

DIGITALISATION FOR A JUST SOCIAL COMPACT

GLOBAL SOUTH LESSONS FROM
THE COVID-19 PANDEMIC

AN IDRC COVID-19 RESPONSES
FOR EQUITY (CORE) PROJECT
2023

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EXECUTIVE SUMMARY

This policy paper responds to global and localised calls for a new social compact. It acknowledges the central role of digital inclusion and equity in mitigating the health and economic risks associated with the COVID-19 pandemic lockdowns to limit the spread of the virus.

The pandemic highlighted the critical role of the digitalisation of public services and digital access to them for the effective participation of citizens in the economy and society, both during the pandemic and in postponed pandemic economic reconstruction.

This digitalisation and access is important if equitable outcomes are to be achieved. The research explores the interplay between the uneven but intensifying global processes of digitalisation and datafication, the State and the 'formalising' effect on the significant informal sector in developing economies. As more people and firms come online, their visibility to the State is increasing; at the same time, other firms are 'informalising' as they start up or reconstitute themselves online.

With firms being established or moving their operations online, the global landscape has been transformed into one characterised by diminished or new forms of labour, and firms operating without physical presence for taxation purposes and not subject to national law designed for the physical industrial era, nor to legal requirements to contribute to social protection for workers. Obligations for worker protection have therefore shifted to the State, which, in most Global South countries, already has a very limited resource base.

Under pandemic and lockdown conditions the paper examines the potential of these developments to enhance weak state formation; improve much needed revenue generation; extend social protection to unprotected platform workers; and provide business and social relief to firms and individuals usually not visible to the State. With this Global South pandemic lens and in the context of post-pandemic reconstruction, this policy paper also assesses the role of digitalisation in reviving and renewing democratic governance for new and more equitable social compacts that can build the resilience of developing countries to better survive the next inevitable pandemic.

Overall the research finds that in the countries covered by this study – Nigeria, South Africa, India and Sri Lanka and Peru and Columbia – governments missed the opportunity afforded by the crisis to deploy digital strategies effectively to mitigate the social and economic effects of the pandemic and lockdowns in support of more equitable social compacts.

Amongst multiple findings the research confirmed that mobile technology was the primary means to access the Internet for the majority of low-income earners in the surveyed countries. However in some countries a basic mobile phone is still the predominant type of device owned, with in some instances smartphone adoption

accounting for less than a third of the population. Given that heightened digitalisation increased the pressure to transact online, while also requiring at least partly dedicated and relatively advanced digital devices, in fact a widening of digital inequalities is observed. The invisibility of the unconnected, who are predominantly people who live in rural areas, are less educated, elderly and female, requires the most attention if digitalisation is to be leveraged in their interests. This highlights the importance from a policy perspective of addressing demand-side constraints to the access and use of the Internet, not only attending to supply-side issues such as mobile network coverage and affordable use, and creating an affordable market for smartphone devices.

While generally gender gaps have declined since 2018, the degree of decline varies significantly. An important driver for women coming online was the need to assist children with schoolwork, and it remains uncertain whether they remained online after schools re-opened. Data on gender also lack the nuances for more specific policy planning and evaluation. Even in contexts where the gender gap has been narrowed, segments of the female population may be unequally affected given that women are not a heterogeneous group.

The lack of digital skills amongst older adults and their absence from labour markets and educational institutions where these skills could be learned means that older adults often rely on their close social circles to enable them to transact online. Older adults generally have a low reliance on digital channels to obtain information and to interact with public and private services. A major barrier to them coming online is a lack of trust which is likely to increase their dependency on paper-based transactions for social safety programmes.

While governments in the Global South took steps to reduce the social and economic impact of the COVID-19 pandemic through different state support interventions, a low use of digitally enabled channels for accessing social protection schemes was observed. This was likely driven, at least in part, by Internet use being lower among groups that social protection programmes are aimed at, such as the poor, elderly, and persons with disability. When transactions were remote, low-end technology solutions such as SMS or USSD were preferred. High transaction costs, patron-client relationships, and ineffective and siloed administration poor data sources to identify beneficiaries and on levels of poverty generally were inhibitors to access programmes.

In two countries where microenterprise surveys were conducted the largely informal businesses did not benefit from state support interventions. Many were also unable to transact online, increasing their vulnerability to government isolation measures implemented at the height of the pandemic. The low levels of tax compliance and local municipality registration observed confirmed the invisibility of the informal sector to the state. While the Internet offers a plausible way both to strengthen the sector – for example through cash transfers – and to make informal businesses visible to the state for taxation planning, resources need to be allocated to equip the most vulnerable businesses in developing countries for digital substitution and financial inclusion. Efforts to reduce informality, including through digitalisation, can also have positive impacts on long-term development and poverty reduction.

While platform work has increased across most countries surveyed (the exception is South Africa), remote work was a possibility for only a few, such as those working in the ICT industries and financial and insurance services. Many who engaged in informal work activities remotely considered themselves to be unemployed because they had neither frequent customers nor contractual obligations.

Education was a key driver of Internet adoption in all countries. However, challenges included poor signal quality, high data costs, and an insufficient number of devices in households. Schools were also unprepared to deliver remote education and children struggled to maintain the necessary attention for learning. As a result an education deficit during the pandemic requires additional measures to redress.

With this Global South lens, the paper looks at reforms to the international taxation regime to tax multinational corporations (focusing particularly on the highly concentrated and super-profitable big tech corporations without presence in most developing countries). These reforms are necessary to contribute to the narrow tax bases in countries. They are particularly important to relieve the poor in many African countries from regressive social networking and mobile money use taxes that have undermined affordable universal access to broadband strategies and pushed those who had come online prior to the introduction of these taxes offline.

Based on the research findings this paper makes multiple policy recommendations to policy makers and regulators with respect to harnessing digitalisation and datafication for the new social compact :

- States must align national and global governance frameworks based on a practical articulation of the concept of digital public goods as a rationale for regulation;
- States must harmonise national and regional digital, social and economic policy through participatory, multi stakeholder processes;
- States must develop reliable and granular public data on digital inequalities, financed by a global digital solidarity fund from a 1% levy on domain name registrations;
- States should enable policy experimentation to develop alternative policies and regulatory strategies to promote access and greater use of digital services;
- States and the private sector should explore public-private mechanisms that can deliver national public digital infrastructure and that can also be coordinated on the continental level;
- States should digitalise government databases and services for more efficient delivery of public services and for better use of data for public planning and policy;
- States should leverage increased visibility of informal workers and firms for resource mobilisation, including enhance legitimate taxation, and engage in global taxation regimes to mobilise resources from big tech and other multinational corporations not contributing to local tax bases; and
- States together with private sector and civil society should improve the readiness of educational institutions for remote learning, harness digitalisation and datafication for social protection, and update labour policies for existing and emerging forms of labour.

INTRODUCTION

While COVID-19 has been described as the great leveller in that it impacted all countries and citizens across the world irrespective of race, class and gender lines, the impacts were highly uneven. The unevenness was to some degree a result of emergency health policies of countries but also the economic ramifications associated with the lockdowns to control the spread of disease.

However, the unevenness was significantly determined by the pre-existing conditions within countries prior to the pandemic – the strength of their social compacts, the institutional endowments and individual resources to mitigate the health and economic risks.

Although the pandemic impacted negatively on the global economy, which recorded the lowest levels of growth in a century (World Bank, 2022) and layoff and unemployment rates at an all time high (ILO,2021), the capacity of countries to manage the crisis and ‘post’-COVID economic reconstruction of economies remains tied to the structural inequalities between and within countries (OECD, 2020).

The pandemic accelerated digitalisation in many countries across the world as social-distancing measures imposed by national governments forced many individuals to work, learn and socialise remotely, and businesses to move their transactions online.

Although most countries have ended states of national disasters and resumed “business-as-usual”, much of the movement towards digital activity has persisted and created a “new normal” for socio-economic activity which is characterised by greater use of the Internet across all aspects of life. However the majority of Africans, significant numbers of South East Asians, Latin Americans, particularly the elderly – were unable to digitally substitute to mitigate the public and economic risks of the pandemic and associated lockdowns. Despite the rapidly increasing trend in digitalisation and datafication, countries in the Global South largely lag behind the rest of the world. Within many countries there remain gaping inequalities in digital access and use which manifest across multiple intersectional segmentations and result in digital marginalisation for many. As digitalisation spreads across all human activities there is an increasing expectation for individuals to operate through digital channels, significantly increasing the socio-economic costs of exclusion. Moreover, the increasing use of data collected from digital activity to inform public and private strategies means that those who are not able to access digital technologies end up being “invisible” to policy makers and private actors and the policies and strategies developed are not tailored to meet the needs of those most in need of assistance.

In this context, the pandemic provided a lens through which these deficiencies can be better understood in order to remedy current and evolving inequalities. It was with this opportunity in mind that Research ICT Africa (RIA), LIRNEasia and the Institute of Peruvian Studies in Peru set out to understand the implications of the pandemic in six countries in Africa, Asia

and Latin America (LAC) and to examine the interplay between digitalisation and formality and informality; the visibility of citizens and firms to the State, both in relation to taxation and social protection, but also in relation to labour, remote and platform work; and in another key area of state responsibility highlighted by the lockdown – education.

The pandemic highlighted that digital inequality across all surveyed countries and the lack of access to technology for certain groups including poorer women and rural dwellers made it difficult for individuals to participate in remote work and education and to receive social assistance.

In contexts where access and use of online commercial and government services remains highly uneven, only a relatively small elite within the formal economy were able to mitigate COVID-related public health lockdowns by moving their work, schooling, food-sourcing, and business-relief applications online. For the vast majority existing within the informal economy without access to online services, lockdowns resulted in the rupture of informal value chains, the disruption of schooling and access to feeding schemes, and the inability to receive social security payouts or to apply for COVID-19 relief. All this has highlighted the compounding effect of digital inequality on wider inequality in economies, which are the result of underlying structural inequalities that exist.

In response to the negative socio-economic impacts made evident by the pandemic, the UN Secretary-General has called for a renewal of the social contract, anchored in human rights and gender equality, to rebuild trust and social cohesion that people need to see reflected in their daily lives. Emphasising the centrality of digital inclusion in contemporary society, the Common Agenda calls for a Global Digital Compact (GDC) that “should also include updated governance arrangements to deliver better public goods and usher in a new era of universal social protection, health coverage, education, skills, decent work and housing, as well as universal access to the Internet by 2030 as a basic human right so all citizens have a say in envisioning their countries’ futures.”¹

It does so in a context where the vulnerability of survivalist economies has been exposed in the Global South, and, at the other end of the spectrum, the landscape has been transformed by diminished or new forms of labour and firms operating without physical presence for purposes of enforcement of labour conditions, or requirements to contribute to social protection for workers, or taxation. Obligations for worker protection have also shifted to the State, which, in most countries in the Global South, already has very limited resource bases and often non-existent social protection and social welfare programmes.

The potential destruction of survivalist economies has meant, in many parts of the Global South, that the informal economy may be unable to serve as the usual buffer to endogenous economic shocks (Pitoyo, 2021). Across Africa, Asia and Latin America, this scenario was compounded by high incidences of gender, race and ethnic marginalisation, particularly among refugees, who fall out of even the most basic safety nets where they exist (RIA, 2023).

Despite the rhetoric of using the crisis as an opportunity for social and economic renewal and more equitable social compacting in the countries studied for this report the opportunity

1 UNGA 2022 Common Agenda

was lost. Through assessing the impacts of the intensifying processes of digitalisation and datafication on inequality and social and economic justice, and from the vantage point of understanding how these processes impacted the most vulnerable during pandemic lockdowns, this paper proposes several policy recommendations to optimise the digital underpinnings necessary for a just social compact.

1.1. PURPOSE AND APPROACH

The purpose of this policy paper is to identify the points of policy intervention to identify or create those conditions that contribute to post-pandemic economic reconstruction and future pandemic resilience. It draws on three phases of research in Africa, Asia and Latin America, focusing initially on South Africa, Nigeria, (Africa), Sri Lanka and India (Asia) and Peru and Colombia (Latin America), with later rounds incorporating findings gathered in other countries in the three regions. The first and second phases of the research set out to understand the status and potential role of digitalisation and datafication in the management of the COVID-19 pandemic.

Based on the existing state of digital inequality in the six primary research countries selected, it sought to understand the strengths and deficiencies of COVID-19 digital response strategies.

In the third phase we examined the state of readiness of countries to harness the potential of digitalisation to contribute to post-pandemic economic and social recovery and to building resilience against inevitable future pandemics within the context of a new social compact. This research was supplemented by long-standing analyses of policy outcomes in the different regions.²

Each region tailored their research focus to tackle different perspectives of the problem, whilst addressing the common set of themes. Regions also used Research ICT Africa's (RIA) extensive 2017-2022 After Access survey data (as well as other public data) to understand the challenges around digital substitution as a result of the unevenness of access to critical services such as education and commerce, and as a means to contextualise government and other service providers' inability to harness technological solutions for the efficient and safe delivery of public and relief services during the lockdowns.

Adopting a multidisciplinary and mixed-methods approach across the three regions, the CORE research explored a variety of regionalised or localised mechanisms that could be implemented or were considered most impactful in different parts of the Global South. Although the approaches used were not exactly the same across the regions, all used a combination of quantitative as well as qualitative methods to gather data. This allowed for cross-regional assessment. A common conceptual framework for the three regions enabled us to draw the linkages between the intensifying global trends of digitalisation and datafication.

2 Such as Instituto de Estudios Peruanos (2020a), Instituto de Estudios Peruanos (2020b), Instituto de Estudios Peruanos (2021), LIRNEasia (2021a); LIRNEasia (2021b), Samaratunga (2021), Hurulle (2021), Galpaya (2022), Zainudeen (2022), Hurulle (2022), Galpaya et al (2023), LIRNEasia (2023), Gillwald & Mothobi (2019), Chinembiri et al (2022), Chinembiri (2022), Calandro, Gillwald & Stork (2013), Chinembiri, Kapinga & Razzano (2021), Ahmed & Chinembiri (2021), Ahmed, Chinembiri & Govan-Vassen (2021).

2

CONCEPTUAL FRAMEWORK

The paper adopts a political economy approach in order to understand the power relations, institutions and interests determining and arising from and the interplay of states, markets and citizens that inform policy outcomes within specific contexts.

It contends that the processes of digitalisation and datafication can, under the right conditions, lay the foundations for state formation in developing economies. This applies to the state in its political dimensions (for the mobilisation of resources for development); in its economic dimensions (for timely delivery); and in its social dimensions (for recognition of the minimum enjoyment of rights).

2.1 SOCIAL CONTRACT

It considers a social contract or compact a framing tool that speaks to many contemporary development trends, such as state formation, the policy-implementation gap, the diagnostic of binding constraints to development, fragility and conflict, taxation and service delivery as well as social protection. The hypothesis is that a healthy social compact, in which state policies reflect the demands and expectations of their citizens, leads to more stable, equitable, and prosperous outcomes relative to those that do not. This is, however, with the understanding that policy making and policy implementation do not occur in a vacuum. Rather, they take place in "...complex political and social settings, in which individuals and groups with unequal power interact within changing rules as they pursue conflicting interests" (World Bank 2017, 29).

