

BOX 2.1 How does informality aggravate the impact of COVID-19?

COVID-19 has taken an especially heavy humanitarian and economic toll on emerging market and developing economies (EMDEs) with large informal sectors. Large informal sectors make lockdowns and social distancing particularly challenging, thus reducing governments' ability to stem the spread of the virus. Informal workers tend to be employed in activities and locations where social distancing is difficult to implement. With few savings and lack of access to formal social benefits, many struggle to comply with government lockdown orders. Economies with large informal sectors are also associated with weak health care systems that can result in a larger number of fatal outcomes of infections. These vulnerabilities amplify the economic shock to livelihoods from COVID-19 and threaten to raise global extreme poverty. It is therefore critical to implement effective delivery channels for support to informal workers and firms. Unconditional support programs may be appropriate. Given their limited resources, low-income countries may require increased international funding for the effective implementation of such programs.

Informal activity is widespread in emerging market and developing economies (EMDEs; figure B2.1.1; World Bank 2019a). Large informal sectors are often associated with underdevelopment, with activity typically characterized by labor-intensive production, less educated and more poorly paid workers, limited access to financial and medical service, and poor or non-existent coverage by social security. These features are likely to intensify the spread of COVID-19 among informal workers and worsen its adverse health and economic impacts (Nguimkeu and Okou 2020). Starting from a relatively lower level, confirmed COVID-19 cases have been rising rapidly in EMDEs with extensive informality since the end of March 2020, despite a lower level of testing.

Against this background, this box addresses the following questions.

- Which features of the informal economy can amplify or dampen the impact of the pandemic?
- How may widespread informality alter the impact of the pandemic?
- How do policies to mitigate the impact of the pandemic need to be tailored to the presence of large informal sectors?

Features of the informal economy

The informal economy has several features that tends to facilitate the spread of the pandemic. Other features worsen the economic impact of adverse shocks more generally.

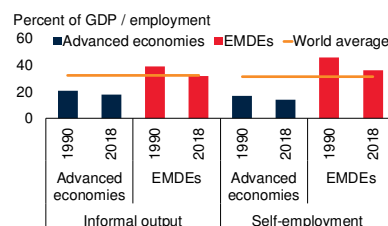
Note: This box was prepared by Shu Yu.

BOX 2.1 How does informality aggravate the impact of COVID-19? (continued)

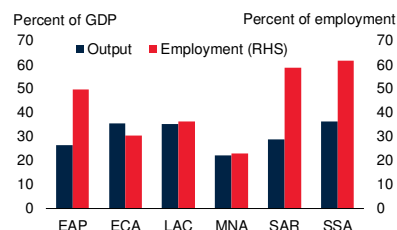
FIGURE B2.1.1 Informality in EMDEs

Informality is particularly prevalent in emerging market and developing economies (EMDEs). In Sub-Saharan Africa, Europe and Central Asia, and Latin America and the Caribbean, informal output averaged about 35 percent of GDP in 2010-18. Self-employment in Sub-Saharan Africa, South Asia, and East Asia and the Pacific, ranged from about 50 percent of employment to more than 60 percent. Confirmed COVID-19 cases have grown rapidly since the end of March 2020 in EMDEs, with some concern about lack of testing in EMDEs with above-median informality.

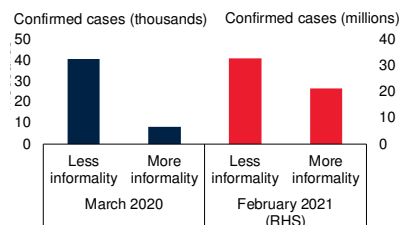
A. Informality in EMDEs



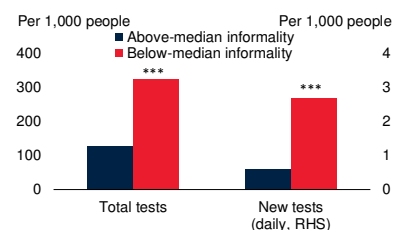
B. Informality across EMDE regions



C. COVID-19 cases and the extent of informality



D. Informality and COVID-19 tests



Sources: Haver Analytics; International Monetary Fund (Government Finance Statistics); *Our World in Data*; World Bank (World Development Indicators).

