavioral responses, a recurrent 1 percent tax on the wealth of the top 1 percent of the population could reduce wealth inequality and increase revenues by up to 0.4 percent to 0.6 percent of GDP (Online Annex 2.5). Nonetheless, several factors weigh against recurrent wealth taxation, especially difficulties in asset valuation and in collecting third-party information, which can impede enforcement (Adam and others 2011).<sup>16</sup> Overall, before turning to new instruments, countries should consider closing of loopholes (Sarin, Summers, and Kupferberg 2020), more progressive income taxation, and greater reliance on property (Norregaard 2013) and inheritance taxes, which remain underused.<sup>17</sup> If these reforms are deemed insufficient to achieve policy objectives, countries could consider taxes on wealth while accounting for design and implementation challenges.

### More and Better Spending to Enhance Access to Basic Services

Access to basic services helps give everyone a fair shot but is costly. For example, meeting the SDGs—a broad measure of access to basic services—by 2030 would require \$3.0 trillion for 121 emerging market economies

<sup>14</sup>Among OECD countries, only four (*France, Norway, Spain, Switzerland*) currently levy wealth taxes, bringing in 0.2 percent to 1.0 percent of GDP in revenues annually (OECD 2018b).

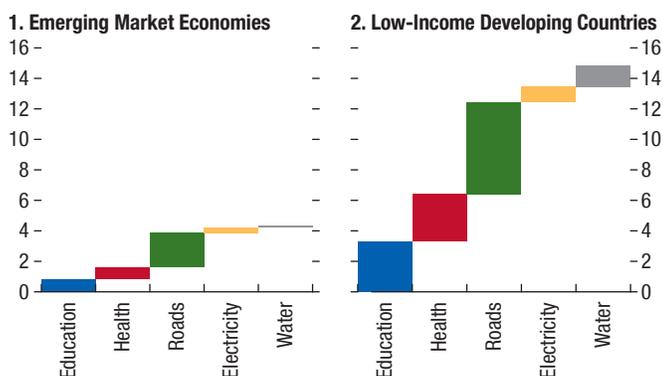
<sup>15</sup>Wealth taxes can be imposed as either recurrently on the stock of wealth, or on transfers of wealth (with the latter defined as financial or nonfinancial) and either on a gross or net basis (excluding debt). Wealth taxes could thus conceptually encompass real property and inheritance taxes. The discussion in the chapter focuses on a recurrent tax on net total wealth.

<sup>16</sup>International cooperation on information sharing and compliance enforcement, such as the automatic exchange of information initiative, could reduce future concerns regarding high tax evasion elasticities (including cross-border) observed in the past. Domestic reporting requirements could also be strengthened to help determine the value of annual wealth balances.

<sup>17</sup>Higher revenues from inheritance/gift taxes in *Belgium* and *France* (up to 0.7 percent of GDP) suggest that improvement is often feasible (De Mooij and others 2020).

**Figure 2.13. Additional Spending Requirement for Meeting the SDGs by 2030**  
(Percentage of 2030 GDP)

Additional spending could amount to 4.7 percentage points for emerging market economies and 14.9 percentage points for low-income developing countries of their own 2030 GDP.



Source: IMF staff estimates.  
Note: SDGs = Sustainable Development Goals.

and low-income developing countries (2.6 percent of 2030 world GDP). This cost includes additional recurrent spending to improve education and health care, as well as to build and maintain infrastructure.<sup>18</sup> On average, emerging market economies and low-income developing countries face additional spending of 4.7 percentage points and 14.9 percentage points of their own 2030 GDP, respectively (Figure 2.13). For both groups of countries, additional spending on education and health care accounts for half the total, with infrastructure accounting for the other half. COVID-19 is impeding efforts to meet the SDGs mainly by reducing tax revenues—long term for many countries. Furthermore, as global value chains are disrupted and resources are shifted to urgent health care and social spending, investment is delayed. An in-depth analysis of four emerging market and developing economies finds that the pandemic could lead to an additional annual financing shortfall of 2 ½ percent of GDP, on average, in that sample (Benedek and others, forthcoming).

While committing to additional spending, inefficiencies should be reduced. The efficiency gap—the difference between the country's spending efficiency and that of best performers—is wider, on average, the lower per capita income. Gaps range from 7 percent to 35 percent for different sectors in emerging market

<sup>18</sup>Estimates of additional spending to meet the SDGs follow the framework in Gaspar and others (2019) and reflect more up-to-date key input data and methodological refinements that use information on education quality and rural access.

economies and from about 10 percent to 50 percent in low-income developing countries (Figure 2.14). Weak public investment and social spending governance, poor allocation of education and health care resources, inequality, and limited institutions tend to result in low spending efficiency (Mathai and others 2020; Schwartz and others 2020). Measures to improve efficiency, which heavily depends on strengthening public financial management frameworks, would help governments deliver better outcomes with the same resources and galvanize public support for spending. The COVID-19 pandemic has derailed implementation of the SDGs, highlighting the need for strong national ownership to prioritize the SDG agenda and improve spending efficiency, and for the international community to provide additional support through grants, concessional financing, and, in some cases, debt relief.