This conceptual framework also draws on ongoing refinements of definitions of digitalisation and datafication (see for instance, Legner et al. (2017); Tilson et al. (2010); Mayer-Schönberger & Cukier (2013); Mejias & Couldry (2019); and Schönberger and Cukier (2013). By helping to reduce transaction costs, and improving the flow of information, digitalisation and datafication are essential to competitive economies. For these developments to be more even both within and between countries digital inequality both within and between countries needs to be redressed.

2.2 STATE FORMATION

From the perspective of seminal dependency theorist Walter Rodney (1972), state formation is distorted by the subordination of society as a whole, including the State, its economy and political systems, to the development of capitalism in the northern hemisphere. This orientates developing economic activities common to countries on the periphery of the global economic system, such as mining and agriculture. In many ways however, digitalisation and the datafication that comes with it, have changed the social structures and agreements that have dominated economic and political systems and, in the Global South, a new social contract has begun to emerge.

Digitalisation has the potential to be put to good use to contribute to social advancement. Some recent research and policy papers (Ortega et al., 2019; Keidanren, 2018) point out that technology can be applied to welfare systems, and, more generally, serve as an accelerator for the fulfilment of the Sustainable Development Goals (SDGs) and in general for improved human wellbeing.

2.3 FORMALISATION AND INFORMALISATION

However, the new social contract as envisaged by the UN will require a political commitment from the State, and will also demand the willingness and participation of all stakeholders. This in a context of increasing formalisation on the one hand as informal sector and microenterprises transact online and become more visible to the State, and increasing informalisation of firms as they move online and reduce and revise the labour obligations. Social protection commitments in this case default from the private sector to the state (or remain in abeyance in the absence of social welfare systems).

Public authorities however are no longer the only ones responsible for welfare policies or public goods, be they global or local. Now private firms produce digital public goods and are in the driving seat of much of the technological change. States or public sectors are not the only agents, even though they must still be guarantors. State, local authorities, international bodies, firms, and citizens (NGOs, foundations, etc.) are also responsible (Ortega et al., 2019).

Arguably, with the delivery of digital public goods by private providers however, many states have abdicated their responsibility for ensuring fair and equitable access, quality, prevention of harms and the particularly creation of equitable opportunities for participation of their citizens, firms in the global digital economy.

Despite the potential of digital services and data to contribute to developmental objectives, the outcomes of the absence of regulation or reliance of self-regulation by big tech are at best uneven (Gillwald 2023).

Without regulatory intervention these advanced data-driven technologies will exacerbate existing structural inequalities rather than ameliorate them (Hargittai, 2021; Gillwald & Partridge, 2022; Gillwald, 2017). Even where these digital goods were developed using public investments in support of national innovation, these vast global networks have been treated as private goods. Largely unregulated, they also generally make no contribution to the tax base or underlying infrastructure costs in the countries from which these extractive virtual businesses produce their superprofits (Mazzucato, 2018 in Gillwald 2023)). These complexities need to be acknowledged in order to contribute to the construction of a new global governance of global digital public goods. This new governance will need to rely on an increased investment in the building of digitalised processes and services that are both efficient and cost effective. While such systems will increasingly constitute the core of governments' infrastructure and operation, the costs and complexities required for their development and maintenance requires an exploration of joint-effort alternatives that can articulate efforts from multiple sectors of society, including the private sector. This implies that

significant efforts must be made in the definition of a unified vision and mission, codes of conduct and appropriate governance bodies, as well as to guarantee the voice and representation of all stakeholders, considering all sets of inequalities and intersectionalities. Therefore, a renewal of the social contract can play a role as a guiding compass for the governance frameworks (Eaves et al., 2022).

The mobilisation of resources for the development and redefinition of the social compact requires the evaluation and improvement of social services delivery, taking advantage of the opportunities opened up by digitalisation and datafication.

Revenue mobilisation and social policies are intrinsically intertwined, and without sufficient domestic revenue, ambitious social policies that enable countries to reach international goals, such as those of the SDGs, cannot be achieved (Burchi et al, 2022). However, expanded revenue collection is worthwhile only if the revenue is translated efficiently into valuable public goods and services (Moore, Prichard, and Fjeldstad, 2018, p.12).

The benefits of any improvements in most developing countries will remain highly uneven without concerted intervention, given those most marginalised are located at the intersections of multiple inequalities such as class, race, and gender, and in some countries ethnicity or religion. These same inequalities in the digital realm also relate to geographic location (urban/rural), age, income, and education. When facing these inequalities, the possibilities of full substitution of the digital are limited, preventing society as a whole from harvesting the cost savings from a more efficient service delivery to the most in need, and from realising the rights that a new social compact entails.

3

COUNTRY CONTEXTS

This policy paper draws on available data from multiple countries but is built on foundational quantitative and qualitative research exploring digitalisation trends over the COVID-19 pandemic in six countries across three regions in the Global South. The countries included in the CORE project are listed in Table 1 below along with each country's population and Gross Domestic Product (GDP) per capita.

TABLE 1: Countries included in the COVID-19 Responses for the CORE project (2022 statistics)

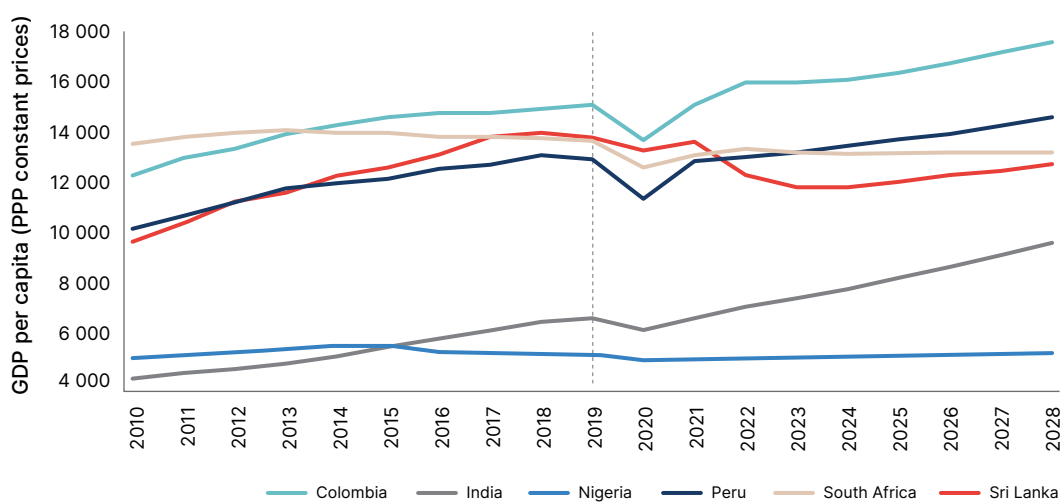
REGION	COUNTRY	POPULATION SIZE	GDP PER CAPITA (USD)	COVID-19 CASES*	COVID-19 MORTALITIES*
AFRICA	Nigeria	218 541 212	2 184	122	1
	South Africa	59 893 885	6 776	6 760	171
SOUTH ASIA	Sri Lanka	22 181 000	3 354	3 209	76
	India	1 417 173 173	2 389	3 153	37
LATIN AMERICA	Peru	34 049 588	7 126	13 082	641
	Columbia	51 874 024	6 630	12 232	274

* per 100 000 people

Source: World Bank (2023); World Health Organization (2023)

Although there are similarities in the countries included in the analysis, they were at different stages of development coming into the COVID-19 pandemic and experienced varying degrees of economic impact of the virus. As Figure 1 shows, all countries experienced a drop in real GDP per capita in 2020 however the degree of decline varied. Although the Latin American countries of Columbia and Peru exhibited the sharpest drop between 2019 and 2020, the recovery has been more rapid and the projections from 2021 show these countries pulling away from the other countries aside from India which began with a much lower level of GDP per capita but is expected to catch up in the post-COVID period. The initial impact in Sri Lanka was dampened somewhat but there has been a delayed economic decline which is expected to continue for 2023.

FIGURE 1: Real GDP per capita (PPP) projections, 2010-2028



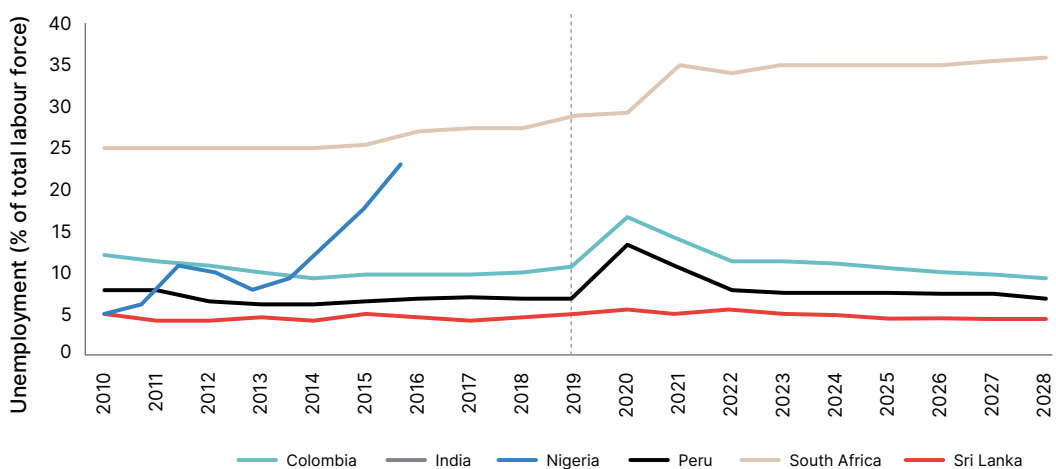
Source: IMF (2023)

For the African countries of Nigeria and South Africa the long-term outlook is more bleak with the economies expected to continue on a downward trend in the post-COVID recovery period.

The impact on unemployment shown in Figure 2 follows a similar pattern with South Africa's high rate of unemployment expected to worsen whereas in Latin America an initial sharp spike in unemployment in 2020 expected to be followed by a sustained decline going forward.

The variation in economic impacts as a result of the pandemic are due to a number of factors including the rate at which the virus spread, the economic make-up of each country, external factors impacting on each economy at the onset of the pandemic, and by different policy and regulatory responses by each government in response to the pandemic.

FIGURE 2: Unemployment rate projections (% of total labour force), 2010-2028



*Data is not available for India

Source: IMF (2023)

4

ASSESSING DIGITAL INEQUALITIES

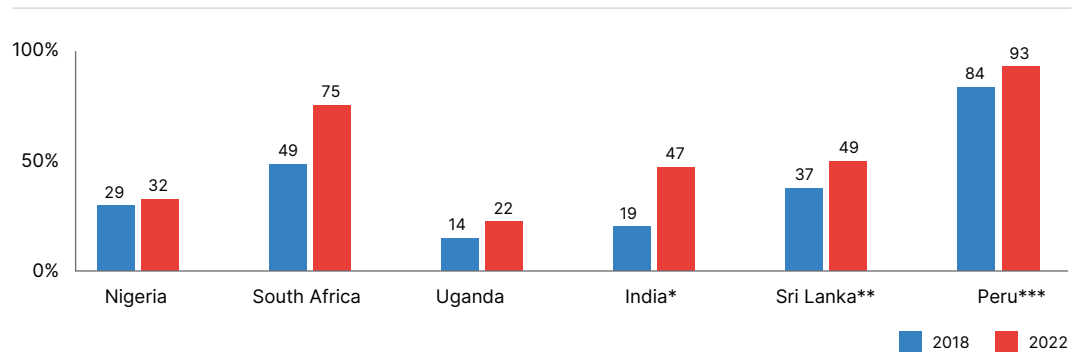
The opportunity to harness digital tools to improve livelihoods and to reduce inequalities in society and under pandemic and lockdown conditions depends on all individuals being able to have affordable access to Internet services in order to be able to digitally substitute. The COVID-19 pandemic highlighted the importance of digital substitution in times of crisis and the compounding effect of digital inequalities on structural inequalities without policy interventions to ensure the opportunities to digitally substitute are more evenly distributed.

4.1. THE IMPACT OF COVID-19 ON INTERNET USE

Only a few countries are able to provide recently updated reliable statistics on Internet access based on nationally representative surveys. For many of the countries, particularly with regards to developing countries in the Global South, national statistics are based on estimations which are inherently problematic. Where demand-side data is available, as for the countries displayed in Figure 3, it reveals very different changes in Internet access even between countries at similar levels of economic development and at similar stages of digitalisation.

Mobile connectivity is nevertheless the primary driver of these changes in data. Whereas computers and laptops remain out of reach for the majority of low-income individuals, more than two thirds of individuals own mobile phones in all the countries displayed in Figure 4 after significant increases since 2018.

FIGURE 3: Internet access for a selection of countries in the Global South, 2018 vs 2022



* India: 2017 and 2021

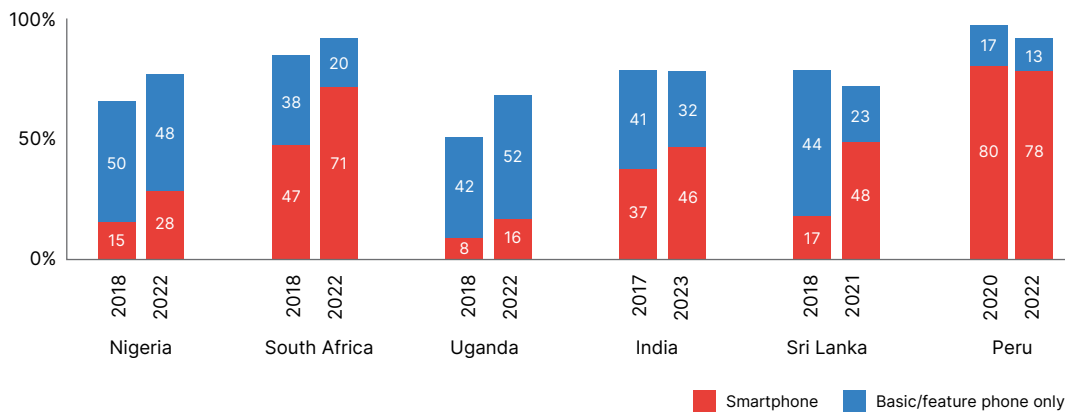
** Sri Lanka: 2018 and 2021

*** Peru: 2020 and 2022, urban areas only

Source: After Access: RIA, 2018, 2022; LirneAsia, 2021, 2022; IEP, 2021, 2022

The only case where mobile phone ownership did not increase was in Peru; but it should be noted that this is based on a survey encompassing urban areas only and as such the

FIGURE 4: Mobile phone ownership for a selection of countries in the Global South, 2008 vs 2022



Source: (After Access: RIA, 2018, 2022; LirneAsia, 2021, 2022; IEP, 2021, 2022)

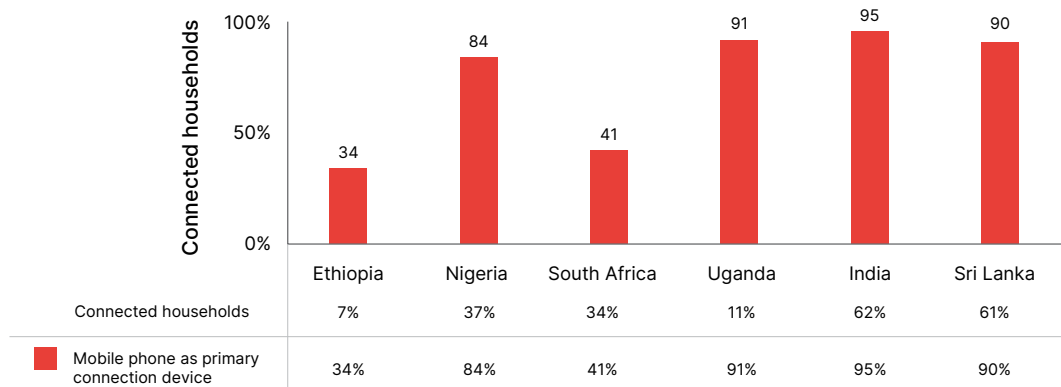
decline in ownership may be reflective of urbanisation trends which occurred as a result of the impacts of COVID-19.

