FISCAL AFFAIRS

Special Series on Fiscal Policies to Respond to COVID-19

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Reaching Households in Emerging and Developing Economies: Citizen ID, Socioeconomic Data, and Digital Delivery[1]

A key challenge facing policy makers is how to protect households during an economic crisis. Reaching affected groups requires sufficient information on key household characteristics (such as income and household composition) as well as a reliable delivery system to ensure support reaches the intended beneficiaries. This creates particular challenges for emerging and low-income countries with large informal sectors and therefore limited sources of information on employment and income for most of their population. This note discusses the importance of citizen ID systems, integrated socioeconomic databases, and digital delivery systems in extending coverage of social protection in such contexts.

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A key challenge facing policy makers in emerging and low-income countries is how to support workers and households that experience employment and income shocks.[2] Targeting public support based on income requires verifiable information on employment and income, which is typically only available for workers in the "formal" sector that are officially registered as employees or self-employed and potentially liable for payment of income and social security taxes. The lack of such information for "informal" workers therefore restricts the ability of governments to effectively target resources to affected households. This challenge is particularly acute in low-income and developing countries (LIDCs) with large informal sectors where about two-thirds of workers earn their living in the informal economy.[3] This is a key factor behind the very low coverage of social insurance systems in these countries, which typically base benefit eligibility, and benefit and contribution levels, on income and/or "formal" employment status (Figure 1).

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[1] Prepared by Delphine Prady.

[2] See accompanying note in this series, "Expenditure Policies in Support of Firms and Households".

[3] World Bank 2019 report Protecting All: Risk-Sharing for a Diverse and Diversifying World of Work.

Figure 1. Coverage of Social Insurance Programs, by Income Group (2008-2016 average)
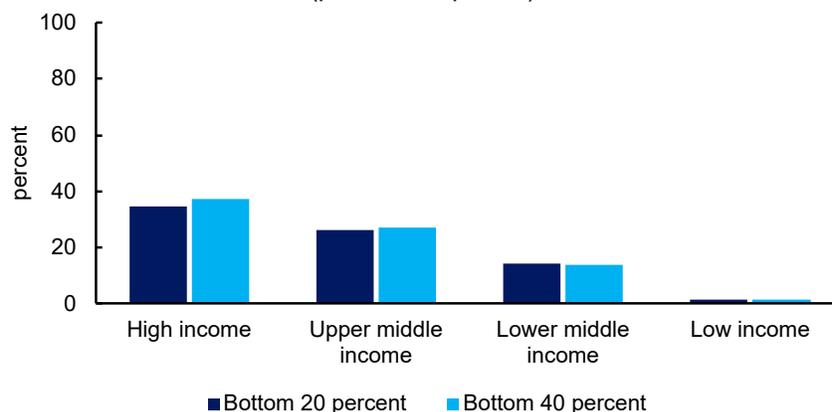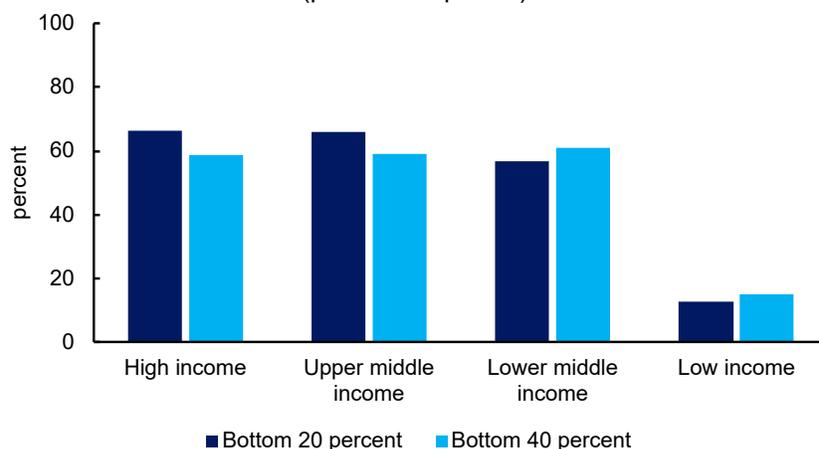
(percent of quintile)

Source: IMF staff on World Bank Aspire data.
Note: Percentage of population participating in social insurance programs (includes direct and indirect beneficiaries).