### Strengthening Tax Capacity to Raise Additional Revenue

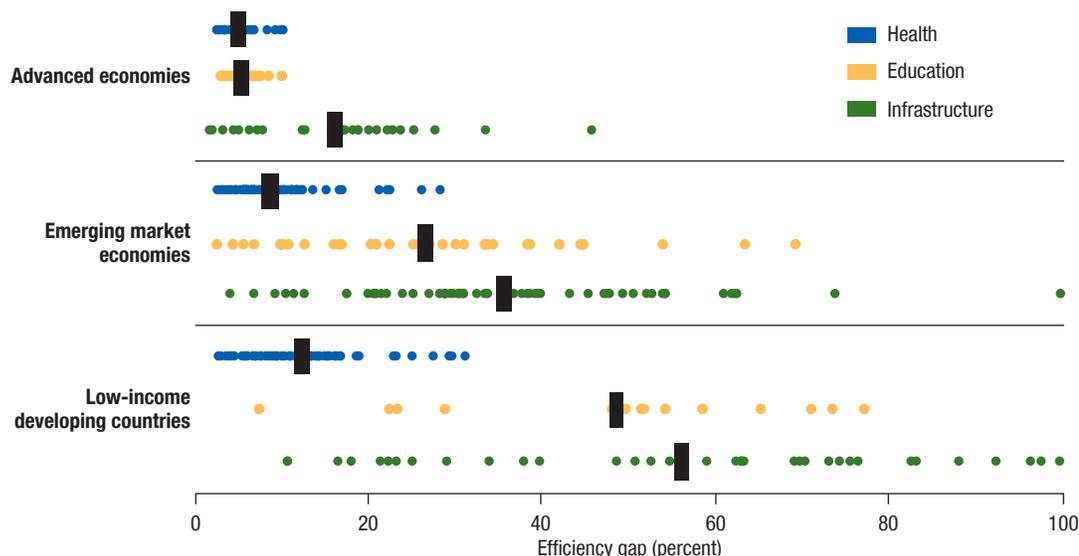
Strengthening tax capacity in the postpandemic world will be crucial for advanced and developing economies alike to meet large spending needs. In addition to strengthening revenue administrations, including through better governance and digitalization (especially in emerging market economies and low-income developing countries), reforming tax policy could raise additional revenues in the least-distortive ways. Countries can choose from various tax reforms to raise additional revenue (Abdel-Kader and De Mooij 2020; De Mooij and others 2020) from income, property, and consumption taxes (Figure 2.15).<sup>19</sup> International cooperation and agreement on effective minimum corporate taxation can help curb further tax competition and allow countries to maintain higher rates and reduce tax expenditures. In the postpandemic world, countries may emphasize the joint effect of taxes and expenditures by communicating that higher tax revenues will finance specific needs, such as health care, as prescribed under a medium-term revenue strategy (Platform for Collaboration on Tax 2017) and embedded in the budgets as early as possible. This could boost public confidence that revenues from tax reforms will be used adequately.<sup>20</sup>

<sup>19</sup>As digital service firms generate increased profits during the pandemic, taxes on their value have also gained interest. Estimates suggest modest but growing potential yields but should be considered cautiously because they create economic distortions and firms can easily shift their incidence to users (Aslam and Shah 2020).

<sup>20</sup>Tax financing of specific initiatives is different from standard revenue earmarking through legislation, which usually causes excessive budgetary inflexibility and inefficiencies.

**Figure 2.14. Sectoral Spending Inefficiencies**

There is considerable room for improving the efficiency of spending.



Sources: Baum, Mogues, and Verdier 2020; Garcia-Escribano, Juarros, and Mogues (forthcoming); and IMF staff calculations.

Note: All estimates are based on Data Envelopment Analysis; for health, output is life expectancy and input is total per capita health expenditure. For education, outputs are test scores and net enrollment rates and input is public education spending per student (Online Annex 2.4). For infrastructure, output is the volume and quality of infrastructure and input is public capital stock and GDP per capita.

In addition, countries with robust tax systems may consider levying temporary COVID-19 recovery contributions as supplements to top personal income tax rates. Temporary increases in personal income tax rates (often restricted to the highest income brackets) were previously introduced during exceptional circumstances in *Germany* (1991), *Australia* (2011), and *Japan* (2013) (Abdel-Kader and De Mooij 2020).<sup>21</sup> Alternatively, taxes on “excess” profits (economic rents in excess of the minimum return required by investors), either in addition to or instead of the regular corporate income tax, can assure a contribution from businesses that prosper during the crisis (such as some pharmaceutical and highly digitalized businesses) and not affect companies (and their workers) otherwise earning minimal profits or incurring losses.

### Support for a Fair Shot

Whether governments are investing in education, health care, infrastructure, or social safety nets, they will face difficult policy choices on how to finance these crucial expenditures. The policy dilemma will be as acute as ever given more limited fiscal space (Chapter 1). Raising

<sup>21</sup>Temporary/one-off levies on net wealth would present bigger implementation challenges because they would need to be both unanticipated and believed certain not to be repeated (Keen 2013).

taxes or reallocating spending will require dialogue with society at large to ensure that policies are aligned with people’s preferences. Understanding these preferences, which have likely been affected by the COVID-19 crisis, will be crucial. Miscalculations can lead to political instability. Reinforcing trust in government is key to implementing needed public policies but is also more challenging during a pandemic.

Surveys by the International Social Survey Program before the COVID-19 pandemic, covering thousands of individuals in several advanced and emerging market economies, suggest that respondents want greater provision of basic public services through higher and more progressive taxes, and some spending cuts and reallocation. Such survey results must be read with caution because they may capture views that are not fully representative of the population and may not force respondents to fully internalize budget constraints. Even so, they provide additional perspectives, especially where budget decisions are influenced by vested interests and may not fully reflect citizens’ views.

Most respondents, particularly in emerging market economies, prefer more spending on education, health care, and pensions (Figure 2.16) and consider the provision of these services as the government responsibility. At the same time, most respondents, especially in emerging market economies, want spending cuts. This may suggest

**Figure 2.15. Tax Reform Options to Raise Additional Revenue**

A variety of options are available, some especially suited to emerging market and developing economies.



Source: IMF staff.

Note: VAT = value-added tax.

<sup>1</sup>Especially applicable to advanced economies.

<sup>2</sup>Especially applicable to emerging market economies and low-income developing countries.