Notably the share of individuals who only own a basic or feature phone has declined in almost all the countries with the increase in mobile phone ownership driven by a sharp increase in owners of smartphones.

The importance of the smartphone in driving Internet access in the Global South is further highlighted through looking at households which have a means of connecting to the Internet in Figure 5. In Nigeria, Uganda, India and Sri Lanka more than 80% of households which have an available Internet connection in this way do so through a mobile phone.

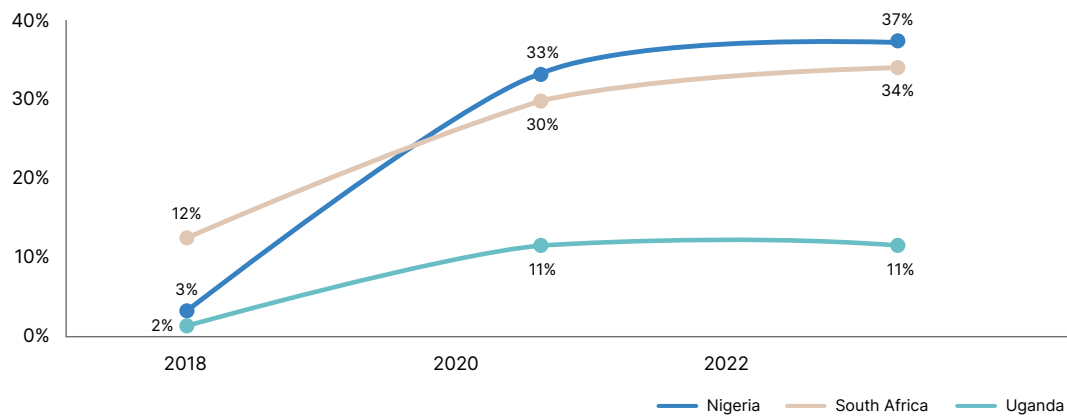
Between 2018 and 2022 in the Global South there was also a notable increase in individuals living in households with Internet access. The increase was observed both in

FIGURE 5: Household Internet connections in the Global South, 2021/2022



Source: (After Access: RIA, 2022; LirneAsia, 2021, 2022)

FIGURE 6: Households with home Internet access, 2018 vs 2020 and 2022



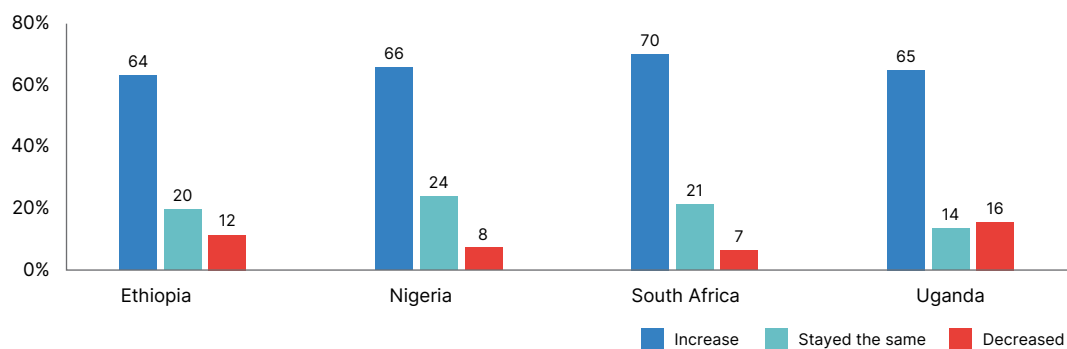
Source: RIA, After Access, 2018, 2022

cases where there was a low base, as in Nigeria, which increased from 3% to 37%, and in cases where the initial base was higher, such as Sri Lanka where there was an increase from 33% to 61% (RIA, 2018, 2022; LirneAsia, 2021).

However, in Africa, using retrospective questions contained in some of the 2022 After Access surveys allows for the midpoint of this increase to be identified which corresponds to the time just prior to the outbreak of COVID-19 in 2020. Splitting the trend in this way, as in Figure 6, shows that the increase since 2018 occurred almost entirely before the pandemic and that very few households were able to gain access since.

The inability of unconnected households in Africa to gain access to the Internet during the lockdown, and in the post-COVID period, suggests that the sharp increase in online activity was mainly attributed to an increase in use by those who were already online. This is further supported by Figure 7 which shows that across countries surveyed in Sub-Saharan Africa, between 64% and 70% of Internet users reported an increase in Internet use since before the COVID-19 pandemic.

FIGURE 7: Change in the frequency of Internet use since before the COVID-19 lockdown



Source: RIA, After Access 2022

The findings from Africa were in slight contrast to the experience of households in South Asia. During 2020 there were an additional 80.6 million individuals coming online in India (8% of the adult population) and an additional 1.6 million individuals in Sri Lanka (10% of the adult population). Of these individuals coming online 43% and 69% respectively claimed to have come online in response to the COVID-19 pandemic (LIRNEasia, 2021). In Sri Lanka 23% of households claimed to have obtained a smartphone in response to the needs presented by the pandemic. Some 2% purchased laptops, 2% purchased desktops and 1% purchased tablets. Some 60% of those who got connected in Sri Lanka for reasons related to COVID-19 were women.

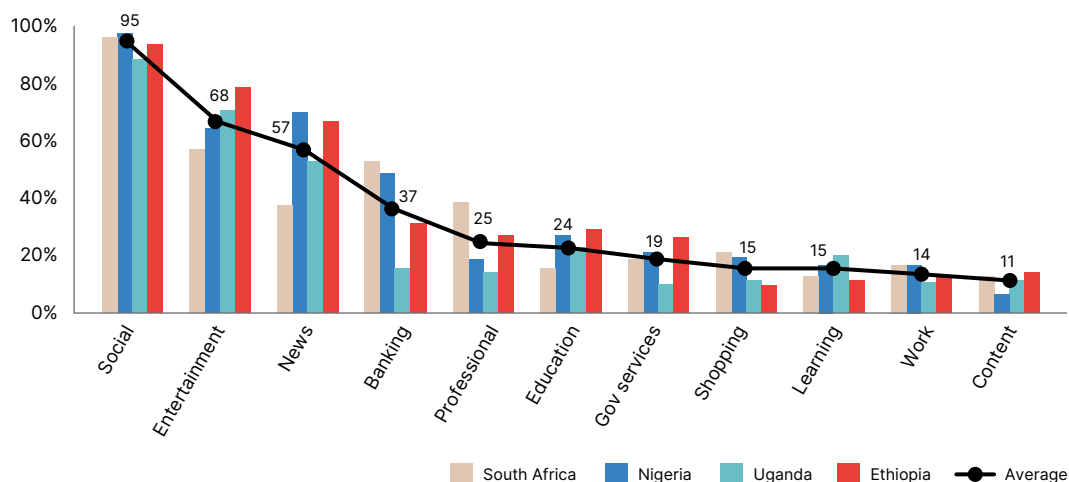
As Figure 8 shows, the most common use of the Internet in all countries surveyed in Africa was for social use, accounting for on average 94% of Internet users. The relative use then differs across different countries. In South Africa there is a strong use case in online banking and relatively low use of the Internet to follow the news, a use case which contrastingly comes out very high in Nigeria. In Uganda and Ethiopia entertainment use is very high but then aside from following the news, all other use cases have very low rates of incidence.

A comparatively greater proportion of those getting connected for COVID-19-related reasons in Sri Lanka versus India lends itself to explaining why (in part) online education and online work were more popular in the former.

Understanding the Internet as being overwhelmingly accessed by mobile cellular technology in the Global South is important for policy making as it implies different enablers to what is needed to grow fixed-line Internet infrastructure.

It highlights the importance of both mobile network coverage and affordable use as well as the importance of having an affordable market for mobile phone devices given that mobile Internet use is primarily concentrated amongst low-income individuals.

FIGURE 8: Percentage of Internet users conducting specific tasks digitally



Source: (After Access: RIA, 2022)

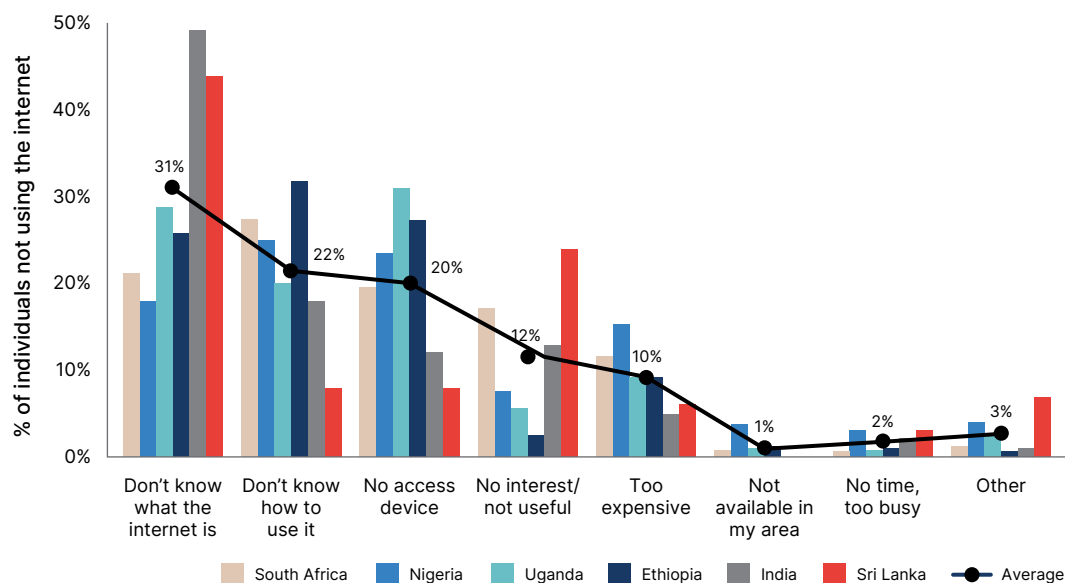
However it should be noted that there are still segments of the populations without mobile phones – more than a quarter in Uganda and Sri Lanka. Moreover in some countries a basic mobile phone is still the predominant type of devices owned, particularly countries like Uganda and Nigeria where smartphone adoption still accounts for less than a third of the population.

4.2. THE “UNCONNECTED”

Across the countries surveyed in Africa and East Asia, the main barrier identified by individuals as preventing them from accessing the Internet was overwhelmingly related to awareness and education. This combined with not knowing what the Internet is and not knowing how to use the Internet alone accounted for on average more than half of non-users (53%). In India and Ethiopia this share reached as high as 67% and 57% respectively. A further 12% on average did not see the value in using the Internet, although this was mainly driven by high prevalence in Sri Lanka (24%) and South Africa (17%). Only in Uganda was not having an access device seen as the biggest issue, accounting for 31% of non-users.

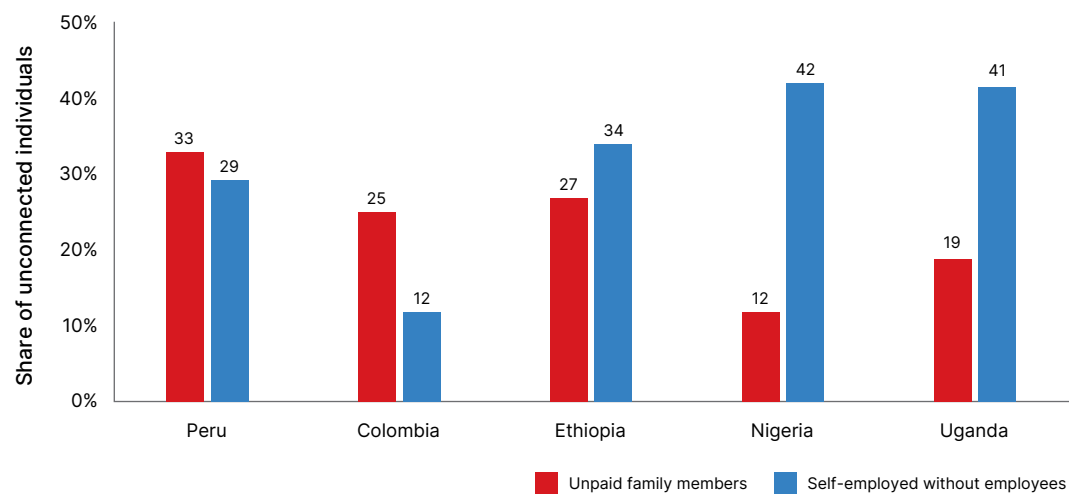
The level of access increases with socio-economic status in all countries surveyed and as such the unconnected tend to be concentrated in lower socioeconomic groups. In a survey of urban areas in Peru and Columbia there were 28-30% unconnected individuals in each of the bottom three socioeconomic groups, less than 15% across all of the top three groups and no unconnected individuals in the highest socioeconomic level.

FIGURE 9: Main barriers preventing individuals accessing the Internet



Source: After Access: RIA, 2022; LirneAsia, 2022

FIGURE 10: Main economic activity amongst the unconnected, 2022



Source: After Access (2022, 2023)

In terms of occupation, the distribution was less in terms of employed versus unemployed and instead in terms of the type of employment, aside from South Africa which has a disproportionately high unemployment rate and elderly population and as such a large share of the unconnected are unemployed job seekers (30%) and retired individuals (31%). In all the other countries surveyed the majority of the unconnected were unpaid household workers, with a large share of self-employed individuals without employees also observed in Nigeria, Uganda and Ethiopia. As Figure 10 shows, these two groups alone account for more than half of the unconnected in Peru, Ethiopia, Nigeria and Uganda.

Connectivity is also higher in urban areas, resulting in a higher share of the unconnected residing in rural areas relative to the geographic distribution of the population.

The rural gap tends to be higher where there are lower levels of urbanisation and lower levels of digitalisation. This means that whilst only approximately half of the unconnected reside in rural areas in countries like South Africa and Nigeria, this reaches as high as 70% in India, 71% in Ethiopia, 80% in Uganda and as high as 84% in Sri Lanka where the population has a particularly high level of rurality.

There is also a strong correlation between the level of education and being unconnected. Across all countries there are very low shares of the unconnected who have a tertiary education. The share of the unconnected with education levels lower than primary varies across the countries in line with the average levels of education, but in all cases has a much stronger concentration at lower levels of education compared with the population average. In both Uganda and Ethiopia 87% of the unconnected have not completed a secondary education (compared to 51% and 33% of Internet users).