Note: EAP = East Asia Pacific, ECA = Europe and Central Asia, MNA = Middle East and North Africa, SAR = South Asia, SSA = Sub-Saharan Africa. In C-D, informality is measured by DGE-based informal output in percent of official GDP in 2018. DGE = dynamic general equilibrium model-based estimates of informal output in percent of official GDP; EMDEs = emerging market and developing economies.

A. Simple averages. Informal employment uses self-employment shares with missing value interpolated in EMDEs for earlier years and filled using the latest available observation in recent years. World averages between 1990 and 2018 are orange.

B. Simple averages of informal output (DGE-based estimates) and employment estimate (share of self-employment) in each region during 2010-18.

C. Bars show the total number of confirmed COVID-19 cases (in thousands or millions) for EMDEs (excluding China) with less informality (that is, above group median) and EMDEs (excluding China) with less informality (that is, below group median) on March 24, 2020, and on February 12, 2021 (RHS).

D. Bars show the simple average number of COVID-19 tests per 1,000 people for EMDEs (excluding China) with less informality (that is, above group median) and EMDEs (excluding China) with less informality (that is, below group median) on February 12, 2021. The left two bars show the total number of COVID-19 tests done so far, and the right two bars show the daily number of COVID-19 tests performed. *** indicates that group averages are significantly different at 10 percent level.

**BOX 2.1 How does informality aggravate the impact of COVID-19?
(continued)**

Widespread informality in EMDEs. The informal sector, on average, accounts for about a third of official GDP and about 70 percent of total employment in EMDEs (of which self-employment accounts for more than one-half; figure B2.1.1; World Bank 2019a). Informal enterprises account for 8 out of every 10 enterprises in the world (ILO 2020a). The size of the informal economy varies widely across regions and countries. The share of informal output is highest in Sub-Saharan Africa (SSA), Europe and Central Asia (ECA), and Latin America and the Caribbean (LAC), averaging near 40 percent of GDP in those regions between 2010 and 2018. The share of self-employment, another measure of informality, is highest in SSA, South Asia (SAR), and East Asia and the Pacific (EAP), ranging from 50 percent to 62 percent of total employment. In 2018, the informal economy accounted for more than 50 percent of GDP in Bolivia and Zimbabwe.^a The sector accounted for about 90 percent of total employment in Mali, Mozambique, and India. In economies like Kenya, 8 out of 10 workers were self-employed.^b

Characteristics of informal workers. Workers in the informal sector tend to be lower-skilled and lower-paid, with less access to finance and social safety nets than workers in the formal sector (Loayza 2018; Perry et al. 2007; World Bank 2019a). They often live and work in crowded conditions and conduct all transactions in cash—factors that facilitate the spread of disease (Chodorow-Reich et al. 2020; Surico and Galeotti 2020). Informal workers on average have incomes 19 percent lower than formal workers and have limited savings (figure B2.1.2; World Bank 2019a). In the one-third of EMDEs with the most pervasive informality, more than one third of the population would be driven into poverty if they had to cover direct out-of-pocket payments for an unexpected health care emergency. On average, unemployment benefits are only available to a small fraction of the population (less than 4 percent) in EMDEs with above-median output informality between 1990 and 2018.

Characteristics of informal firms. Informal firms tend to be characterized by labor-intensive production and are more prevalent in the services sector. These have been hard hit by measures to curtail social interactions (Benjamin and Mbaye 2012; Surico and Galeotti 2020). In EMDE service sectors, about 72

a. Here, DGE-based estimates are used to capture output in the informal sector. MIMIC-based estimates of informal output indicate that other economies also have informal output exceeding 50 percent of GDP.