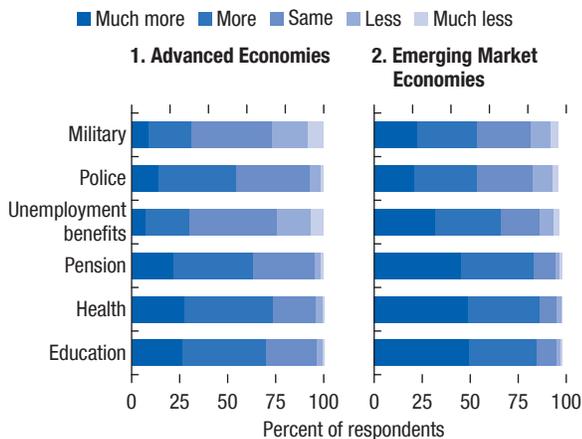
a preference for a shift from wasteful or low-priority spending to key basic services such as health care and education. Those most well-off prefer less government spending. Women are in favor of more government spending, especially on health care. Demand for spending cuts is less pronounced among young people.

Most respondents also prefer more progressive taxation. In most countries, more respondents believe that the tax burden is too high for low- and middle-income households compared with that of high-income households (Figure 2.17). This support is broad based, holding for advanced and emerging

**Figure 2.16. Survey Results on Preferences for Tax-Financed Spending**

(Percent of respondents)

Even before the pandemic, most respondents preferred more spending on education, health, and pensions.



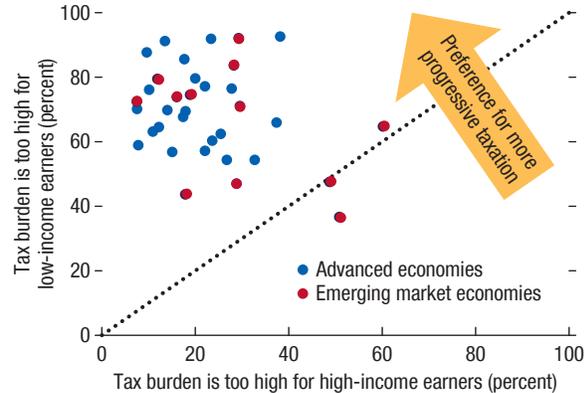
Sources: International Social Survey Program 2016 database; and IMF staff estimates.

Note: Results are based on individual-level data on 23 advanced economies and 12 emerging market economies in 2016.

**Figure 2.17. People's Preference for Progressive Taxation**

(Percent of respondents)

Most respondents preferred progressive taxation, even before the pandemic.



Sources: International Social Survey Program 2016 database; and IMF staff estimates.

Note: Results are based on 2016 individual-level data on 23 advanced economies and 12 emerging market economies. Percentages refer to the share of respondents who agree with the statements reported on each axis.

market economies and for subgroups, including those in the richest decile and those with high or low trust in government (Online Annex 2.6).

Support for higher public spending also depends on people's perceptions of how the government functions. Trust in government can depend on respondents' view of the government's integrity and capacity to deliver basic services, such as education and health care (Online Annex 2.6). Respondents who trust their governments are generally less likely to favor government spending cuts and more likely to favor additional spending in at least one sector without cuts in others (Online Annex 2.6). Previous studies have also found that more trust in governments leads to demand for more distributive policies (Yamamura 2014; Kuziemko and others 2015; Stantcheva 2020). Respondents who held a favorable perception of government responses to COVID-19 were more willing to support financial relief for the vulnerable (Balasundharam and Dabla-Norris 2021).

Trust in government is low when respondents are dissatisfied with the quality of basic services. Even if lower trust is associated with demand for spending cuts, it is also associated with demand for more services, suggesting that dissatisfied respondents do not consider their governments to provide value for tax money (Online Annex 2.6). When trust in government is low or corruption is perceived to be high, respondents want changes in spending allocation—especially toward spending on education, health care, and pensions.<sup>22</sup> With higher distrust in government, respondents also support more progressive taxation. This perhaps is due to the desire to correct inequalities that may be attributed to ill-gotten gains of the rich or weaknesses in tax collection (Di Tella, Dubra, and Lagomarsino 2016; Domonkos 2016; Online Annex 2.6).

The COVID-19 pandemic is likely changing people's attitudes toward policies that affect the distribution of income. Studies have found that preferences for distributive policies are influenced by major events.<sup>23</sup> For example, after economic recessions (Giuliano

and Spilimbergo 2014) and experiences of personal misfortunes such as unemployment (Alesina and Giuliano 2011), people want more redistribution. In this context, several waves of the World Values Survey indicate that individuals with poor health view measures to improve distribution more favorably (Online Annex 2.6). Evidence from a survey undertaken in the *United States* during the COVID-19 pandemic reveals that respondents who lost employment or suffered from the disease, or personally know someone who has, are more likely to support progressive taxation (Box 2.2).

The pandemic is a vital test for governments' ability to maintain and reinforce people's trust. The risk is high that trust in government could deteriorate after COVID-19, especially if a government's response to the epidemic—including support to people and firms, as well as vaccination—is perceived to be inadequate or marred by favoritism or corruption. Past epidemics have undermined trust in political institutions and leaders in a durable manner (Aksoy, Eichengreen, and Saka 2020). In this context, ensuring fair and affordable access to safe and effective COVID-19 vaccines for all—starting with frontline workers and those in high-risk groups—irrespective of national boundaries, is crucial. Global cooperation, including financial support to COVAX, is needed to provide adequate supplies to countries lagging in vaccination efforts (January 2021 *World Economic Outlook Update*). Such mass immunization campaigns require adequate funding, organization, and infrastructure.