In most countries the level of connectivity follows a quadratic trend, with a high share of the unconnected being youth and elderly people. However the concentration of unconnected youth is only attributable to the beginning of the age distribution and this effect is not observed in India and Sri Lanka. The proportion of unconnected aged above 55 years is far higher than the population for all countries and even reaches as high as 52% in South Africa despite the fact that many developing countries have large “youth bulges” with lots of young people and a low population share in the elderly age groups.

As gender is fairly evenly distributed in most countries, gender gaps in access highlighted mean that overall the unconnected are more female than male.

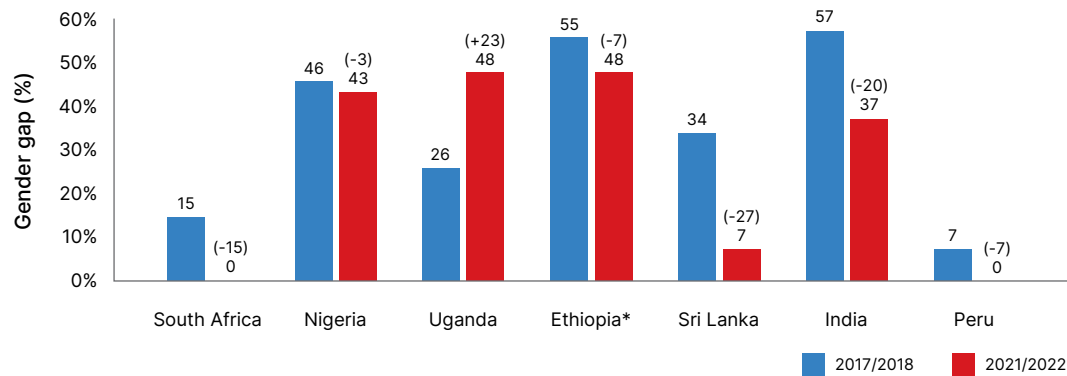
In Peru and South Africa there is a fairly even gender split amongst the unconnected and there is only a slight female bias in India and Sri Lanka. However in Columbia, Nigeria, Uganda and Ethiopia, the share of the unconnected who are female exceeds 60%.

The findings on the inability of the unconnected to get online to digitally substitute during the COVID-19 pandemic highlights the challenges in rebuilding society in an equitable manner. There would have been a widening of digital inequalities at a time when there was increased pressure to conduct activities online. Although there is variation across the countries analysed it clearly highlights the importance of addressing the demand-side constraints to access. Efforts solely focused on the supply-side constraints around device access and the cost of using the Internet will neglect the fact that the majority of non-users are not even aware of the Internet or possess the basic skills required to access and use it. Moreover the findings highlight a key concern going forward: that without policy interventions to bridge the digital gap, instead of providing a safety net for the marginalised, the digital economy can cause further marginalisation and the widening of socio-economic inequalities.

4.3. GENDER INEQUALITIES IN DIGITAL ACCESS AND USE

Econometric modelling of the 2012 After Access survey showed that gender inequality in terms of mobile phone ownership and Internet access in Africa was as a result of intersectional inequalities, specifically as a result of unequal incomes and levels of education between men and women (Chair et al., 2016; Deen-Swaray et al., 2012). A further study on the 2018 round of the survey corroborated this for a selection of African countries as well as in Latin America and Asia. Moreover, the study went further to show that even once factors which influence earnings are controlled for, women in the gig economy earn significantly less than men (Aguilar et al., 2020).

FIGURE 11: Gender gaps in the Global South, 2018 vs 2022



Data Source: RIA, 2018, 2022; LirneAsia 2017, 2018, 2022; IEP 2020, 2022

*Ethiopia data for 2018 interpolated between 2012 and 2022

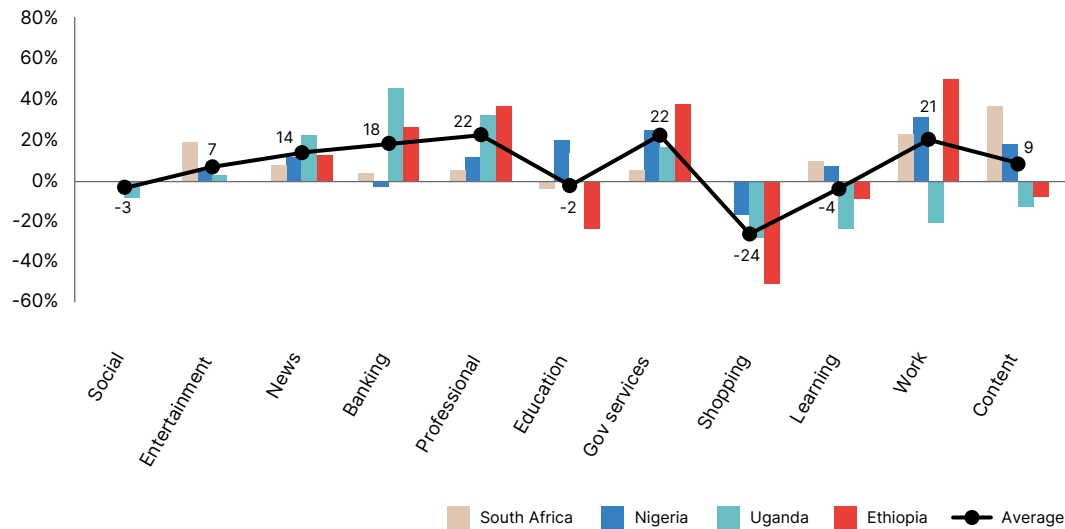
**Peru data for 2020 and 2022, urban areas only

The recent survey data shows that while generally gender gaps³ have declined since 2018 in all except Uganda, the degree of decline varies significantly. Notably Sri Lanka has nearly eliminated the gender gap. Conversely, Uganda showed a 23% increase in the gap. In Sri Lanka it was found that 60% of individuals who got online due to the COVID-19 pandemic were women, compared to 43% in India. Qualitative research in the two countries suggests that part of this is due to women needing to assist their children with online education and learn how to use mobile phones and navigate applications such as Zoom. However, it is unclear whether these women continued to use the Internet after their children transitioned back to physical classrooms. The rise of online education during the pandemic gave way to a number of households getting connected for the first time. Over half the households that got connected to the Internet were those with children in India (54%), a percentage that was significantly higher in Sri Lanka (84%).

The gender gaps in specific Internet uses also vary across different countries as can be seen by the variation in the gaps in the intensity of use presented for each country in Figure 12. The gaps measure differences in use of each online service amongst those who are using the Internet. Therefore these inequalities will be bigger if taken across the whole population (i.e. will be compounded by gender gaps in access). A negative gap highlights cases where women Internet users are more likely to use the service than men; however this is on average only the case for shopping and marginally so for social, education and learning. In contrast the services which have the greatest potential for economic empowerment, work, professional services, government services and banking, all have large gaps biased towards males.

3 Gender gaps are calculated as: $(\text{male internet access} - \text{female internet access}) / \text{male internet access}$. Where internet access is calculated as the number of adult internet users as a percentage of the total size of the adult population segment

FIGURE 12: Gender gaps in specific Internet uses



Data Source: (RIA, 2022)

It has already been illustrated that access is relatively low in some of the countries included in the analysis and hence where the incidence is also low amongst users (i.e. to the right of the x axis towards online work and creating content), then the sample sizes become very small. However, a t-test of the difference between men and women does still yield statistical significance confirming the existence of gender inequalities in Internet use. Table 2 provides a summary of the t-tests where, as expected, there are more significant cases in South Africa where access is highest. Again where there is significance it almost always relates to a male-bias, the only exceptions being social use in Uganda and shopping in Ethiopia, which are both only significant at 10%.

The only use cases with a statistically significant gender gap across all countries is in relation to accessing the news which is also biased towards men in all countries.

Online work has significant gender gaps in favour of men in South Africa and Nigeria, the latter also having a significant gender gap in terms of government services. In the other countries the lack of significance is due to low overall incidence rather than the lack of a gap.

TABLE 2: Statistical significance of gender gaps for specific use cases

	SOUTH AFRICA	NIGERIA	UGANDA	ETHIOPIA
Social			●	
Entertainment	●●●			
News		●●	●	●●
Banking				
Professional				
Education				
Gov services		●		
Shopping				●
Learning				
Work	●	●		
Content	●●			

Key: ● = significant at 10%; ●● = significant at 5%; ●●● = significant at 1%.
 Data Source: RIA, 2022

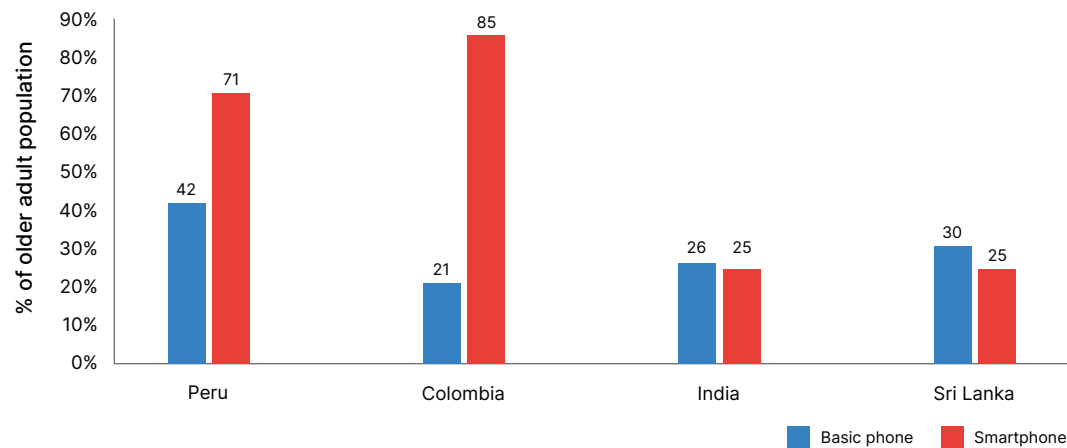
Having equal shares of population segments with digital access cannot be considered equitable if those online are not equally able to use online products and services. South Africa provides an interesting use case where at the aggregate-level gender parity in access has been achieved; however there are still clear gender gaps in use where men appear more able to use the Internet for productive means. Therefore it is important that policy makers and other role players take a holistic view of equity to address the usage gap in favour of men over women and ensure equal opportunities for all those online.

The different rate of change in the gender gaps, and even different direction of change between countries with seemingly similar contexts and levels of digitalisation and development, also highlights the importance of specific country contexts and the unreliability of trends based on extrapolations from other country data.

Although progress in closing the gender gap in parts of the developing world should be celebrated, it is important to also realise the heterogeneity of women as a group and that even where gender gaps have been eliminated at the national level they may still exist within certain segments of the population.

This heterogeneity is highlighted by the different access outcomes observed for different groups of females. Whilst the levels vary there is a universal variation in access based on geographic location, on the level of household income per capita and the highest educational achievement which highlights the intersectional nature of digital inequalities.

FIGURE 13: Mobile phone ownership amongst older adults in urban areas



Data Source: LirneAsia 2022; IEP 2022

Being able to provide further nuances to the gender discourse is not just important for providing accurate analyses but is becoming increasingly important in order to sensitise researchers and policy makers to the needs of specific groups of women. It is also important to be able to provide policies which provide a safer and more equal playing field to individuals who do not identify according to a binary construct of gender or are discriminated against based on sexual orientation or divergence from norms of masculinity in many parts of the world.⁴

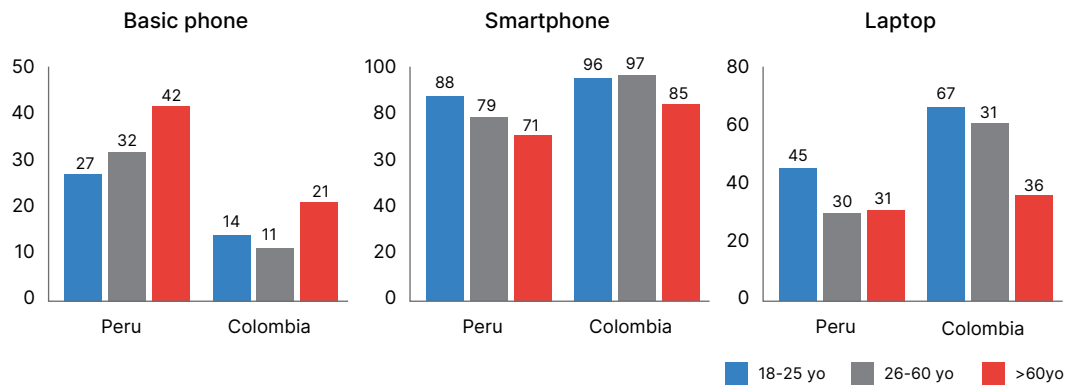
4.4. AGE INEQUALITIES: THE PLIGHT OF OLDER ADULTS

Older adult populations (those aged 60 years and above) have shown particular vulnerabilities in relation to digital inclusion which have been highlighted through the pandemic. This segment of the population has been growing steadily in recent decades (United Nations, 2022). Thus the situation of older adults represents an important problem which will require the implementation of viable policy solutions and government initiatives.

Among the problems that are commonly related to the digital exclusion of vulnerable groups within the population, device ownership constitutes a base-level barrier that still remains to be addressed. Mobile phone ownership amongst older adults differs across the regions as shown by the comparison between Latin America and South Asia in Figure 13. Ownership of basic mobile phones is relatively consistent across the four countries surveyed with the variation in mobile phone ownership largely driven by smartphone adoption which is high amongst older adults in Latin America but low in South Asia.

⁴ For the results of virtual surveys conducted through Facebook in Peru and Columbia during the pandemic that highlight the challenges faced by LGBTI+ individuals in interacting in the digital economy, please see main CORE research report at <https://researchictafrica.net/publication/digitalisation-for-a-just-social-compact-global-south-lessons-from-the-covid-19-pandemic/>.

FIGURE 14: Device ownership amongst older adults in urban areas by age group

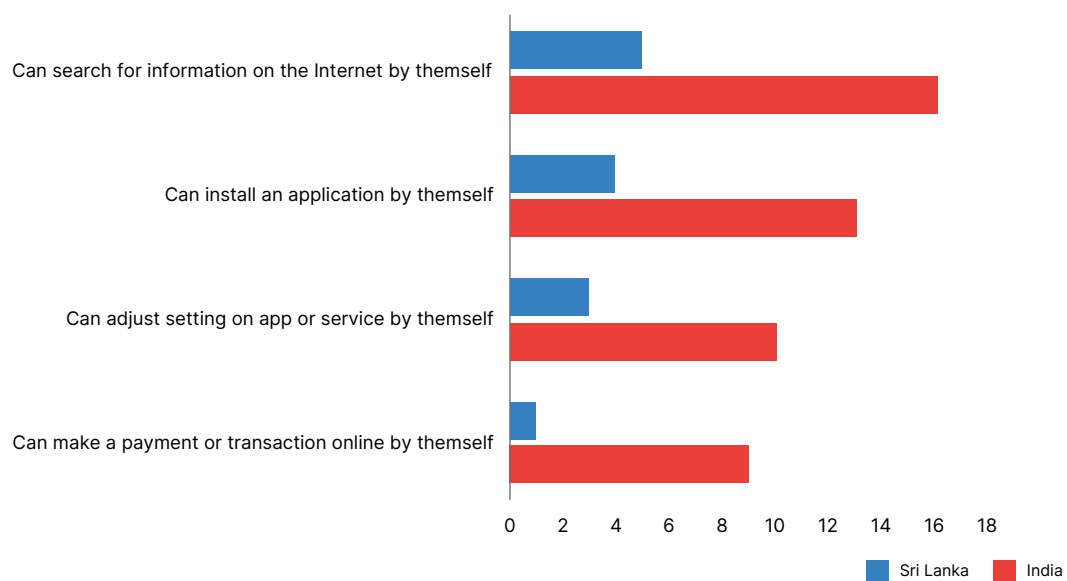


Data Source: IEP 2022

Although smartphone adoption is high amongst older adults in urban areas in Peru and Colombia, it is lower than it is for younger individuals. As Figure 14 shows older adults are more likely to have basic mobile phones which are not able to access the Internet and hence have very limited digital capabilities, and less likely to own smartphones. The ownership of laptop computers is generally lower for older adults compared to younger people.