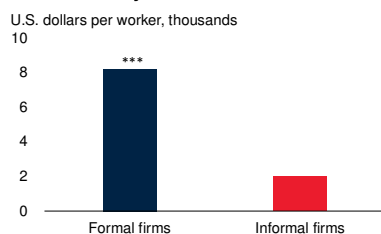
b. Common employment measures of informality are ratios of *self-employment* and *informal employment* to total employment. The *self-employed* work on their own account, or with one or a few partners, or in a cooperative. *Informal employment* comprises all workers of the informal sector and informal workers outside the informal sector (World Bank 2019a).

BOX 2.1 How does informality aggravate the impact of COVID-19? (continued)

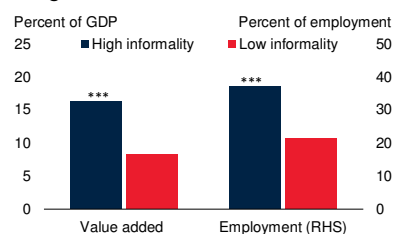
FIGURE B2.1.2 Features of the informal sector

Many informal workers are employed in the agricultural or services sectors, poorly paid, with limited access to social benefits, and at risk of impoverishing health spending.

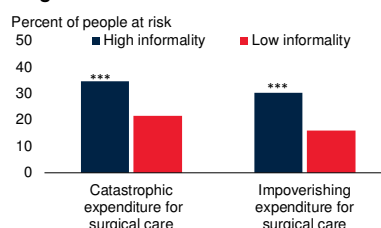
A. Productivity in the informal sector



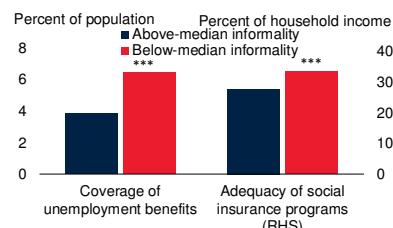
B. Agricultural sector



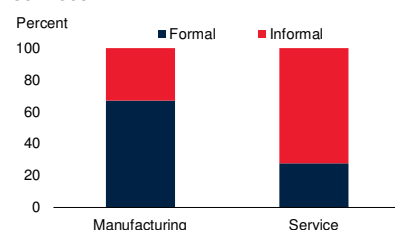
C. Risk of impoverishing expenditure for surgical care



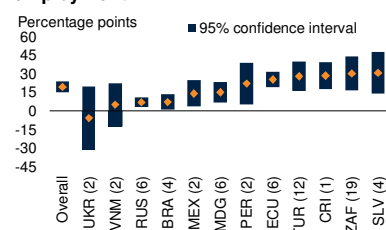
D. Social insurance



E. Informality in manufacturing and services



F. Wage premium for formal over informal employment



Sources: Amin, Ohnsorge, and Okou (2019); Program in Global Surgery and Social Change (PGSSC) at Harvard Medical School; World Bank (Enterprise Surveys, World Development Indicators); World Bank.

Note: *** indicates the group differences are not zero at 10 percent significance level. DGE = dynamic general equilibrium model-based estimates of informal output in percent of official GDP.

A. Firm productivity is measured as sales per worker.

B.C. Bars are simple group mean for EMDEs. "High informality" are the highest one-third of EMDEs by DGE-based informal output and "low informality" are the lowest one-third over 2010-18.

D. Bars are simple group mean for EMDEs. "High informality" are the highest half of EMDEs by DGE-based informal output and "low informality" are the lowest half over 1990-2018. Adequacy of social insurance programs are measured in percent of total welfare of beneficiary households.

E. Data coverage as in Amin, Ohnsorge, and Okou (2019).

F. The wage premium is obtained from 18 empirical studies. See World Bank (2019a) for details. BRA = Brazil, CRI = Costa Rica, ECU = Ecuador, MEX = Mexico, MDG = Madagascar, PER = Peru, SLV = El Salvador, RUS = Russian Federation, TUR = Turkey, UKR = Ukraine, VNM = Vietnam, ZAF = South Africa. The number of studies or estimates for each country is shown in parenthesis; country means are calculated using a random-effects meta-analysis model.