If governments can meet demands for basic services while strengthening transparency and accountability, trust will improve. With limited fiscal space, governments will need to prioritize efficiency gains and reallocation toward those most affected by the COVID-19 crisis before scaling up spending. At the same time, governments should plan medium-term policies for better basic services and better protection from income shocks while fostering a job-rich and inclusive recovery. If governments are unable to meet the challenge, the erosion of trust could lead to more polarized politics in which some call for a smaller government, while those affected by illness or job loss would urge for more government services. Although the primary responsibility rests with country governments, the global community can provide financial and technical support as well as policy coordination.

<sup>22</sup>The share of government spending on health care and education is lower in countries with higher perceived corruption (April 2019 *Fiscal Monitor*).

<sup>23</sup>These preferences may also reflect social norms (Alesina and Glaeser 2004), a reaction to the prevailing political regime (Alesina and Fuchs-Schündeln 2004), or perceptions on inequalities and on one's own prospects of success (Engelhardt and Wagener 2014; Alesina, Stantcheva, and Teso 2018).

### Box 2.1. Persistent Consequences of Wealth Inequality for the Next Generation's Income: The Case of Norway

A study of Norwegian administrative data (Berg and Hebous 2021) finds that people who grow up in families with more wealth tend to have higher labor income, controlling for the education and incomes of their parents (Figure 2.1.1).

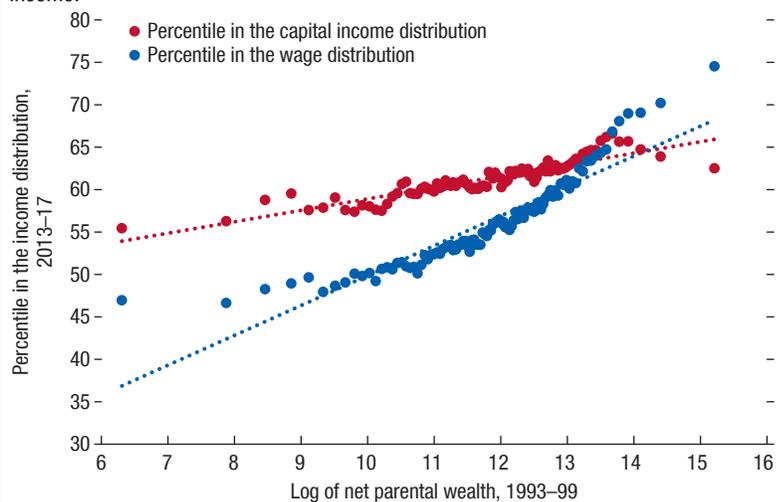
Norway is one of the few countries with a broad net wealth tax. In the 1990s, the liability threshold was net wealth of Nkr500,000, with a progressive rate structure reaching 1.5 percent. As of 2020, the threshold had been increased to Nkr1.5 million (more than

twice the average GDP per capita) and the rate made flat at 0.85 percent.

Berg and Hebous simulate a hypothetical income distribution in the absence of a wealth tax in the late 1990s and early 2000s by exploiting variation in tax liability for the same wealth. The counterfactual labor income distribution is more unequal than the actual income distribution (raising the Gini coefficient by about 1 point).

**Figure 2.1.1. Norway: Percentile in the Income Distribution of Children versus Parental Wealth**

*Norwegians who grow up in families with more wealth tend to have higher labor income.*



Source: Berg and Hebous 2021.

### Box 2.2. Public Preferences for Progressive Taxation in the Post–COVID-19 World

In the first survey-based analysis on progressive taxation after the onset of the coronavirus disease 2019 (COVID-19) crisis, Klemm and Mauro (2021) gauge how attitudes toward fiscal policy choices have changed in the context of the pandemic. Their study is based on an analysis of survey responses from a representative sample of 2,500 individuals in the *United States* in October 2020.

Respondents affected by the COVID-19 pandemic report a stronger preference for progressive taxation—both a temporary recovery levy and permanent structural reform—than those who were not so affected. Roughly one-half of the respondents reported experiencing job loss or serious COVID-19 illness or knowing (well) someone who did. Those who experienced serious illness or job loss favored progressive taxation with a likelihood of 15 percentage points higher than those who did not, controlling for socioeconomic and demographic factors. Even just knowing someone who was affected by the pandemic raised the likelihood of support. This result is consistent with previous findings that attitudes can

be molded by personal experiences during crises and other upheavals that have major economic effects. The increase in the likelihood of supporting progressive tax reform is especially strong in groups—identified through their spending preferences—that are otherwise skeptical of such taxes.

This result needs to be interpreted with caution. First, it is unclear how long the effect will last. Previous studies have documented that the effect of job loss during the global financial crisis on attitudes toward welfare programs was short lived (Margalit 2013). Yet, the effect of recessions (Giuliano and Spilimbergo 2014) and epidemics (Aksoy, Eichengreen, and Saka 2020) was found to be longer lasting by forging the attitudes of cohorts that experienced such upheavals as young adults, then entered the job market during their “impressionable age.” Second, to establish more general validity, further work will be necessary in other countries. Third, the survey is a static snapshot: it does not allow researchers to test whether the opposition to progressive taxation becomes more entrenched over time.