Low levels of digital skills amongst older adults can at least partly explain the lower utilisation of digital tools by this population segment. Figure 15 shows that for the case of the Asian countries included in this study, digital skills are remarkably lacking; among other abilities, only 16% of older adults in India and 5% of this population in Sri Lanka can use the Internet to search for information by themselves, a type of use that could be considered a basic digital skill.

FIGURE 15: Digital Skills, urban areas



Data Source: LirneAsia 2022

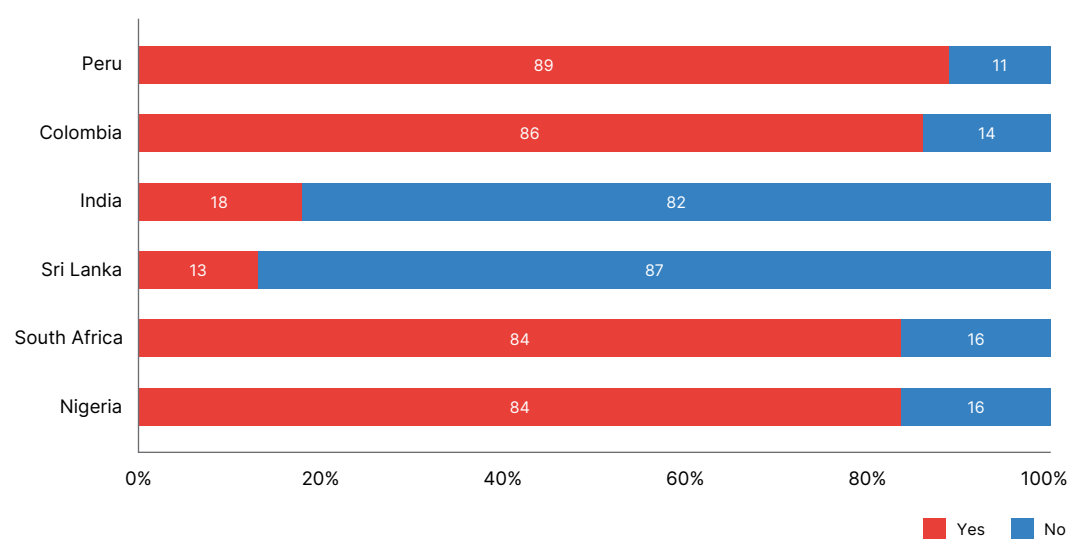
Older adults included in the qualitative research whose life trajectories developed with limited contact with ICTs were largely unaware of the possibilities and concrete benefits offered by their use. This lack of knowledge makes it difficult for them to articulate reasons or motivations for acquiring new ICT-related skills at a stage of life in which learning can be particularly costly. This poses a difficulty in their inclusion in an increasingly digitalised world, namely, the lack of motivation to be part of it. As a result it was identified that lower lifetime exposure to ICTs tended to be associated with lower levels of motivation to learn more about the use of ICTs during old age.

The lack of digital skills amongst older adults and the absence from labour markets and educational institutions where these skills could be learned also means that older adults often rely on their close social circles to enable them to interact with ICTs. Therefore the qualitative research revealed a tendency for the relationship between older adults and ICTs to be mediated by the closest social circle. This general finding is particularly true for those who did not have significant ICT experience prior to the pandemic.

When it came to internet use by older adults, the data showed for both the African and Latin South American countries considerably higher values than those in South Asia, with 84% of older adults in urban areas mentioning they use the Internet in some form in Nigeria and South Africa, 86% in Colombia and as high as 89% in Peru. In contrast to these countries, the Internet use situation in the included Asian countries is comparatively very low at only 18% and 13% in India and Sri Lanka respectively.

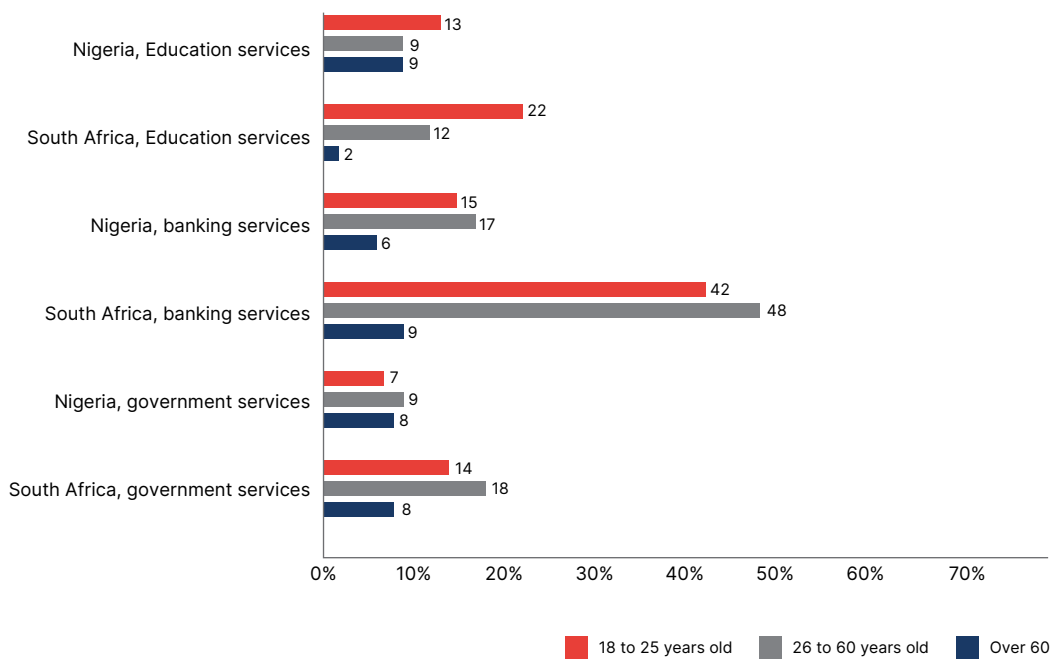
Although the mobile phone has been shown to be the main means of accessing the Internet across countries in the Global South, this is not always the case for older adults. Mobile connection is a slightly more popular means of accessing the Internet amongst older adults in urban areas in Peru (46% versus 25% for a fixed connection), however in Columbia there are far more individuals from this population segment accessing the Internet via a fixed connection (83% versus 43% for a mobile connection).

FIGURE 16: Internet use by older adults, urban areas



Data Source: RIA, 2022; LirneAsia 2022; IEP 2022

FIGURE 17: Online activities, age groups



Data Source: RIA, 2022

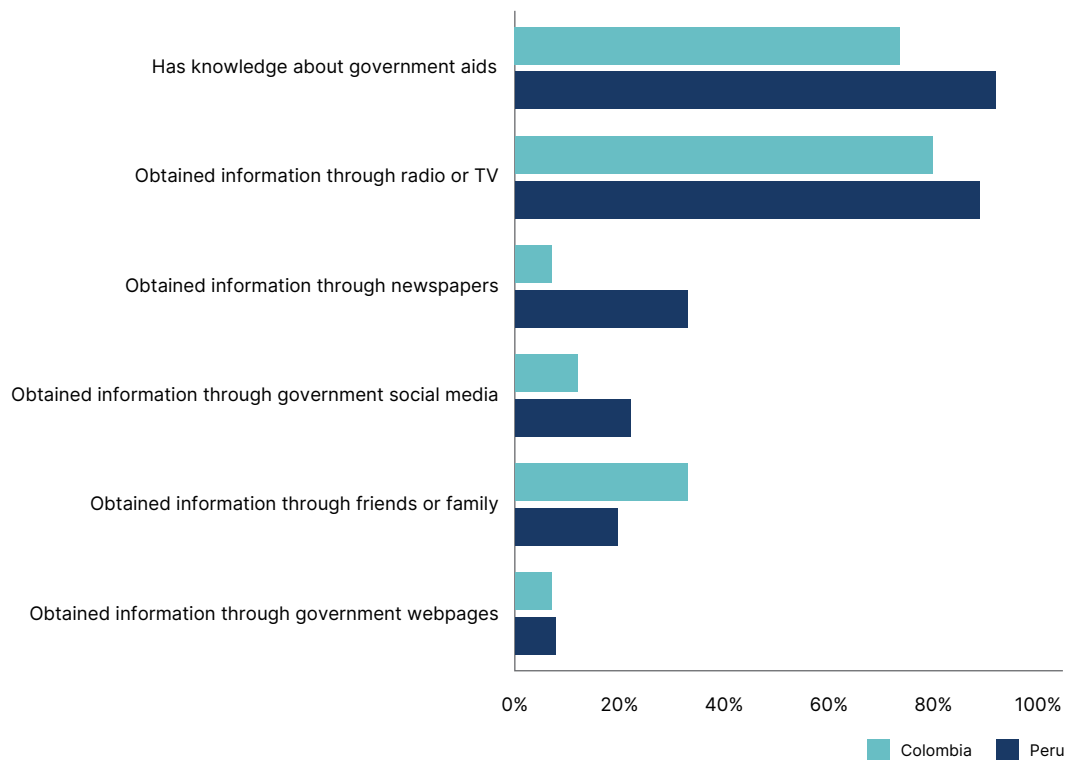
Qualitative research carried out in Peru and Columbia suggests that the personal trajectories of older adults are a key element to consider when thinking about their ability to appropriate and benefit from ICTs in a context of rapid digitalisation. The older adults who benefited the most from digitalisation were observed to be those who had previous experience of contact with and use of digital technologies (although a barrier also existed for those with poor prior experience such as use of slow connection in Peru and Colombia). While all participants in the research had at least one mobile phone at their disposal, the different levels of pre-pandemic exposure to ICTs had an impact on ICT appropriation during this period.

Older adults generally have a low reliance on digital channels to obtain information and to interact with public and private services.

The data from South Africa and Nigeria in Figure 17 shows that less than 10% of older adults access government services, banking and education online, and that in almost all cases this is less than what is observed for younger age groups with particularly large gaps noted in banking services.

In Peru and Columbia older adults exhibited a high level of knowledge of aid provided by government during the COVID-19 pandemic. However, as Figure 18 shows, radio and television were the primary information source on these initiatives in both countries, with 84% of respondents in Peru and 76% in Colombia mentioned this medium being their primary information source. Digital channels such as social media and government websites were relatively underutilised.

FIGURE 18: Knowledge of government aid obtained via different media in urban areas of Peru and Colombia



Data Source: IEP 2022

The findings from the survey data points to a situation where older adults, even when online, make limited use of ICTs. Qualitative research also highlighted the exclusion of this population segment from digitalised services that could favour older adults economically and occupationally. Where they were able to make use of these services they reported greater autonomy in accessing economic benefits and an increased ability to overcome transaction and mobility costs which otherwise limit the economic interactions undertaken by this population segment.

A major barrier for take-up was a lack of trust. This came out particularly strongly in the qualitative research in relation to the provision of digital health services in Peru, and to a slightly lesser extent in Colombia. The low levels of digital skills amongst older adults also makes them more vulnerable to the risks encountered when interacting online, and more fearful of becoming a victim. In Colombia for example there is a high prevalence of violent abuse experienced online, and in Peru online scams are commonplace. When a lack of trust is disproportionately felt by a particular population group it suggests a lack of understanding on behalf of that group and a lack of skills to interact safely online which, together with other factors inhibiting greater take-up by older adults, needs to be taken into account in policy proposals.

5

INFORMALITY

According to Dix-Carneiro and Kovak (2019) the informal sector is broadly characterised by entities involved in creating goods or services primarily to generate employment and income for those involved. These entities – of which microenterprises form a significant part – usually function with minimal organisation, often lacking a clear distinction between labour and capital as production elements, and operate on a small scale.

When labour relationships are present, they typically rely on casual employment, familial or personal connections, and social relationships, as opposed to formal contractual agreements with established assurances. The research recognised that the informal sector is not homogenous, and thus manifests in different ways across different countries and local contexts. With this in mind, evidence of informality is shown through non-registration of microenterprises as businesses, taxation or with any local licensing authority. Generally informal sector businesses are not banked and business and household expenses and income are often not separate.

In this context, the evidence on the role of the informal sector during crises such as COVID-19 is mixed. While Dix-Carneiro et al (2021) suggests that the informal sector traditionally serves as a buffer to exogenous shock, the pandemic and associated lockdowns in the countries reviewed prevented it from serving this function as informal supply chains were disrupted and people were prevented from trading. A look at International Labour Organization (ILO) data confirms that in the early stages of the pandemic, in 2020, a disproportionate impact on the informal sector in the early stages of the pandemic. However, by 2021, the resilience of this sector was already evident. Informal job growth fully recovered from the losses experienced in 2020, whereas formal employment did not. Driven by low-and lower-middle income countries, informal jobs are estimated to be growing at the same pace as formal employment, jeopardising the slow but consistent trend towards formalisation observed over the past 15 years (ILO, 2022).

Although there is evidence of informality being negatively correlated with development, it has also been argued that informality serves as a buffer to loss of employment from trade-enhancing policies (Dix-Carneiro and Kovak ,2019, and Ponczek and Ulyseas, 2022) or as a redistributive tool to reduce political pressure to increase taxation or implement effective social inclusion policies (Holland, 2017). While this may be true for certain categories of self-employment that were already online or able to move online, the informal sector was unable to fulfil its historical role as buffer to exogenous shocks with informal firms largely unable to digitally substitute during the pandemic. Evidence of this was found in Ethiopia, Uganda, Nigeria and South Africa (RIA, 2022).

The low levels of Internet uptake within informal enterprises means that beyond limited mobile phone contact, workers or micro-enterprises have been unable to tap into the digital lifelines provided by some states.

The informal sector accounts for over 70% of total employment globally. However, these figures are higher in the Global South particularly with Sub-Saharan Africa accounting for 85% employment and South-East Asia accounting for 80%. Latin America accounts for 50%. Most of these individuals are invisible to the state and do not pay taxes, as well as lack basic social protections that leaves them vulnerable.

Table 3 shows the distribution of microenterprises in South Africa and Nigeria according to whether the business is registered for tax, for VAT or to a local authority. The data further indicate that formal businesses in South Africa (50%) and Nigeria (17%) are registered for tax. In addition, 71% in South Africa and 94% are registered with local authorities.