BOX 2.1 How does informality aggravate the impact of COVID-19? (continued)

percent of firms are informal, compared with 33 percent in EMDE manufacturing sectors (see Amin, Ohnsorge, and Okou 2019 for sample coverage). Agricultural employment in EMDEs is roughly 90 percent informal. Epidemic-control measures have already disrupted access to markets and inputs and may also eventually threaten the food security of smallholder farmers (Cullen 2020; FAO 2020; ILO 2018b).

Broader development challenges. Economies with larger informal sectors are associated with weaker economic, fiscal, institutional, and developmental outcomes. GDP per capita in economies with above-median informality is about one-quarter that of economies below-median informality (Chapter 1). Health systems in EMDEs with more informality are relatively underdeveloped, and government capacity to mount an effective policy response to pandemics is limited.

- *Health and sanitation.* Although the populations of EMDEs with the most pervasive informality tend to be younger, they also tend to be less healthy, live in less sanitary conditions, and only have access to weak public health and medical systems (figure B2.1.3).^c In the one third of EMDEs with the most pervasive informality, sanitation facilities are accessible to only 36 percent of the population, and clean drinking water is available to only 54 percent of the population, compared to about 75 percent in the one third where informality is least pervasive. Hand-washing facilities are available for only 40 percent of the population in the former group. Access to medical care is also extremely limited in EMDEs with above-median informality, with only three-fourths the number of doctors and nurses per 1,000 people that the EMDEs with below-median informality have. In economies like Malawi and Kenya, thousands of people share access to only one or two ICU beds (Murthy, Leligdowicz, and Adhikari 2015).
- *Government policy effectiveness.* Economies with pervasive informality are less likely to have the institutional and fiscal capacity to mount an effective policy response to the pandemic. Tax avoidance is prevalent in the informal sector, resulting in limited fiscal resources (Besley and Persson 2014). For example, government revenues and expenditures in the EMDEs with the most pervasive informality are 5-10 percentage points of GDP, on average, below

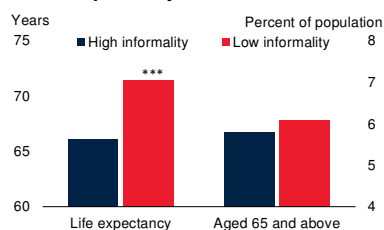
c. In the one-third of EMDEs with the most pervasive informality, life expectancy at birth is 66.2 years, compared with 71.4 years in the one-third with the least pervasive informality. In the one-third of EMDEs with the most pervasive informality, the number of deaths per 1,000 people caused by communicable diseases and maternal, prenatal, and nutrition conditions are about twice as high as in the one-third with the least pervasive informality.

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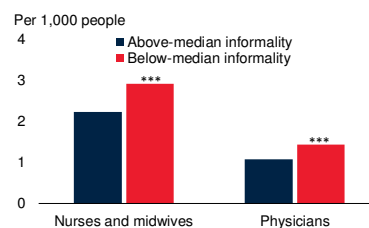
FIGURE B2.1.3 Development challenges

Pervasive informality is associated with short life expectancy, lack of access to medical resources, limited sanitation facilities, and other health-system shortfalls. Economies with widespread informality have significantly lower government revenues and expenditures, substantially less effective governments, and greater corruption.