## References

- Abay, K., G. Berhane, J. Hoddinott, and K. Tafere. 2020. “COVID-19 and Food Security in Ethiopia: Do Social Protection Programs Protect?” IFPRI Discussion Paper 1972, International Food Policy Research Institute, Washington, DC.
- Abdel-Kader, K., and R. De Mooij. 2020. “Tax Policy and Inclusive Growth.” IMF Working Paper 20/271, International Monetary Fund, Washington, DC.
- Adam, S., T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Johnson, G. Myles, and J. Poterba. 2011. “Taxes on Wealth Transfers.” In *Tax by Design: The Mirrlees Review*, edited by S. Adam, T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Johnson, G. Myles, and J. Poterba. Oxford: Oxford University Press.
- Aiyar, S., and C. Ebeke. 2019. “Inequality of Opportunity, Inequality of Income, and Economic Growth.” IMF Working Paper 19/34, International Monetary Fund, Washington, DC.
- Aizer, A. 2014. “Rising Inequality and Intergenerational Mobility: The Role of Public Investments in Human Capital.” *CEifo Economic Studies* 60 (2): 280–311.
- Aksoy, C., B. Eichengreen, and O. Saka. 2020. “The Political Scar of Epidemics.” NBER Working Paper 27401, National Bureau of Economic Research, Cambridge, MA.
- Alesina, A., and N. Fuchs-Schündeln. 2004. “Goodbye Lenin (or Not?): The Effect of Communism on People’s Preferences.” *American Economic Review* 97 (4): 1507–28.
- Alesina, A., and P. Giuliano. 2011. “Preferences for Redistribution.” In *Handbook of Social Economics*, Vol. 1A, edited by J. Benhabib, A. Bisin, and M. O. Jackson. Amsterdam: Elsevier.
- Alesina, A., and E. Glaeser. 2004. *Fighting Poverty in the US and Europe: A World of Difference*. Oxford: Oxford University Press.
- Alesina, A., S. Stantcheva, and E. Teso. 2018. “Intergenerational Mobility and Preferences for Redistribution.” *American Economic Review* 108 (2): 521–54.
- Al Masri, D., V. Flamini, and F. Toscani. 2021. “The Short-Term Impact of COVID-19 on Labor Markets and Inequality in Brazil.” IMF Working Paper 21/66, International Monetary Fund, Washington, DC.
- Andrew, A., S. Cattan, M. C. Dias, C. Farquharson, L. Kraftman, S. Krutikova, A. Phimister, and A. Sevilla. 2020. “Inequalities in Children’s Experiences of Home Learning during the COVID-19 Lockdown in England.” Working Paper 20/26, Institute for Fiscal Studies, London.
- Aslam, A., and A. Shah. 2020. “Tec(h)tonic Shifts: Taxing the ‘Digital Economy.’” IMF Working Paper 20/76, International Monetary Fund, Washington, DC.
- Aspachs, O., R. Durante, J. García Montalvo, A. Graziano, J. Mestres, and M. Reynal-Querol. 2020. “Real-Time Inequality and the Welfare State in Motion: Evidence from COVID-19 in Spain.” CEPR Discussion Paper 15118, Center for Economic and Policy Research, Washington, DC.
- Attanasio, O. 2015. “The Determinants of Human Capital Formation during the Early Years of Life: Theory, Measurement, and Policies.” *Journal of the European Economic Association* 13 (6): 949–97.
- Balasundharam, V., and E. Dabla-Norris. 2021. “Pandemics and Inequality: Perceptions and Preferences for Redistribution.” IMF Working Paper 21/53, International Monetary Fund, Washington, DC.
- Balboni, C., O. Bandiera, R. Burgess, M. Ghatak, and A. Heil. 2020. “Why Do People Stay Poor?” STICERD—Economic Organisation and Public Policy Discussion Paper 067, Suntory and Toyota International Centres for Economics and Related Disciplines, London School of Economics and Political Science, London.
- Barrera-Osorio, F., L. Linden, and J. Saavedra. 2020. “Medium- and Long-Term Educational Consequences of Alternative Conditional Cash Transfer Designs: Experimental Evidence from Colombia.” NBER Working Paper 23275, National Bureau of Economic Research, Cambridge, MA.
- Bau, N., and J. Das. 2020. “Teacher Value Added in a Low-Income Country.” *American Economic Journal: Economic Policy* 12 (1): 62–96.
- Baum, A., T. Mogue, and G. Verdier. 2020. “Getting the Most from Public Investment.” In *Well Spent: How Strong Infrastructure Governance Can End Waste in Public Investment*, edited by G. Schwartz, M. Fouad, T. Hansen, and G. Verdier, pp. 30–49. Washington, DC: International Monetary Fund.
- Benedek, D., E. Gemayel, A. Senhadji, and A. Tieman. Forthcoming. “Post-Pandemic Assessment of the Sustainable Development Goals.” IMF Staff Discussion Note, International Monetary Fund, Washington, DC.
- Berg, K., and S. Heibus. 2021. “Does the Wealth Tax Improve Equality of Opportunity? Evidence from Norway.” IMF Working Paper 21/85, International Monetary Fund, Washington, DC.
- Boniol, M., M. McIsaac, L. Xu, T. Wuliji, K. Diallo, and J. Campbell. 2019. “Gender Equity in the Health Workforce: Analysis of 104 Countries.” Working Paper 1, World Health Organization, Geneva.
- Bounie, D., Y. Camara, E. Fize, J. Galbraith, C. Landais, C. Lavest, T. Pazem, and B. Savatier. 2020. “Consumption Dynamics in the COVID Crisis: Real-Time Insights from French Transaction and Bank Data.” CEPR Discussion Paper 15474, Center for Economic and Policy Research, Washington, DC.
- Brandily, P., C. Brebion, S. Briole, and L. Khoury. 2020. “A Poorly Understood Disease? The Unequal Distribution of Excess Mortality due to COVID-19 across French Municipalities.” NHH Department of Economics Discussion Paper 15/2020, Norwegian School of Economics, Bergen, Norway.
- Brown, C. S., and M. Ravallion. 2020. “Inequality and the Coronavirus: Socioeconomic Covariates of Behavioral Responses and Viral Outcomes across US Counties.” NBER Working Paper 27549, National Bureau of Economic Research, Cambridge, MA.