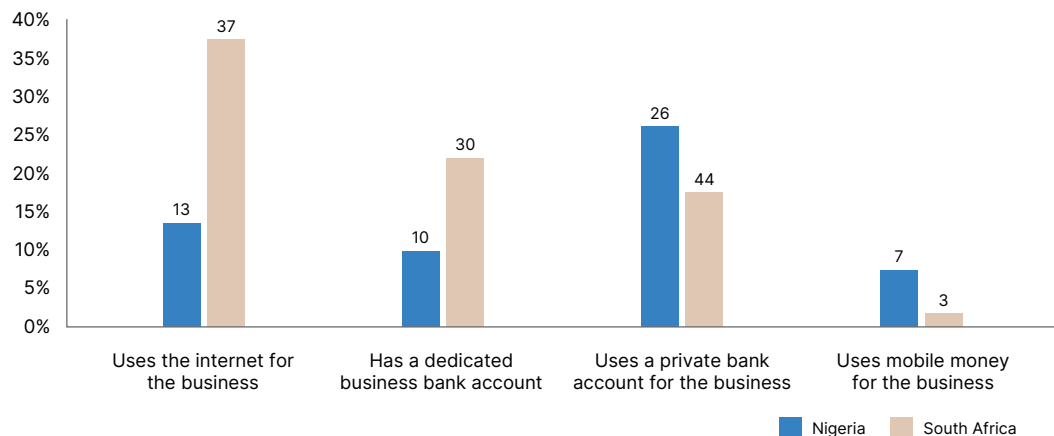
TABLE 3: Total sample of firms surveyed in Nigeria and South Africa, 2022

COUNTRY	FORMALITY (BASED ON REGISTRATION FOR EITHER TAX, VAT OR LOCAL AUTHORITY)	TOTAL NUMBER OF MICROENTERPRISES SURVEYED
AFRICA	Total	565
	Formal	437
	Informal	128
NIGERIA	Total	718
	Formal	592
	Informal	126

Data Source: (RIA, 2022)

Evidence from Sri Lanka in 2018 also shows that 75% of the small and medium enterprises were registered with at least one authority (Galpaya et al., 2018). A total of 61% were registered with the Divisional Secretary, 30% with the Company Registrar and 40% registered/licensed under other authorities. However none of the informal businesses surveyed in both South Africa and Nigeria were registered either for tax or VAT or with the local authorities. Following the assumption that businesses that are not registered are invisible to the state and therefore informal, the evidence showed that most of the microenterprises in both of the countries are informal businesses.

FIGURE 19: Distribution of inclusion by country, 2022



Data Source: RIA, 2022

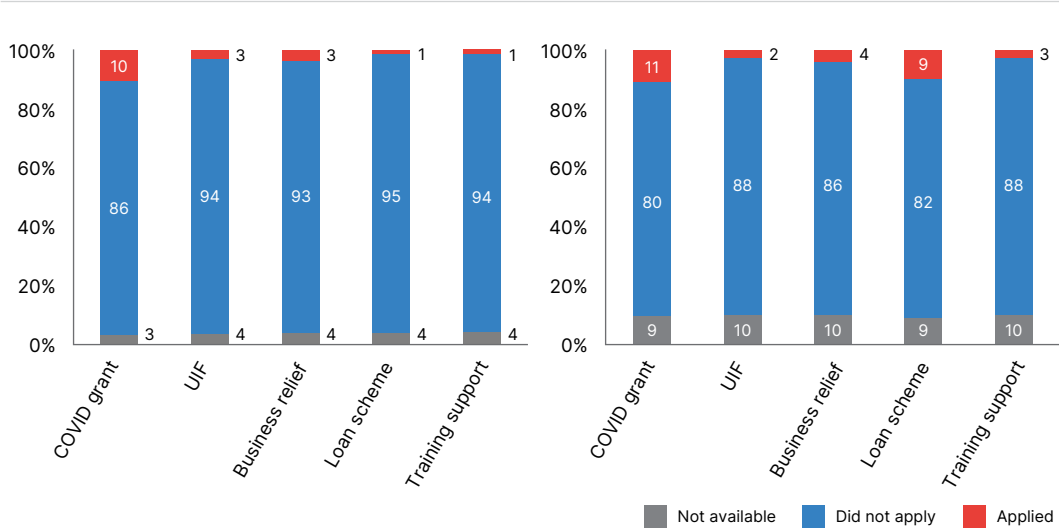
The After Access survey also collected data on how the microenterprises surveyed accessed financial products and services, in particular those who used the Internet for business transactions, those who had business bank accounts, those who used their private bank accounts for business and those who used mobile money for business transactions. Access to finance is a critical requirement for most enterprises, and this is also an area that provides visibility to their operations.

Figure 19 shows contrasting access to finance dynamics among the different countries. Most microenterprises in Nigeria (25.9%) use a private bank account for business, and in South Africa most microenterprises use the Internet for transactions. The difference could be because of the differing national payment systems, where the payment system in Nigeria is bank-led, and the digital payments systems in South Africa are increasingly adopted.

Access to finance by SMEs is higher in Latin America with 45% of small enterprises having access to formal financial institutions (World Bank, 2018). In South East Asia, 40% of small businesses have access to finance through formal financial institutions (ADB, 2021). Further evidence from the 2018/2019 After Access survey in Sri Lanka shows that 38% of small businesses use bank accounts for transactions and only 4% of small and medium enterprises use mobile money (LIRNEasia, 2020).

While governments in the Global South took steps to reduce the social and economic impact of the COVID-19 pandemic through different COVID-19 state support interventions, Figure 20 shows that most microenterprises in Nigeria and South Africa did not apply for support during the pandemic. This could be because most of the support services required that businesses prove that they were still operating and show evidence that they were negatively impacted by the pandemic, and such requirements may have been hard to meet. Informal businesses who are not registered for tax were likely not interested in becoming visible to the authorities, with fears of being discovered for tax compliance.

FIGURE 20: Distribution of COVID-19 government support applications



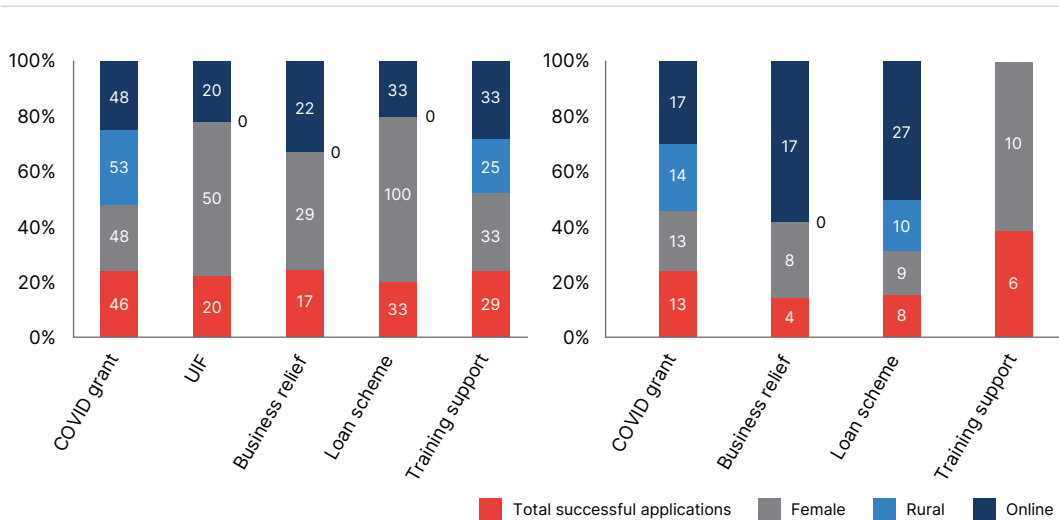
Data Source: RIA, 2022

In terms of applying for business relief, most microenterprises in Nigeria (86%) did not apply for business relief support, 10% said business relief support was not available to them and only 4% applied for the support. In South Africa a similar trend was evident, with 93% of microenterprises not applying for business relief support. A total of 10% said it was not available to them and only 4% applied. This shows the detrimental impact of not being visible to the state, as such that in times of external shocks, most informal businesses either do not qualify for the support or do not apply.

Looking at other countries in the Global South, we saw for instance that the state in Sri Lanka provided access to social safety nets for daily wage earners in the form of a Rs. 5000 emergency cash transfer. These transfers were not necessarily related to existing businesses, though they could have been used by business owners.

Of those that managed to apply for support, Figure 21 illustrates the dynamics of the successful applications. In South Africa, the COVID grant had the most successful

FIGURE 21: Distribution of successful applications



Data Source: RIA, 2022

applications at 46%. A total of 48% of the successful applicants were female-led micro-enterprises, 53% were rural-based microenterprises and 48% were from successful online applications. In Nigeria, this COVID grant, though the most successful, had only 13% successful applications. A total of 13% of the successful applicants were female-led micro-enterprises, 14% were rural-based microenterprises, and 17% of the successful applications were applied online.

The lesson for future pandemics is that it is important to equip the most vulnerable firms in developing countries, with resources for digital substitution and financial inclusion.

This is because informal firms are often not visible to the state, and pandemic support often falls outside their reach. Efforts to reduce informality, whether intentional or not, can have positive impacts on long-term development and poverty reduction. However, it is important to recognise that vulnerable populations may face short-term costs as the informal safety net they rely on disappears.

Therefore, it is crucial to strengthen official social safety nets to support these groups during this transition. This is especially relevant in the current COVID-19-induced recession. Additionally, policies aimed at reducing informal activity must consider the potential disruption to formal activity, particularly if there are synergies between the two sectors, such as subcontracting. To minimise negative effects, measures to reduce informality should be coupled with increased flexibility in the formal labour and product markets, making it easier for informal participants to transition into the formal sector.

6

OLD AND NEW FORMS OF LABOUR

The ILO reported that in G20 countries millions of workers lost their jobs despite governments' efforts to support firms and protect jobs through job retention schemes (ILO, 2020).

In the early stages of the pandemic in Q2 2020, employment to population ratios also fell by a greater proportion in high-income countries than middle-income countries (1.4 percentage points versus 5.8 percentage points) (ILO, 2021). One hypothesis is that the greater ability to work remotely in higher income countries, driven by greater levels of digitalisation, allowed more employees to retain their jobs.

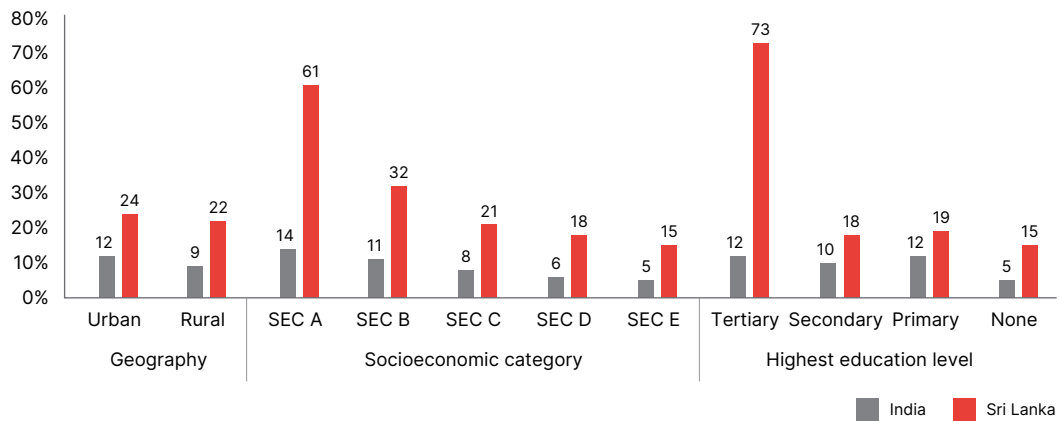
6.1. REMOTE WORK

While remote work became more commonplace during COVID-19, it was a possibility for only a few in the Global South. The nationally representative surveys in India, South Africa and Sri Lanka showed that only a few employed persons aged 15 years and older reported being able to work from home during the lockdown (10%, 16% and 22% respectively) (Figure 21). In both India and Sri Lanka, those working in the ICT industries and financial and insurance services were more likely to have worked from home than their peers working in other industries. Similar patterns were also seen in South Africa.¹ Of the 16% who were able to transition to online platforms, 42% had regular jobs, while 30% were self-employed and ran their own businesses and 27% held casual jobs. Some who engaged in informal work activities remotely considered themselves to be unemployed because they had neither frequent customers nor contractual obligations. Some indicated that they would go for as long as two months without anyone demanding their services.

Socio-economic factors played a role in determining whether people were able to work from home or not. In Sri Lanka, 73% of those who had a tertiary education were able to work from home, as opposed to 18% of those who only had secondary education. Those in socio-economic category A (SEC A; a proxy for the wealthiest in society), were twice as likely to work from home as those belonging to SEC B, the next most well-off (Figure 22). In Peru, more than 77% of respondents belonging to SEC A said they had increased their use of digital technologies in contrast to 25% of those at SEC E. Some of these may have a confounding effect on other elements of employment discussed above, including informality and the type of industry worked in. In India, similar trends were seen, but the contrast between the 'haves' and 'have-nots' was less stark. This may, at least in part, be impacted by the way the specific question was asked; in Sri Lanka, we asked respondents if they were able to work during the lockdown, while in India, we asked if they were able to work during the most severe lockdown. It is possible that the prevalence of working from home would have increased in India, particularly in the higher socio-economic brackets.

In South Africa, a critical examination of the distribution of the jobs reveals a positive correlation between residence/housing location and the ability to work remotely online.

FIGURE 22: Socio-economic and geographic drivers of remote work
(% of employed population aged 15+)

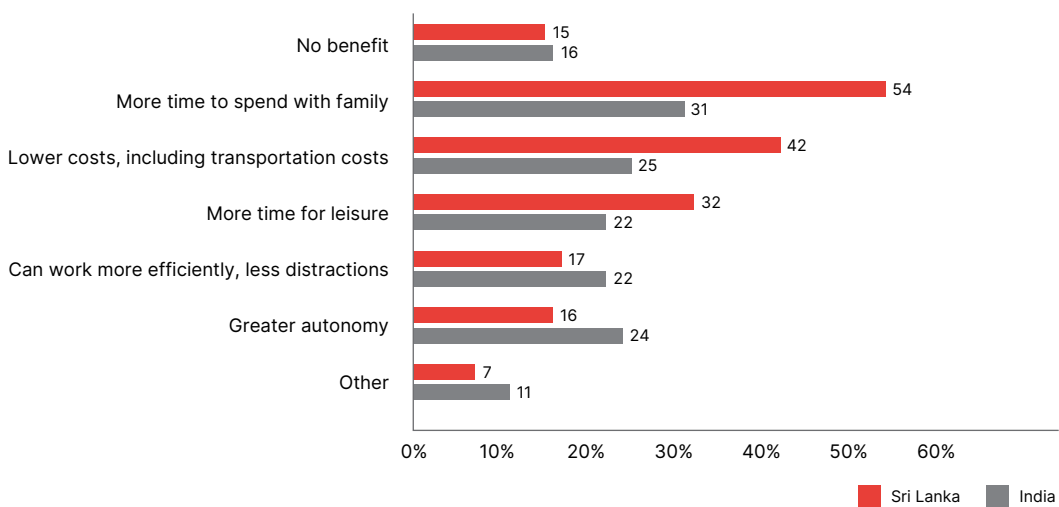


Data Source: LirneAsia 2022

The suburbs have the highest proportion of regular employees compared to informal settlements (57% in the suburbs versus 27% in the informal settlements). Informal settlements have the highest proportions of informal, self-employed, and casual workers (45% in the informal settlement versus 15% in the suburbs). This supports the pro-rich thesis by Nwosu et al. (2021) who contends that the ability to work online from home is concentrated in the wealthier segments of South Africa.