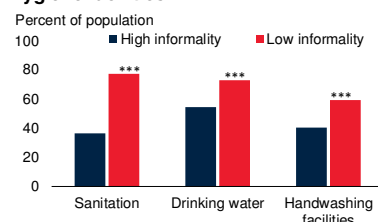
A. Life expectancy



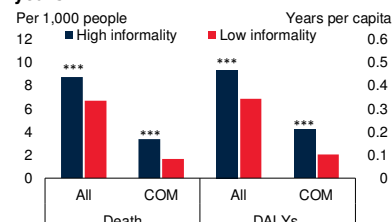
B. Access to medical resources



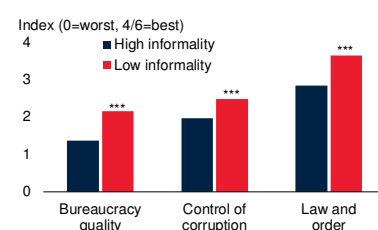
C. Access to water, sanitation, and hygiene facilities



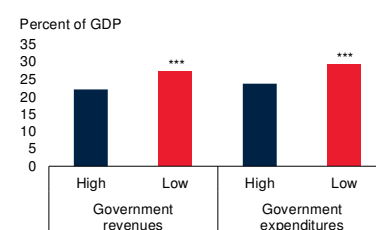
D. Mortality and disability adjusted life years



E. Government effectiveness



F. Fiscal indicators



Sources: International Monetary Fund (Government Finance Statistics); *International Country Risk Guide* (ICRG); Program in Global Surgery and Social Change (PGSSC) at Harvard Medical School; WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply, Sanitation and Hygiene; World Health Organization; World Bank (World Development Indicators); World Bank (2019a).

Note: *** indicates statistically significant group differences at 10 percent significance. "High informality" are the highest one-third of EMDEs by DGE-based informal output and "low informality" are the lowest one-third over 2010-18.

A.C. Simple group means for EMDEs with "high informality" and those with "low informality" over 2010-18.

B. Simple group means for EMDEs over 2010-18. "Above-median informality" are EMDEs with above-median informality by the share of DGE-based informal output. Two outliers, Belize and Belarus, are dropped.

D. Simple group means for EMDEs with "high informality" and those with "low informality" over 2010-18 (2016 for DALYs). DALYs refers to disability adjusted life years -- the number of healthy life years per person lost to diseases. "COM" indicates years lost to communicable diseases and maternal, prenatal, and nutrition conditions.

E. Simple group means for EMDEs with "high informality" and those with "low informality" over 2010-2018. A higher value means better governance. "Bureaucracy quality" ranges from 0 to 4. The rest measures range from 0 to 6.

F. Simple average fiscal indicators for EMDEs with "high" informality and those with "low" informality over 2000-18. Sample includes 69 nonenergy-exporting EMDEs with populations above 3.5 million people.

BOX 2.1 How does informality aggravate the impact of COVID-19? (continued)

those with the least pervasive informality (World Bank 2019a; figure B2.1.3). In addition, governments are less effective, and corruption is more rampant, in economies with more pervasive informality (Loayza, Oviedo, and Servén 2006). Moreover, less than a quarter of informal firms use bank accounts and about one-half of small informal firms identified lack of access to finance as a major obstacle to their operations, which makes it difficult to use the financial system to channel support to the informal economy (Farazi 2014; Schneider, Buehn, and Montenegro 2010). The rising availability of digital payments—whether on mobile phones, cards, or online—provides an alternative financial channel for governments to reach the informal sector. However, it is doubtful whether sufficient cash-in and cash-out points are in place to allow people using digital payments to deposit and withdraw cash safely and reliably (World Bank 2017).^d The lack of registration also makes it a challenge to provide effective support to informal workers and firms via official fiscal measures (such as tax deductions).

Impact of the COVID-19 outbreak

As a result of these features of the informal sector, the impact of COVID-19 is likely to be worse in EMDEs with widespread informality. It can intensify the pandemic's adverse health and economic consequences while weakening the ameliorative effects of policies.