- Brum, M., and M. De Rosa. 2020. “Too Little but Not Too Late: Nowcasting Poverty and Cash Transfers’ Incidence during COVID-19’s Crisis.” *World Development* 140: Article 105227.
- Bulman, G. B., and C. M. Hoxby. 2015. “The Returns to the Federal Tax Credits for Higher Education.” NBER Working Paper 20833, National Bureau of Economic Research, Cambridge, MA.
- Cantó Sánchez, O., F. Figari, C. Fiorio, S. Kuypers, S. Marchal, M. Romaguera de la Cruz, I. Tasseva, and G. Verbist. 2021. “Welfare Resilience at the Onset of the COVID-19 Pandemic in a Selection of European Countries: Impact on Public Finance and Household Incomes.” Euromod Working Paper Series 4/21, University of Essex, Essex, UK.
- Card, D., C. Domnisoru, and L. Taylor. 2018. “The Intergenerational Transmission of Human Capital: Evidence from the Golden Age of Upward Mobility.” NBER Working Paper 25000, National Bureau of Economic Research, Cambridge, MA.
- Carey, D., J. Chouraqui, and R. Hagemann. 1993. “The Future of Capital Income Taxation in a Liberalised Financial Environment.” Organisation for Economic Co-operation and Development, Paris.
- Case, A., D. Lubotsky, and C. Paxson. 2002. “Economic Status and Health in Childhood: The Origins of the Gradient.” *American Economic Review* 92 (5): 1308–34.
- Causa, O., and M. Hermansen. 2018. “Income Redistribution through Taxes and Transfers across OECD Countries.” LIS Working Paper 729, LIS Cross-National Data Center, Luxembourg.
- Chen, J. T., and N. Krieger. 2020. “Revealing the Unequal Burden of COVID-19 by Income, Race/Ethnicity, and Household Crowding: US County vs Zip Code Analyses.” Working Paper 19 (1), Harvard Center for Population and Development Studies, Cambridge, MA.
- Chetty, R., J. Friedman, N. Hendren, M. Stepner, and the Opportunity Insights Team. 2020. “The Economic Impacts of COVID-19: Evidence from a New Public Database Built from Private Sector Data.” Opportunity Insights (blog), Center for First-Generation Student Success, September. <https://firstgen.naspa.org/scholarly-article/the-economic-impacts-of-covid-19-evidence-from-a-new-public-database-built-from-private-sector-data>.
- Chetty, R., N. Hendren, P. Kline, and E. Saez. 2015. “The Economic Impacts of Tax Expenditures: Evidence from Spatial Variation across the US.” US Internal Revenue Service, Washington, DC.
- Chiou, L., and C. Tucker. 2020. “Social Distancing, Internet Access and Inequality.” NBER Working Paper 26982, National Bureau of Economic Research, Cambridge, MA.
- CONEVAL (Consejo Nacional de Evaluación de la Política de Desarrollo Social, National Council for the Evaluation of Social Development Policy). 2020. “CONEVAL Presents Information about the Trend Index Labor Poverty and Labor Poverty for the Third Quarter of 2020.” Dirección de Información y Comunicación Social, Comunicado 32, Mexico City.
- Corak, M. 2013. “Income Inequality, Equality of Opportunity, and Intergenerational Mobility.” *Journal of Economic Perspectives* 27 (3, Summer): 79–102.
- Cunha, F., and J. Heckman. 2007. “The Technology of Skill Formation.” *American Economic Review* 97 (2): 31–47.
- Currie, J. 2009. “Healthy, Wealthy, and Wise? Socioeconomic Status, Poor Health in Childhood, and Human Capital Development.” *Journal of Economic Literature* 47: 87–122.
- Davidovic, S., S. Nunhuck, D. Prady, and H. Tourpe. 2020. “Beyond the COVID-19 Crisis: A Framework for Sustainable Government-to-Person Mobile Money Transfers.” IMF Working Paper 20/198, International Monetary Fund, Washington, DC.
- De Mooij, R., R. Fenchietto, S. Hebus, S. Leduc, and C. Osorio-Buitron. 2020. “Tax Policy for Inclusive Growth after the Pandemic.” Special Series on COVID-19, International Monetary Fund, Washington, DC.
- Di Tella, R., J. Dubra, and A. Lagomarsino. 2016. “Meet the Oligarchs: Business Legitimacy, State Capacity and Taxation.” NBER Working Paper 22934, National Bureau of Economic Research, Cambridge, MA.
- Domonkos, S. 2016. “Determinants of Tax Policy Preferences in Post-Socialist Eastern Europe.” *East European Politics and Societies and Cultures* 30 (2): 423–48.
- Dorband, I. I., M. Jakob, M. M. Kalkuhl, and J. C. Steckel. 2019. “Poverty and Distributional Effects of Carbon Pricing in Low- and Middle-Income Countries: A Global Comparative Analysis.” *World Development* 115 (C): 246–57.
- Dorn, E., B. Hancock, J. Sarakatsannis, and E. Viruleg. 2020. “COVID-19 and Learning Loss—Disparities Grow and Students Need Help.” McKinsey & Company, Chicago.
- Duflo, E. 2012. “Women Empowerment and Economic Development.” *Journal of Economic Literature* 50 (4): 1051–79.
- Eissa, N., and J. Liebman. 1996. “Labor Supply Responses to the Earned Income Tax Credit.” *Quarterly Journal of Economics* 11 (2): 605–37.
- Elborgh-Woytek, K., M. Newiak, K. Kochhar, S. Fabrizio, K. Kpodar, P. Wingender, B. Clements, and G. Schwartz. 2013. “Women, Work, and the Economy: Macroeconomic Gains from Gender Equity.” IMF Staff Discussion Note 13/10, International Monetary Fund, Washington, DC.
- Engelhardt, C., and A. Wagener. 2014. “Biased Perceptions of Income Inequality and Redistribution.” CESifo Working Paper Series 4838, CESifo, Munich.
- Engzell, P., A. Frey, and M. D. Verhagen. 2020. “Learning Inequality during the COVID-19 Pandemic.” SocArXiv Paper ve4z7, Center for Open Science, Charlottesville, VA.
- Evans, D., M. Akmal, and P. Jakiela. 2020. “Gender Gaps in Education: The Long View.” CGD Working Paper 523, Center for Global Development, Washington, DC.