Lack of access to social insurance benefits means that informal workers and their families typically need to rely on benefits provided through social safety nets to protect them from poverty and income shocks.[4] The large size of the informal sector in LIDCs means that safety nets typically need to rely more on non-income-based targeting methods with eligibility determined by imperfect proxies for income such as demographic characteristics (presence of children or elderly), place of residence, or ownership of housing or other assets. However, social safety nets remain weak in many LIDCs, with low coverage of the poorest income groups, which are least able to deal with short-term income shocks (Figure 2). This presents a particular challenge in the context of an economic crisis given the difficulties associated with scaling up coverage of existing safety net programs in the short term, including administrative and information constraints and limited fiscal space.

Figure 2. Coverage of Social Assistance Programs, by Income Group (2008–2016 average)

(percent of quintile)

Source: IMF staff on World Bank Aspire data.
Note: Percentage of population participating in social assistance programs (includes direct and indirect beneficiaries).

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[4] Many traditional and informal family or community arrangements in place to mitigate the risk of income-loss are being disrupted and are typically not capable of functioning effectively during systemic shocks (see Grosh et al, 2008. For Protection and Promotion: The Design and Implementation of Effective Safety Nets. Washington, DC: World Bank).

To expand the potential reach of social safety nets, some developing countries have started to establish citizen identification (ID) systems and integrated these with public socio-economic information databases and improved benefit delivery mechanisms. Notably, building on its biometric digital ID (Aadhaar), over recent years India has set up a redistribution infrastructure designed for and capable of universal reach. It has invested in integrating the Aadhaar system with other socio-economic databases linked to enhanced mobile communications and financial access with the aim of improving administrative and targeting performance and program delivery. The resulting system is known as the "JAM trinity" with three key pillars:

1. *Reliable identification (ID) system.* Aadhaar is a biometric identification system, which was rolled out starting in 2009. It provides each citizen with a 12-digit unique identification number with demographic and biometric information (fingerprint and iris scan). It currently covers 1.2 billion people (95 percent of Indian population);
2. *Financial inclusion.* Jan Dhan is a financial inclusion program that started in 2014. In 2017, 85 percent of the population had access to a bank account, up from a prior coverage of 56 percent;
3. *Mobile network.* This covers more than 1.16 billion phones with a growing share of smartphones and internet-enabled devices. This network serves as an effective service delivery platform, especially in rural areas.

From the outset, these three pillars have been integrated, allowing the Indian government to improve the targeting and delivery of its policies. Aadhaar is linked with beneficiary databases for public services and subsidies, as well as with tax databases. It also enables customers and banks to fulfill know-your-customer (KYC) norms necessary to obtain a bank account or a mobile SIM card, thus being linked automatically to new bank accounts and mobile connections. This in turn supports Aadhaar-based reforms of social programs—such as transformation of LPG subsidies into a direct cash transfer deposited on Aadhaar-linked bank accounts—and further encourages people to register and open formal bank accounts.

If any one of these three components are absent, this results in important policy tradeoffs. The Indian example highlights the importance of three key integrated components in the delivery of broad and adequate income support: a universal ID system, linked to socioeconomic data on households, and to a mode of benefit delivery. In the COVID-crisis context, missing any one of the components will require unavoidable prioritization across competing objectives in the short run, i.e., broad population coverage, fiscal sustainability and virus containment. For instance:

- *Absence of reliable citizens' registry.* Without a reliable and universal registry, people without IDs will be excluded from benefits, while people with IDs will receive benefits, possibly multiple times. This increases the likelihood that poor and vulnerable households are not reached, especially if these households are less likely to be registered.
- *Absence of cashless delivery system* (e.g., mobile money)*.* Without such systems governments will need to rely on physical handouts, whether cash or in-kind. This may be particularly challenging during a health crisis requiring social distancing and confinement.
- *Absence of integrated socioeconomic database.* Integration of ID systems with other socio-economic databases allows governments to better target resources to more vulnerable social groups, e.g., based on incomes, tax records and receipt of other social benefits. In the absence of an integrated database, they would have to rely only on the information contained in the ID systems, e.g., household composition and place of residence which could result in substantial under-coverage of vulnerable groups and leakage to non-vulnerable groups.

Many LIDCs lack the capacity to implement such integrated schemes, especially in the short run. In most low-income countries, and in many emerging economies, birth registration rates range between 15 to 80 percent

and registration at older age is not available, leaving most people in Asian and African countries without birth certificates.[5] The potential to make broad cashless transfers varies significantly across countries and relies heavily on mobile money, as financial inclusion and banking coverage remain low in many of these countries (Figure 3). In LIDCs, about half of the population—especially the non-poor population working in the informal economy—are systematically excluded from any analysis of their socioeconomic status (Figure 4). Population coverage by social registries varies widely across countries (Figure 4b), also reflecting differences in social programs scopes—i.e., some may be national, others targeting only specific regions.

Some emerging and developing countries have already started to develop the capacity to expand coverage of their safety nets, and the use of mobile money is rapidly increasing in many developing economies. For instance, building on a universal ID system integrated with socioeconomic databases, Turkey's Integrated Social Assistance System uses 28 databases to determine the individuals' capacity to pay different proportions of the health insurance premium as well as eligibility for social assistance and other programs. In Senegal, following the rollout of the "National Unique Registry"—that combines first a geographical targeting of communities and then a selection of poorest households within communities—the conditional cash transfer program coverage increased by more than five times from 3 to 16 percent of the population between 2013 and 2016. Access to cashless modes of payment is increasing rapidly with, for instance, two-thirds of adults in Kenya, Rwanda, Tanzania, and Uganda actively using mobile payment accounts in 2017 (Figure 5).[6] Digital payments in systems based on Quick Response (QR) codes have become widely used in China; mobile money is very rapidly increasing in Bangladesh; and Thailand is rapidly moving away from cash with the open-source digital payment platform PromptPay.