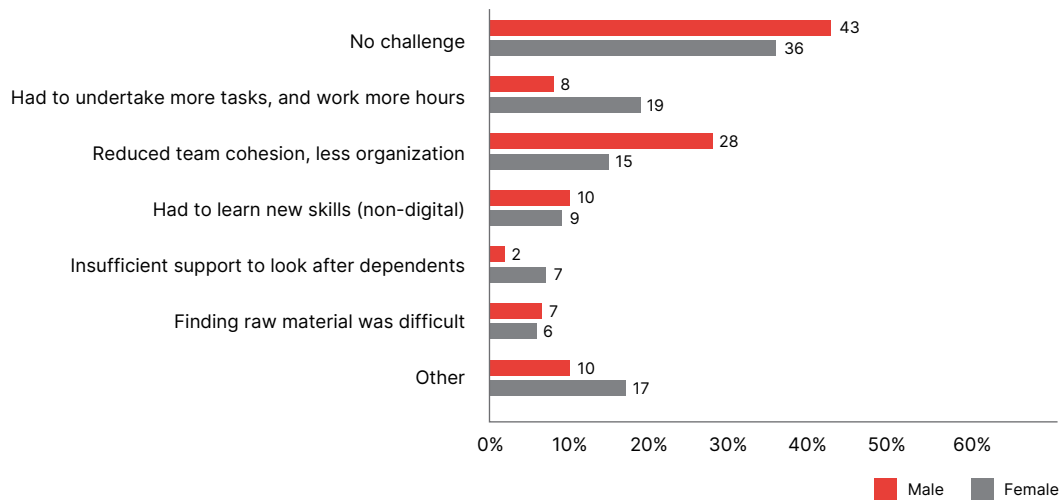
Remote workers' experiences during the pandemic were mixed, echoing pre-pandemic findings on the socio-economic impacts of remote work (Athanasidou & Theriou, 2021; Müller & Niessen, 2019; Morganson et al., 2010; Chung & van der Horst, 2018; Lautsch et al., 2009). While many faced challenges, only 16% of remote workers in India, and 15% in Sri Lanka saw no benefits in working from home. Many spoke of the positives of getting to spend more time with family, and lower costs incurred (Figure 23).

FIGURE 23: Benefits of working from home
(% of those who worked from home during the lockdown)



Data Source: LirneAsia 2022

FIGURE 24: Challenges faced when working from home in Sri Lanka – men vs women
(% of male and female remote workers during the lockdown)



Data Source: *LirneAsia 2022*

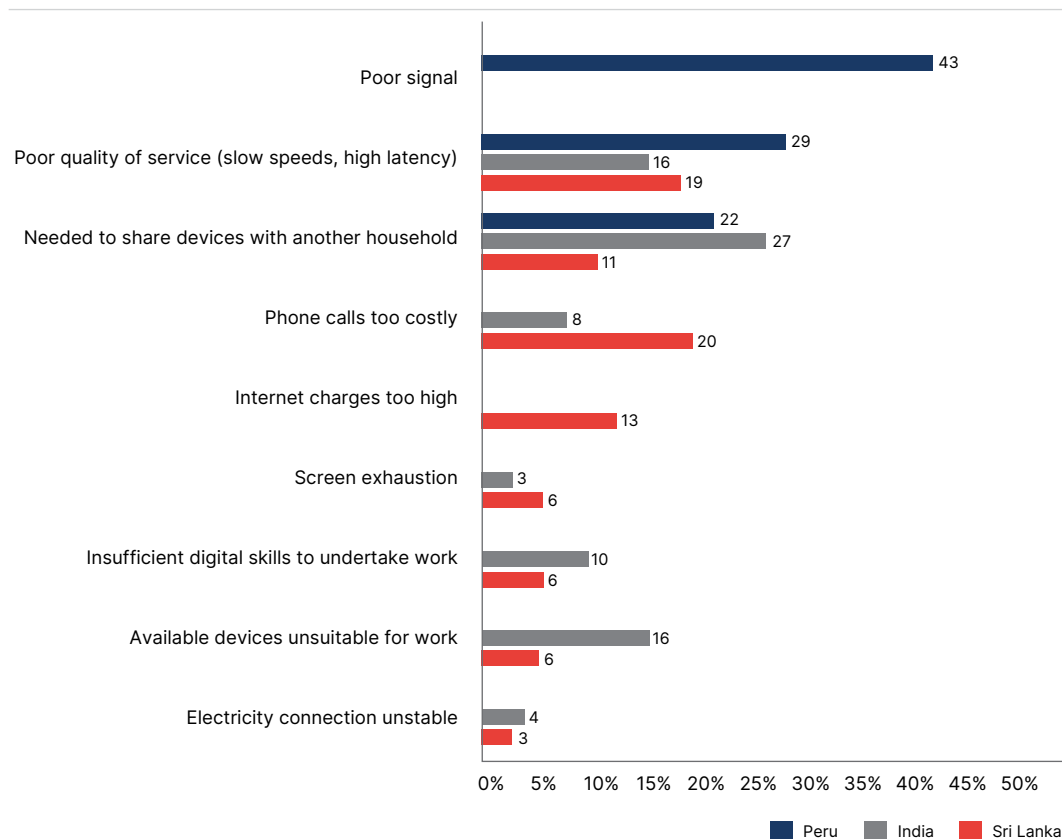
Women’s experiences of remote work differed from that of men. For many women with care responsibilities, flexible work allowed them to slot work in between care work and optimise their time. For women with young children the ability to be physically present was reported to be important. However, as Lautsch et al (2009) point out, the way in and the extent to which remote work is implemented, rather than remote work *per se*, could lead to certain positive or negative results. This also speaks to the disproportionate care burden that falls on women and was also highlighted during the pandemic. During the pandemic, more women who engaged in remote work struggled with maintaining work-life balance, working more hours, and engaging in care work (Zainudeen, 2022).

In Sri Lanka, 43% of men who engaged in remote work during the pandemic stated that they faced no challenges, but this was only true for 36% of women. The types of challenges men faced also differed. Men mentioned more work-related tasks, including reduced team cohesion and the need to learn new skills to undertake new tasks (Figure 24).

“I found it challenging to work from home. I had never worked from home before. It was impossible to even imagine it [before]. We deal with people’s money. I had to keep a track on phone calls all the time and I also had to keep answering calls, attending meetings on Zoom. It was very difficult since I had to manage the household chores as well. The workload was less when working at the office but while working from home my workload was doubled as there was a procedure to follow and our branch is a high performing branch. I felt pressured to maintain that reputation.” – Bank manager, female, Sri Lanka

For those who engaged in digitally enabled remote work, challenges in digital access and use translated to their work. A total of 64% of those who worked from home in Peru faced challenges while working from home. A lack of mobile coverage or poor quality of it was the key concern, with 43% of respondents stating this was a challenge to working from home.

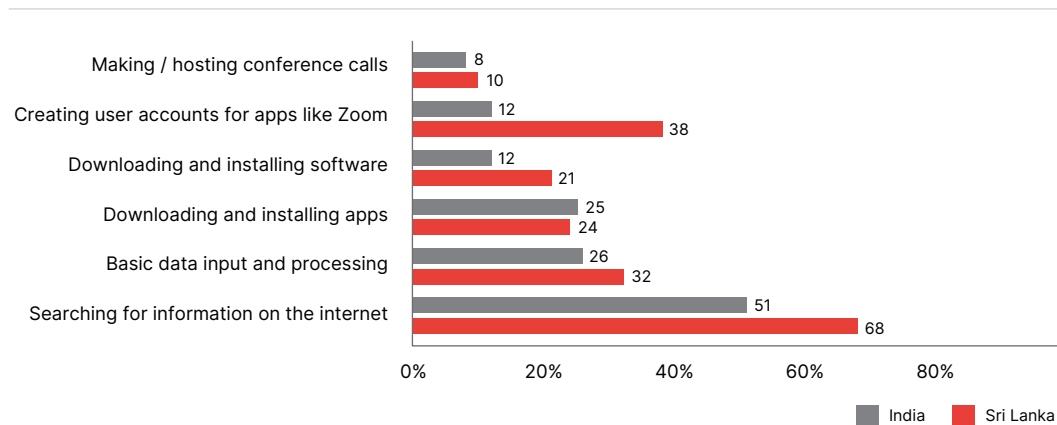
FIGURE 25: Key digital-related challenges faced in Sri Lanka, India and Peru
(% of remote workers during lockdown)



Data Source: LirneAsia 2022; IEP 2022

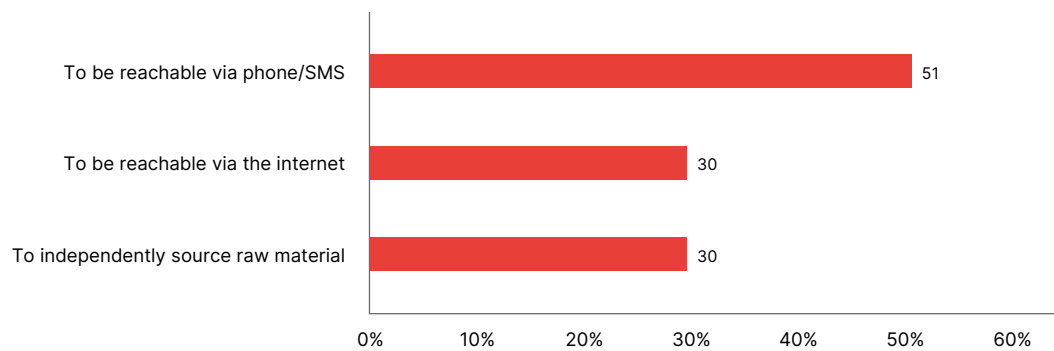
Meanwhile, 29% stated that the quality of service offered by the Internet provider was poor. These issues around network quality were also among the key concerns in both India and Sri Lanka. The need to share devices, as those available at home were insufficient to meet the needs of all household members, was also a common thread experienced across the countries, with 27%, 22% and 11% stating this as a challenge in India, Peru, and Sri Lanka respectively (Figure 25). In Sri Lanka, a father spoke about how he had to make a trade-off between joining a work call and having his child join an online class due to the lack of devices.

FIGURE 26: New digital skills learned due to the COVID-19 crisis
(% of those who learned new digital skills due to the COVID-19 crisis)



Data Source: LirneAsia, 2022

FIGURE 27: Work requirements for those who worked from home – India



Data Source: *LirneAsia 2022*

Some 18% of the economically active population in Sri Lanka, and 15% in India, learnt new digital skills due to the crisis. Digital skill-building was greatest among younger, more educated groups – possibly due to having to use it for online education and work. About a quarter in both India and Sri Lanka had to learn to download and install applications (Figure 26). This highlights the key role the pandemic played in the upskilling of the workforce. It is unclear if this helped expand job opportunities for workers.

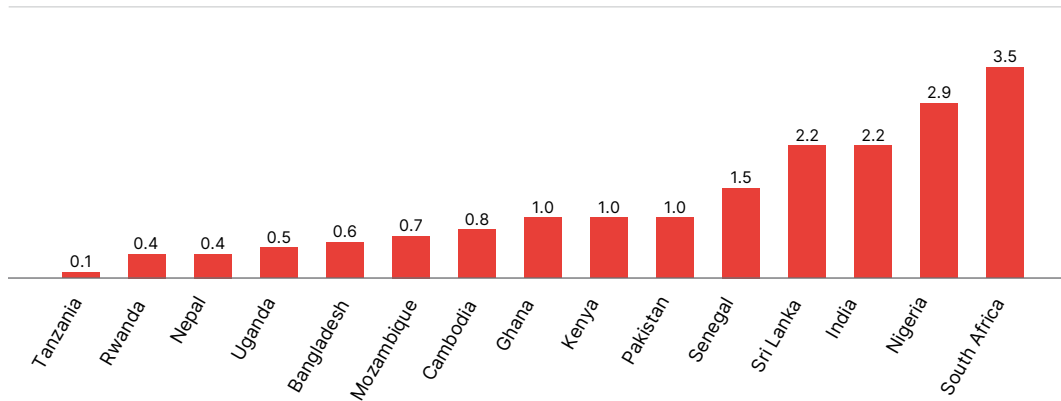
While digital access enabled working from home for some types of jobs, it was not necessary in all cases. Only 30% and 51% of those who worked from home in India needed to be reachable via the Internet and mobile phones respectively. Meanwhile, the ability to independently source raw materials was as important as being reachable via the Internet (Figure 27). In Sri Lanka, for example, some respondents spoke of how they continued to run small-scale, informal enterprises from home during the lockdowns, including making mats, bedsheets, and food.

Some may debate the importance of ensuring that policies (at a national or workplace-level) are equipped to enable remote work in a post-COVID-19 environment. In Sri Lanka, at the time of survey implementation (in late 2021), roughly a third of those who had worked from home during lockdowns had returned to physical workplaces. A third were unemployed. The rest (another third) worked remotely, either on a full-time or hybrid basis. However, the latter should be a priority for two reasons. First, as it can be an entry point for those outside the labour force to engage in work, particularly women. Second, it will make workplaces more resilient to shocks such as COVID-19.

6.2. PLATFORM WORK

The growth of the gig economy, enabled by digital platforms, has played a pivotal role in labour markets in recent years. In 2017/2018, 0.1% to 3.5% of those aged 16-65 were platform workers in the countries surveyed. Various types of platforms were available and used across the countries. In most of the countries studied in Asia, most platform-based workers were working on transportation-based platforms (such as ride-sharing applications) (Galpaya et al, 2023).

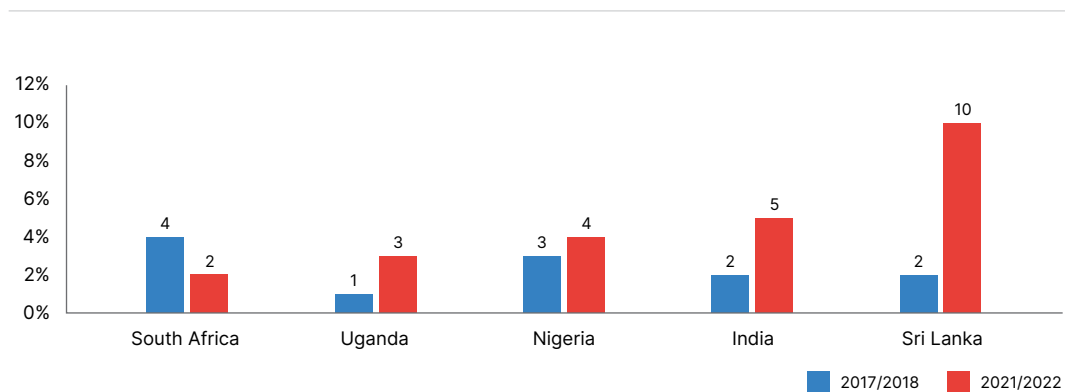
FIGURE 28: Platform workers (% of population aged 16-65) in Asia and Africa – 2017/2018



Our surveys showed an increase in platform work across countries, with the exception of South Africa. A plausible reason for this could be that platform workers in South Africa continue to earn low wages and are subjected to a lack of benefits and security platform (Fairwork South Africa, 2022). This compounded by the lingering economic effects of the COVID-19 pandemic, the contraction of the economy and the cost of living crisis do not make platforms an attractive alternative for work. The number of platform workers have more than doubled in 3-4 years in Sri Lanka, Uganda, and India (Figure 29). In both Sri Lanka and India, this was driven largely by growth in platform work using transportation and goods delivery applications.