- Fuchs-Schündeln, N., D. Krueger, A. Ludwig, and I. Popova. 2020. "The Long-Term Distributional and Welfare Effects of COVID-19 School Closures." NBER Working Paper 27773, National Bureau of Economic Research, Cambridge, MA.
- Furceri, D., P. Loungani, J. D. Ostry, and P. Pizzuto. Forthcoming. "The Rise in Inequality after Pandemics: Can Fiscal Support Play a Mitigating Role?" IMF Working Paper, International Monetary Fund, Washington, DC.
- García-Escribano, M., P. Juarros, and T. Mogue. Forthcoming. "Patterns and Drivers of Health Spending Efficiency." Unpublished Report.
- Gaspar, V., D. Amaglobeli, M. García-Escribano, D. Prady, and M. Soto. 2019. "Fiscal Policy and Development: Human, Social, and Physical Investments for the SDGs." IMF Staff Discussion Note 19/03, International Monetary Fund, Washington, DC.
- Gerber, C., A. Klemm, L. Liu, and V. Mylonas. 2020. "Income Tax Progressivity: Trends and Implications" *Oxford Bulletin of Economics and Statistics* 82 (2): 365–86.
- Giuliano, P., and A. Spilimbergo. 2014. "Growing Up in a Recession." *Review of Economic Studies* 81 (2): 787–817.
- Grewenig, E., P. Lergertpoper, L. Woessmann, and L. Zierow. 2020. "COVID-19 and Educational Inequality: How School Closures Affect Low- and High-Achieving Students." CESifo Working Paper 8640 2020, CESifo, Munich.
- Grigoli, F. 2015. "A Hybrid Approach to Estimating the Efficiency of Public Spending on Education in Emerging and Developing Economies." *Applied Economics and Finance* 2 (1): 19–32.
- Han, J., B. Meyer, and J. Sullivan. 2020. "Income and Poverty in the COVID-19 Pandemic." NBER Working Paper 27729, National Bureau of Economic Research, Cambridge, MA.
- Hanushek, E., P. Peterson, and L. Woessmann. 2012. "Achievement Growth: International and US State Trends in Student Performance." PEPG Report 12–03, Program on Education Policy and Governance, Harvard University, Cambridge, MA.
- Harding, M., and M. Marten. 2018. "Statutory Tax Rates on Dividends, Interest, and Capital Gains: The Debt-Equity Bias at the Personal Level." OECD Taxation Working Paper 34, OECD Publishing, Paris.
- Hogan, A., B. Jewell, E. Sherrard-Smith, J. Vesga, O. Watson, C. Whittaker, and T. Hallett. 2020. "Potential Impact of the COVID-19 Pandemic on HIV, Tuberculosis, and Malaria in Low-Income and Middle-Income Countries: A Modelling Study." *Lancet Global Health* 2020 (8): e1132–41.
- Huang, C., L. Huang, Y. Wang, X. Li, L. Ren, X. Gu, L. Kang, L. Guo, M. Liu, X. Zhou, J. Luo, Z. Huang, S. Tu, Y. Zhao, L. Chen, D. Xu, Y. Li, C. Li, L. Peng, Y. Li, W. Xie, D. Cui, L. Shang, G. Fan, J. Xu, G. Wang, Y. Wang, J. Zhong, C. Wang, J. Wang, D. Zhang, and B. Cao. 2021. "6-Month Consequences of COVID-19 in Patients Discharged from Hospital: A Cohort Study." *Lancet* 397: 220–32.
- International Labour Organization (ILO). 2021. "ILO Monitor: COVID-19 and the World of Work. Seventh Edition." International Labour Organization, Geneva.
- Keats, A. 2018. "Women's Schooling, Fertility, and Child Health Outcomes: Evidence from Uganda's Free Primary Education Program." *Journal of Development Economics* 135 (November): 142–59.
- Keen, M. 2013. "Once and for All: Why Capital Levies are Not the Answer." IMF Blog, International Monetary Fund, November 6.
- Kindermann, F., and D. Krueger. Forthcoming. "High Marginal Tax Rates on the Top 1%: Lessons from a Life-Cycle Model with Idiosyncratic Income Risk." *American Economic Journal: Macroeconomics*.
- Klemm, A., and P. Mauro. 2021. "Pandemic and Progressivity." IMF Working Paper 21/24, International Monetary Fund, Washington, DC.
- Knittel, C. R., and B. Ozaltun. 2020. "What Does and Does Not Correlate with COVID-19 Death Rates." NBER Working Paper 27391, National Bureau of Economic Research, Cambridge, MA.
- Kuziemko, I., M. Norton, E. Saez, and S. Stantcheva. 2015. "How Elastic Are Preferences for Redistribution? Evidence from Randomized Survey Experiments." NBER Working Paper 18865, National Bureau of Economic Research, Cambridge, MA.
- Margalit, Y. 2013. "Explaining Social Policy Preferences: Evidence from the Great Recession." *American Political Science Review* 107 (1): 80–103.
- Marrero, G., and J. Rodríguez. 2013. "Inequality of Opportunity and Growth." *Journal of Development Economics* 104 (September): 107–22.
- Mathai, K., C. Duenwald, Guscina, A., R. Al-Farah, H. Bukhari, A. Chaudry, M. El-Said, F. Fareed, K. Gerling, N. Le, F. Ricka, C. Serra, T. Sydorenko, S. Walker, and M. Zaher. 2020. "Social Spending for Inclusive Growth in the Middle East and Central Asia." IMF Departmental Paper 20/12, International Monetary Fund, Washington, DC.
- Narayan, A., R. Van der Weide, A. Cojocaru, C. Lakner, S. Redaelli, D. Mahler, R. Ramasubbaiah, and S. Thewissen. 2018. *Fair Progress? Economic Mobility across Generations around the World*. Washington, DC: World Bank.
- Norregaard, J. 2013. "Taxing Immovable Property Revenue Potential and Implementation Challenges." IMF Working Paper 13/129, International Monetary Fund, Washington, DC.
- Office of the United Nations High Commissioner for Human Rights. 2020. "Disproportionate Impact of COVID-19 on Racial and Ethnic Minorities Needs to Be Urgently Addressed." Press Release, June 2.
- Organisation for Economic Co-operation and Development (OECD). 2013. *PISA 2012 Results: What Makes Schools Successful? Resources, Policies and Practices*. Volume IV. Paris: OECD Publishing.
- Organisation for Economic Co-operation and Development (OECD). 2015. "How Do Differences in Social and Cultural