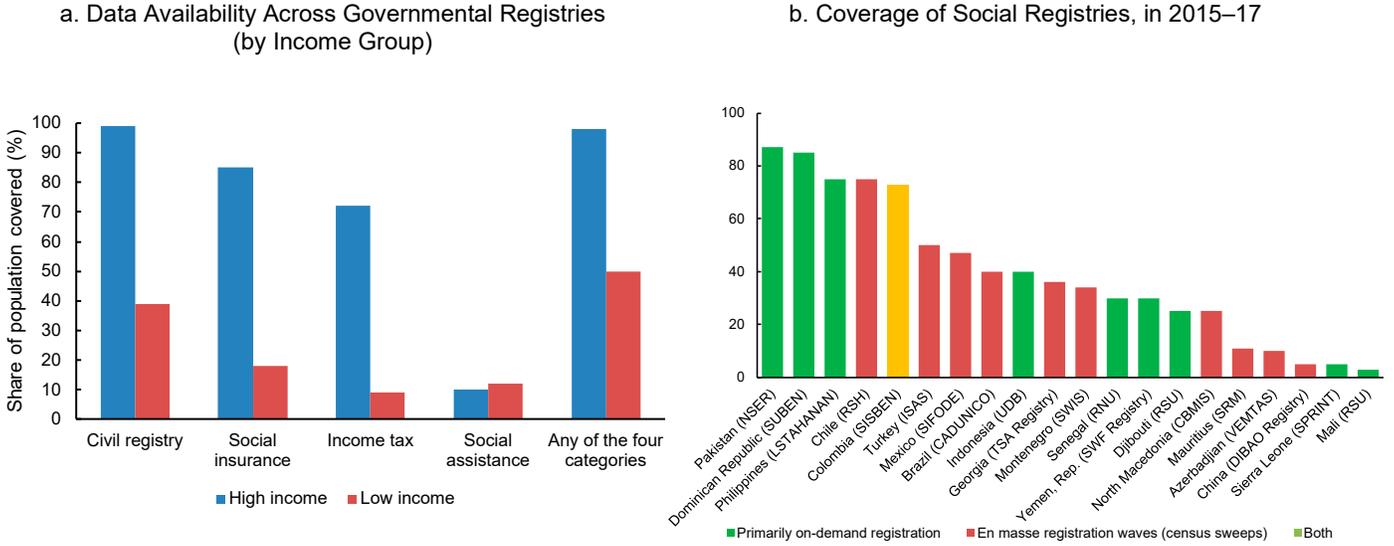**Figure 3. Share of Adults Receiving Government to Person (G2P) Payments**
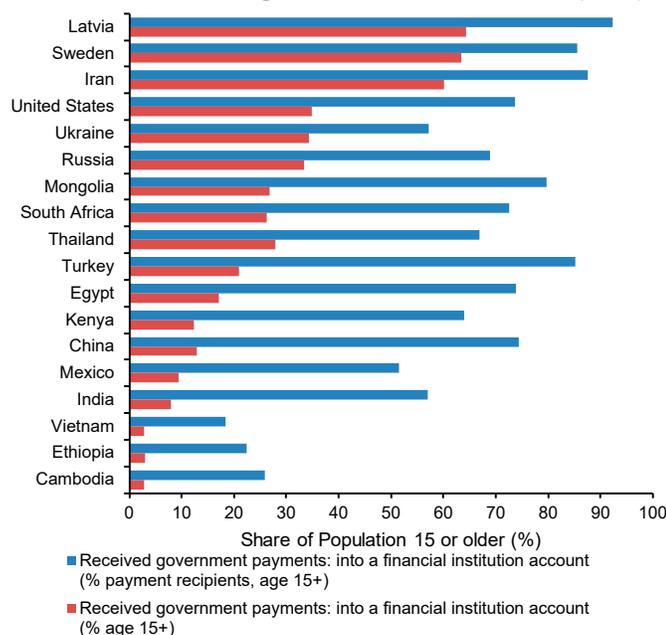
Source: World Bank 2019 report Protecting All: Risk-Sharing for a Diverse and Diversifying World of Work.
Note: G2P payments include wages of civil servants, cash transfer social assistance programs, and social insurance benefits such as pensions.

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[5] Even in countries with good registration rates, many continue to register births and deaths in paper-based and unreliable systems with many individuals having multiple identities. Therefore, a few Sub-Saharan African countries (Benin, Malawi, Mauritania and Rwanda) have followed the Indian example and first registered older children and adults separately, issuing them a unique identifier using biometric deduplication (capturing both fingerprints and iris images) to achieve close to universal coverage of their ID systems.

[6] In Kenya, the value of annual mobile transactions is four times the size of the formal sector wage bill.

Figure 4. Population Coverage of Governmental Registries, by Income Group

a. Data Availability Across Governmental Registries
(by Income Group)

b. Coverage of Social Registries, in 2015–17

Source: World Bank 2019 report Protecting All: Risk-Sharing for a Diverse and Diversifying World of Work.