Health consequences. Health consequences of the pandemic are more adverse in EMDEs with more pervasive informality. In these countries, lack of adequate public health systems worsens the transmission of infectious disease. Access to clean water and handwashing facilities is often difficult or unfeasible. Living quarters and working environments are often overcrowded and insanitary. In SSA, where informality is pervasive, 70 percent of city dwellers live in crowded slums (World Bank 2019b). Lack of medical facilities and a generally less healthy population can worsen the severity of infections and limit the ability to treat those infected (Dahab et al. 2020). The absence of social safety nets means that informal market participants are unable to afford to stay at home, or to adhere to social distancing requirements, which undermines policy efforts to slow down the spread of COVID-19 (Loayza and Pennings 2020).

Economic consequences. Lockdowns hit informal market participants in the service sector, where informality is particularly common, especially hard (ILO 2020a; Panizza 2020). In SAR, about one of four households currently living in

d. These cash-in and cash-out points are often in the form of a bank agent, a mobile money agent, or an automated teller machine (ATM; Klapper and Singer 2017).

BOX 2.1 How does informality aggravate the impact of COVID-19? (continued)

poverty is engaged in informal activities in the service or construction sectors, which have been significantly affected by closures and disruptions (World Bank 2020a). Women are overrepresented in sectors that are subject to high risks during the pandemic: 42 per cent of women workers are in such sectors, compared to 32 per cent of men (ILO 2020a). Also, about 80 percent of informal firms rely on internal funds and financing from family and moneylenders for working capital, making them especially vulnerable to the disruption to cashflows caused by mitigation and other control measures (Farazi 2014). Informal workers too have limited financial resources to buffer temporary income losses during the containment period, making them more likely to be pushed into poverty.^e The health crisis also causes immediate revenue losses for firms, forcing them to temporarily or permanently close their businesses. This could trigger an unprecedented surge in unemployment and a potential expansion of the informal economy (ILO 2020b).

Past pandemics, such as the Ebola epidemic in West Africa in 2014-15, provide a stark illustration of the vulnerability of smallholder farmers (World Bank 2015).^f The agricultural sector has the highest share of informal employment—estimated at more than 90 percent (ILO 2018b). Farmers producing for the urban market may experience massive income losses as they are unable to sell their produce during the lockdowns (ILO 2020d).^g Small informal firms play a critical role in the food supply chain and are likely to run into operational distress and insolvency due to logistical breakdowns during containment periods (FAO 2020; ILO 2020b; World Bank 2020b). Since they are among the poorest and most vulnerable groups of society, informal workers, especially farmers, may have reduced access to food in the event of sharp income losses.

In countries with widespread informality, governments typically have neither the resources nor the administrative structures in place to effectively deliver well-targeted relief to those most in need (Muralidharan, Niehaus, and Sukhtankar 2016). In a number of EMDEs with widespread informality, social benefit

e. Without alternative income sources, lost labor income during the containment period could result in an increase in relative poverty for informal workers and their families of more than 21 percentage points in upper-middle-income countries and 56 points in lower and low-income countries (ILO 2020a). This could increase income inequality among workers (ILO 2020c).

f. In 2014-2016, the Ebola outbreak was followed by an economic crisis in West Africa, triggered by massive health and social spending to cope with the outbreak and compounded by the almost simultaneous collapse in commodity prices (Cangul, Sdravovich, and Sian 2017; World Bank 2014).

g. Farmers may be increasingly impacted by the health crisis if the virus spreads further into rural areas (ILO 2020a). In the case of India and Senegal, the inability of informal (or self-employed) workers to earn a living and gain access to health care has led to migration from urban to rural areas, which may cause the virus to spread further.

BOX 2.1 How does informality aggravate the impact of COVID-19? (continued)

systems, such as ration cards, are plagued by corruption that weakens their capacity to deliver support to the most vulnerable (Peisakhin and Pinto 2010; World Bank 2004).