- Background Influence Access to Higher Education and the Completion of Studies?” *Education Indicators in Focus* 35, OECD Publishing, Paris.
- Organisation for Economic Co-operation and Development (OECD). 2016. “What Influences Spending on Education?” *Education Indicators in Focus* 46, OECD Publishing, Paris.
- Organisation for Economic Co-operation and Development (OECD). 2018a. “Achieving Inclusive Growth in the Face of Digital Transformation and the Future of Work.” OECD Report to the G20 Finance Ministers, OECD Publishing, Paris.
- Organisation for Economic Co-operation and Development (OECD). 2018b. “The Role and Design of Net Wealth Taxes in the OECD.” OECD Tax Policy Study 26, OECD Publishing, Paris.
- Papageorge, N., M. Zahn, M. Belot, E. van den Broek-Altenburg, S. Choi, J. Jamison, and E. Tripodi. 2020. “Socio-Demographic Factors Associated with Self-Protecting Behavior during the COVID-19 Pandemic.” IZA Discussion Paper 13333, Institute of Labor Economics, Bonn.
- Parker, S., and T. Vogl. 2018. “Do Conditional Cash Transfers Improve Economic Outcomes?” NBER Working Paper 24303, National Bureau of Economic Research, Cambridge, MA.
- Platform for Collaboration on Tax. 2017. “Embarking on a Medium-Term Revenue Strategy.” MTRS Concept Note, Platform for Collaboration on Tax, Washington, DC.
- Prady, D. 2020. “Reaching Households in Emerging and Developing Economies: Citizen ID, Socioeconomic Data, and Digital Delivery.” Special Series on COVID-19, International Monetary Fund, Washington, DC.
- Rosenberg, J., and D. Marron. 2015. “Tax Policy and Investment by Startups and Innovative Firms.” Research Report, Urban-Brookings Tax Policy Center, Washington, DC.
- Rubery, J., and A. Rafferty. 2013. “Women and Recession Revisited.” *Work, Employment and Society* 27 (3): 414–32.
- Sachs, J., G. Schmidt-Traub, C. Kroll, G. Lafortune, G. Fuller, and F. Woelm. 2020. “The Sustainable Development Goals and COVID-19. Sustainable Development Report 2020.” Cambridge University Press, Cambridge, UK.
- Saez, E., and G. Zucman. 2016. “Wealth Inequality in the United States since 1913: Evidence from Capitalized Income Tax Data.” *Quarterly Journal of Economics* 131 (2): 519–78.
- Sarin, N., L. Summers, and J. Kupferberg. 2020. “Tax Reform for Progressivity: A Pragmatic Approach.” Policy Proposal, Hamilton Project, Brookings Institution, Washington, DC.
- Scheuer, F., and J. Slemrod. 2021. “Taxing Our Wealth.” *Journal of Economic Perspectives* 35 (1): 207–30.
- Schwartz, G., M. Fouad, T. Hansen, and G. Verdier, eds. 2020. *Well Spent: How Strong Infrastructure Governance Can End Waste in Public Investment*. Washington, DC: International Monetary Fund.
- Stantcheva, S. 2020. “Understanding Tax Policy: How Do People Reason?” NBER Working Paper 27699, National Bureau of Economic Research, Cambridge, MA.
- Sutherland, D., R. Price, and F. Gonand. 2009. “Improving Public Spending Efficiency in Primary and Secondary Education.” *OECD Journal: Economic Studies* 1: 4.
- Sze, S., D. Pan, C. Nevill, L. Gray, C. Martin, J. Nazareth, J. Minhas, P. Divall, K. Khunti, K. R. Abrams, L. B. Nellums, and M. Pareek. 2020. “Ethnicity and Clinical Outcomes in COVID-19: A Systematic Review and Meta-Analysis.” *EClinicalMedicine* 29–30: 100630.
- Toder, E., and D. Baneman. 2012. “Distributional Effects of Individual Income Tax Expenditures: An Update.” Research Report, Urban-Brookings Tax Policy Center, Washington, DC.
- Una, G., R. Allen, S. Pattanayak, and G. Suc. 2020. “Digital Solutions for Direct Cash Transfers in Emergencies.” Special Series on COVID-19, International Monetary Fund, Washington, DC.
- World Bank. 2020a. *COVID-19 High-Frequency Monitoring Dashboard*. Washington, DC: World Bank, October.
- World Bank. 2020b. *Poverty and Shared Prosperity 2020: Reversals of Fortune*. Washington, DC: World Bank.
- World Bank. 2020c. “The COVID-19 Pandemic: Shocks to Education and Policy Responses.” World Bank, Washington, DC.
- Yamamura, E. 2014. “Trust in Government and Its Effect on Preferences for Income Redistribution and Perceived Tax Burden.” *Economics of Governance* 15 (1): 71–100.
- Yanez, D., N. Weiss, J. Romand, and M. Treggiari. 2020. “COVID-19 Mortality Risk for Older Men and Women.” *BMC Public Health* 20: 1742.