Figure 5. Adult Coverage of Financial Accounts Allowing Cashless Transactions and Mobile Phones, by Region
(percent)
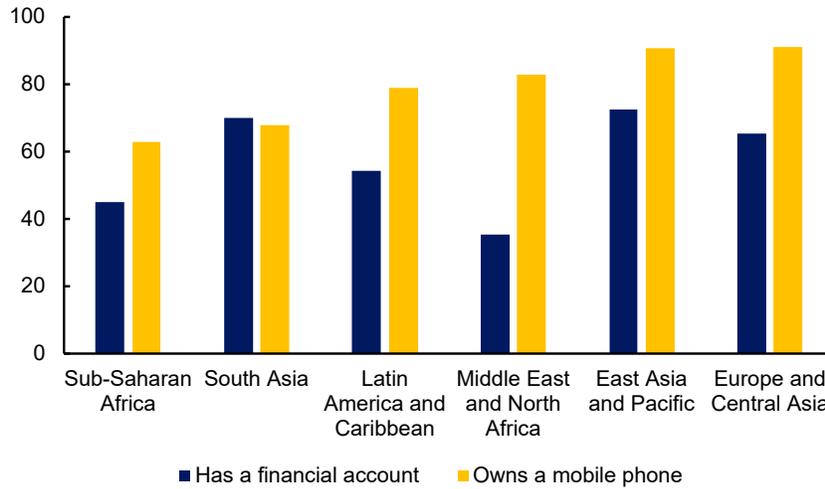
Source: Gelb et al. (2020), Citizens and States: How Can Digital ID and Payments Improve State Capacity and Effectiveness?.
Note: World Bank regions, excluding high income countries. Financial accounts are transacting accounts that at the very least can be used to save money and make transactions. These include both institutional bank accounts and mobile money accounts.

Countries without a comprehensive and integrated system can nonetheless build on the infrastructure they have to expand income support in the short run.[7] Various approaches can be used to expand coverage of informal workers in countries where either a reliable ID system, decent financial inclusion or interconnected socioeconomic information of households is missing.

- **Ways around partial and/or unreliable ID system.** While speeding up the coverage of their national ID system, countries are also temporarily relaxing ID requirements in order to speed up the take up of income support programs. For instance, in Togo, the authorities have introduced a new cashless transfer program, Novissi, targeting adult workers in the informal economy impacted by the confinement measures—e.g., moto taxi drivers. Beneficiaries are identified through their voter IDs. Transfers are then made through mobile money, with a top-up for women recipients, and digital payments are further encouraged—e.g., for utility bills—to avoid handling of cash. In Jamaica, the roll out of the long overdue national identification system—NIDS—will be ramped up.

- **Ways around low financial inclusion.** Governments can rapidly scale up financial inclusion through both demand and supply measures. In many sub-Saharan African countries—Cameroun, Kenya, Rwanda, Uganda—mobile transaction fees are being waived by mobile network operators as they often represent a prohibitive cost to the uptake of mobile money. Information campaigns—through, for example, text message campaigns, radio and TV ads—will help raise awareness of new and existing programs and can also encourage enrollment. In Colombia, the authorities collaborate with mobile network operators to map phone numbers to active financial accounts and type of mobile technology—i.e., 2, 3 or 4G—in order to tailor communication about the new cash transfer—Ingreso Solidario—and financial account options. On the supply side, Ecuador authorities have relaxed criteria for agents allowed to distribute cash transfers, in order to rapidly double cash-out access points from 3,000 to 7,000.

- **Ways around no/scarce socioeconomic data:** In Nigeria, the authorities are collaborating with mobile network operators to identify vulnerable informal workers in urban areas through their purchase pattern of airtime.[8] In Chile, where the national ID is linked to a basic bank account—Cuenta Rut—which covers most low-income people, a top-up income support—"Bono COVID-19"—will directly be transferred into the bank accounts of more than 2 million vulnerable Chileans.[9]

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[7] For a discussion on PFM-related issues see companion note "Digital PFM Solutions for Cash Transfers in Emergency Responses".

[8] Other "proxy registries" can be leveraged to identify workers in the informal economy, such as: i) company/individuals registries held by informal business unions or associations, ii) utility bills, iii) invoices of sales by wholesalers, iv) local governments' registries of poor households and local informal businesses, v) mobile network operators' data.

[9] Even if access to digital means is large, exclusion from this type of transfer—due to digital exclusion—would need to be assessed and mitigated through other types of programs. See April 2018 *Fiscal Monitor*, Chapter 2: "Digital Government".