Policy implications

Informality adds to the challenges of dealing with the Covid pandemic. Fiscal resources need to be used to strengthen public health systems to prevent, contain, and treat the virus, and to support the livelihoods of participants in the informal economy during the outbreak. As conventional measures—such as wage subsidies and tax relief—would hardly reach informal firms and workers, innovative emergency measures should be considered to deliver income support to informal workers, and credit support to informal firms (World Bank 2020b).^h When managing the tradeoff between coverage and costs, policy makers need to strive for a maximum reach to informal participants during the crisis, prioritizing temporary and reversible measures to minimize the longer-term fiscal burden. In some situations, however, the crisis has exposed gaps in a patchwork of social security facilities that should be filled, perhaps in the context of a thorough reform.

Expand social safety nets. The first line of response includes existing social protection and social assistance programs that could be quickly scaled up to provide immediate but temporary relief to families whose earnings have been adversely affected by the outbreak (World Bank 2020c, 2020d). Food aid, cash (or in-kind) transfers, and rent or utility bill waivers can be particularly effective in countries with pervasive informality, as they are easy to implement and have wide reach outside the formal sector (Özler 2020).ⁱ

Utilize flexible platforms and technologies to reach informal workers. Cash transfer and other support programs could utilize various existing registries and platforms that have wider coverage than banking or tax systems (Aker et al. 2016; Aron 2018). Such platforms should have sufficient coverage, provide possibilities to establish identities, and connect accounts with beneficiaries (World Bank 2020e). Examples include existing national social registries (for example, Brazil), new online platforms (Brazil and Thailand), new mobile payment devices

h. See World Bank (2020b) for details on the conventional measures. See ILO (2020b) for details on the importance of reducing the exposure of informal workers and their families to the virus and the risks of contagion and while ensuring their access to health care.

i. Where conditional programs exist, waiving conditionality for a period could ensure wider coverage in the context of a health emergency (World Bank 2020c). See World Bank (2020e) for a summary of country examples.

BOX 2.1 How does informality aggravate the impact of COVID-19? (continued)

(Morocco), and databases in health (Morocco) and energy (El Salvador) sectors. Public transfers via mobile money have been shown to improve food security and assets as compared to manual cash transfers in the short-term (Aker et al. 2016; Haushofer and Shapiro 2016).^j “Big data” analyses and geographic (or age-group or social group) targeting may help expand program coverage by identifying vulnerable groups that are not on any existing registry (Loayza and Pennings 2020; World Bank 2019a, 2020a, 2020e).

Facilitate access to finance for informal firms. To support informal firms, access to finance should be provided to help them stay in business, keep jobs, and maintain links to local and global value chains (World Bank 2020c, 2020f). Such support could be provided, potentially under government guarantees, by commercial banks, microfinance institutions, digital lending platforms, corporate supply chains, or other intermediaries. Easier access to credit, collateralization of existing properties, and online or mobile banking could help owners of informal firms to tap available financial resources, especially with the help of digital technologies.

Consider untargeted and unconditional programs when needed. Targeted programs reduce the risk that payments end up with those who do not need them, especially in the absence of effective targeting and delivery systems (Gentilini 2020; Loayza and Pennings 2020). In EMDEs where informality is pervasive and most of the population is either poor or near-poor, simple untargeted transfers may be better. Attempts to exclude the relatively few who are not in need would likely slow relief down and reduce the desired coverage of informal workers (Özler 2020). In practice, support programs that made formalization a condition of assistance have reduced the number of intended beneficiaries and have not offered net benefits to many informal enterprises (Campos, Goldstein, and McKenzie 2018). During the height of the pandemic and economic downturn, and the potentially weak recovery right afterwards, the need is to quickly reach as many informal workers and firms as possible. To this end, in many EMDEs, unconditional support programs would be advisable. Given their limited resources, low-income countries may require international funding for the effective implementation of such programs.

j. Mobile money is a technology that allows people to receive, store, and spend money using a mobile phone. Cash-in and cash-out points—a bank agent, a mobile money agent, or an automated teller machine—should be provided to ensure the success of public transfers via digital platforms (World Bank 2018).