Around the world, one of the key concerns around the popularity of platform work has been the implications for the labour protections for workers. At the most basic level, the debate is around whether they can be considered employees, or self-employed, which determine the extent of social protection offered to workers. Different jurisdictions have taken different stances on this. The UK for example, has held that Uber drivers are ‘workers’ for the purpose of statutory employment rights. However, in Italy, the Labour Tribunal of Turin in April 2018 rejected the claim by six Foodora couriers that they should be reclassified as employees (Eurofound, 2018). Those without formal workplace contracts (i.e. work in the informal economy) in the Global South have even less labour protection than their counterparts in the Global North, increasing the urgency for worker rights to be considered in the Global South.

FIGURE 29: Growth in platform workers – pre and post COVID-19



Data Source: RIA, 2018, 2022; LirneAsia 2017, 2018, 2022

7

SOCIAL PROTECTION

Rising health expenditures and income losses brought about by lockdowns during the pandemic meant the need for inclusive, adaptive social protection systems. This required governments to be adaptive. In some cases, governments chose to expand coverage from existing (regular) programmes, while in others, they created new, short-term, COVID-19 response focused programmes focused on responding to the pandemic.

Aiyede (2017) highlights that the nature of social protection policies determines the nature of the state. Countries use a range of instruments including social assistance (social safety nets), social care, social insurance, and labour and economic inclusion to achieve the three goals of social protection — equity, resilience, and opportunity. It is noteworthy that in many developing countries, informal social protection arrangements structured by social relations exist. This includes care and support provided by family and community members (Calder & Tanhchareun, 2014). However, here we focus on formal social protection systems.

7.1. HIGH-LEVEL CHALLENGES

Social protection programmes that existed prior to the pandemic have had mixed success. Programmes in South Africa, Brazil and Argentina have been relatively successful in reducing the poverty headcount (proportion of the population living below the poverty line) and poverty gap (average shortfall from the poverty line, measuring the intensity of poverty). However, different types of programmes have worked in different contexts. Social assistance programmes have been more successful in South Africa, while social insurance programmes have worked better in Argentina. At the other end of the spectrum, programmes in Uganda and Nigeria have yielded few benefits (Table 4).

TABLE 4: Impacts on poverty and inequality of Social Assistance and Social Insurance programmes (% reduction of poverty headcount and poverty gap)

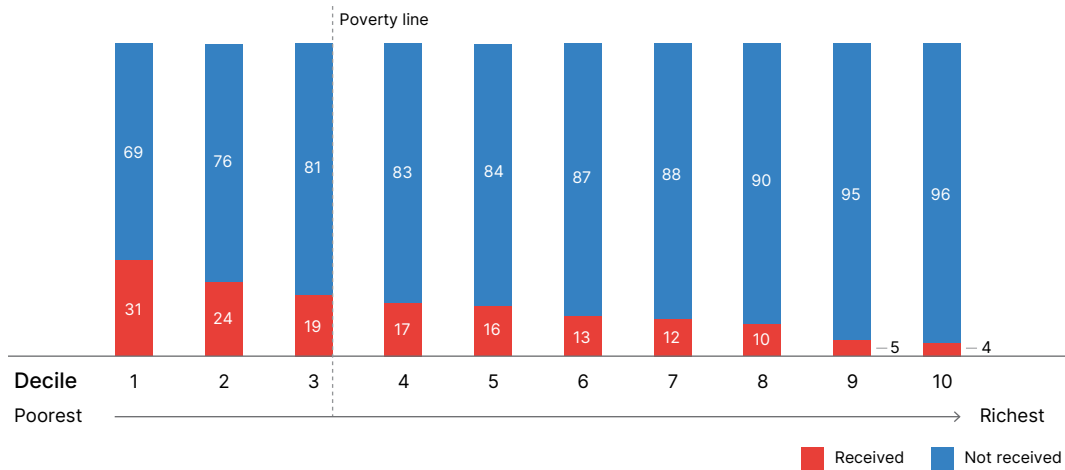
COUNTRY (YEAR)	SOCIAL ASSISTANCE		SOCIAL INSURANCE	
	POVERTY HEADCOUNT (% REDUCTION)	POVERTY GAP (% REDUCTION)	POVERTY HEADCOUNT (% REDUCTION)	POVERTY GAP (% REDUCTION)
ARGENTINA (2019)	7.40	19.01	30.95	42.52
BANGLADESH (2016)	5.23	11.68	0.79	2.04
BRAZIL (2019)	10.60	22.16	31.21	38.98
COLOMBIA (2019)	4.98	9.94	7.68	10.33
ETHIOPIA (2018)	4.81	8.83	0.14	0.23
NIGERIA (2018)	0.99	2.21	2.44	5.63
PAKISTAN (2018)	3.22	6.05	9.80	21.24
PERU (2019)	4.76	12.21	4.31	4.28
SOUTH AFRICA (2014)	45.68	73.31	3.89	9.23
SRI LANKA (2016)	7.94	17.33	10.57	23.15
UGANDA (2016)	0.16	0.23	0.36	0.62

Source: (World Bank, n.d.)

While there is broad consensus on the need for universal social protection, coverage is low in many countries. Many countries are fiscally constrained. Therefore, implementing targeted programmes helps prioritise coverage for poorer individuals. However, many existing programmes have failed to reach the target population, resulting in exclusion errors. In low-income countries, social assistance programmes only reach 13% of the poorest quintile of the population. Lower-middle income countries have more success, with programmes reaching 49% of the poorest quintile (Grosh et al., 2022).

The different challenges faced by these programmes led to similar and additional complexities during COVID-19. In Sri Lanka, for example, only 31% of families living in the lowest expenditure decile received social assistance via the flagship Samurdhi scheme. Meanwhile, 4% of the families from the richest 10%

FIGURE 30: Targeting errors – receipt of social assistance payments in Sri Lanka in 2022/2023

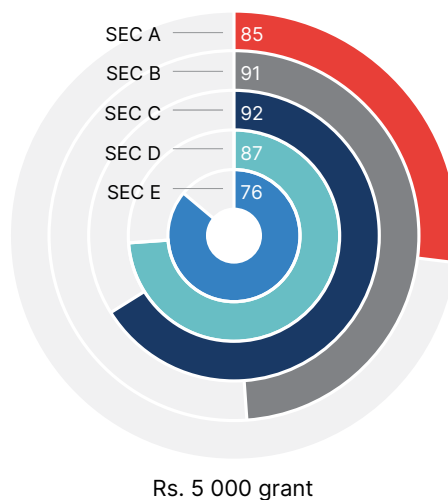


Data Source: LIRNEasia (2022)

Many efforts were taken to increase coverage during the pandemic. This included providing benefits to those on the ‘waiting lists’ for key social assistance benefits, and those who could prove that their livelihoods were impacted. This highlights an example where an attempt to increase coverage, while reducing exclusion errors, led to more inclusion errors – the latter of which is concerning given the country’s limited fiscal space.

The country is now using proxy means testing to identify those in need. As Banerjee et al (2022) highlight, “countries face a trade-off between using noisy proxies for income and using potentially biased self-reports”. While this is a step in the right direction, the effectiveness of the method in identifying those in need is still to be determined.

FIGURE 31: Receipt of COVID-19 emergency grant in Sri Lanka, by socio-economic group



Data Source: LIRNEasia (2022)

Sri Lanka also showed the outcome of ineffective and siloed administration. Over 30 legal and policy documents govern social protection in the country. These have been developed over time, and have evolved, influenced by ideologies of regimes, and international treaties and conventions, amongst others. As highlighted by Stark (1986), state formation of developing country context takes place in the context of a variety of factors including but not limited to colonial domination, nationalist independence movements and trials of new nationhood. Consequently, these documents were not conceived or planned within a coherent system. Therefore, the linkages between the numerous documents and, consequently, the institutions established by these documents, are unclear. In the case of social assistance, this has led to overlaps and duplications in programmes. However, efforts are currently underway to establish a unified social registry. (LIRNEasia, 2022; Tilakaratna et al., 2022; World Bank, 2022b).

As was the case in Sub-Saharan Africa, patron-client relationships played a large role in providing some of the poorest people with a social safety net in Sri Lanka. Sumith* (name changed), a Samurdhi beneficiary spoke of how he was unable to obtain benefits via the Samurdhi scheme until he began helping a local politician organise election rallies. Politicians, thereby, also exercise discretion to include those less in need of assistance in the schemes (highlighted by the inclusion and exclusion errors above), showing that the relative holding power of groups impacts the distribution of resources (Khan, 2010).

High transaction costs were also identified as a barrier in accessing some social protection schemes. Benefits should be easy to access. However, the survey in Sri Lanka showed that those receiving cash transfers through the Samurdhi scheme spent on average 2.5 hours each month on collecting their cash transfers. Meanwhile, recipients spent an average of 1.5 hours travelling back and forth from the collection point (LIRNEasia, 2023). Ramani* (name changed), a Samurdhi beneficiary from Colombo explained:

[My officer usually asks me to come into the Samurdhi bank] to collect benefits between 9:30 and 10:30 a.m. But the Samurdhi officer is in at different times. Then they need time to check their ledgers and ascertain our loans and arrears before making the monthly cash payment. We try to get our work done by 1:30 p.m. so that we can pick up our children from school. But it often takes a lot of time. On some days the officer is not at the Samurdhi Bank, so we return home empty handed. – Ramani* (name changed), Samurdhi Beneficiary, Female, Colombo

7.2. APPLICATION AND DELIVERY CHANNELS

As Lindert et al. (2020) point out, increasing awareness of the availability of programmes is crucial to increase coverage. Evidence from Peru and Colombia indicate that while governments used digitally enabled channels (websites or social media) to disseminate information on the emergency social protection programmes implemented during the pandemic, they had limited reach. Most learnt about the programme through traditional media channels such as television and radio (70% and 65% of individuals in Colombia and Peru respectively). Television was also the most effective information channel for other COVID-19 campaigns in India, such as the COVID-19 vaccination campaigns (LIRNEasia, 2021). This was true across all socio-economic groups (Table 5).

TABLE 5: Channels used for gathering information on COVID-19 - Peru

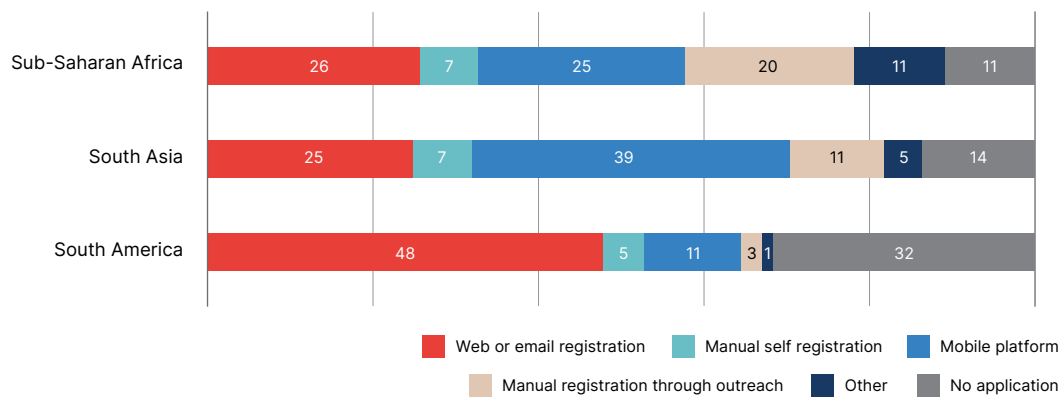
	SSEC A	SSEC B	SSEC C	SSEC D	SSEC E
Radio and Television	87%	68%	74%	68%	63%
Social networks	35%	27%	31%	33%	37%
Friends and family	12%	21%	17%	15%	7%
Newspapers	24%	22%	21%	22%	21%
Web pages	11%	12%	9%	10%	5%

Source: IEP (2021)

However, it is insufficient to rely solely on television and radio campaigns to reach those most in need. The Welfare Benefits Board of Sri Lanka conducted a programme in 2022 encouraging all those of the view that they needed social assistance to register (or reregister) with the government. Despite making announcements on television, radio, and newspapers, and sending mass SMS messages, many heard and took action to register for the programme after an interaction with government officials. Those who lacked the social capital with government officials, including some of those who lived in estate communities (the poorest group in the country), were unaware of the programme. (LIRNEasia, 2023). It is likely for this reason that 20%, 11% and 3% of programmes in Sub-Saharan Africa, South Asia, and South America respectively, had an explicit outreach component in their programme design.

However, physically visiting potential applicants would require high transaction costs. Digitally enabled channels may help in such instances. Some government officials in Jaffna, Sri Lanka, created WhatsApp groups to reach out to potential beneficiaries. While social capital is still required to gain access to this knowledge, the transaction costs for outreach could reduce.

FIGURE 32: Application and enrolment by region



Source: Calculated by authors based on International Policy Centre for Inclusive Growth (2021)

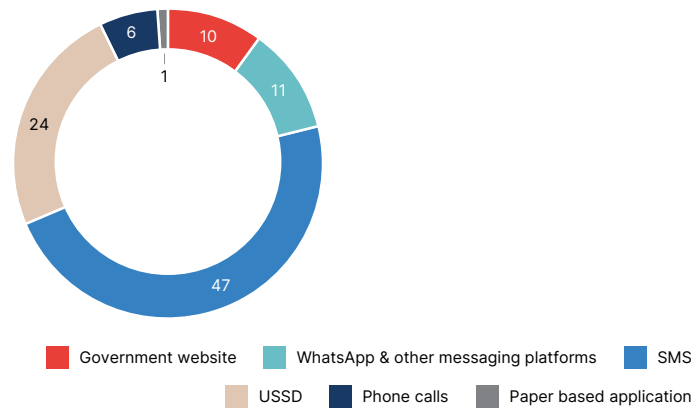
The low use of digitally enabled channels may be driven, at least in part, by Internet use being lower among groups that social protection programmes are aimed at, such as the poor, elderly, and persons with disability.

As Internet access and use grows amongst those at the margins, digitally enabled outreach campaigns may be more effective.

There have been varying levels of digital enablement in the application processes across COVID-19 related social programmes in countries in Africa, South Asia and South America. Figure 32 indicates that registration processes in South America were relatively digitally enabled, with over half the programmes allowing for web, email and/or mobile-based registration. This was nearly double that of their South Asian and Sub-Saharan African counterparts. Within South Asia, Afghanistan, Bangladesh, and Sri Lanka had no opportunities for digitally enabled registration for COVID-19- related social protection programmes. While Sri Lanka’s social protection system is currently undergoing many reforms, there has been no indication that digitalising the social assistance application processes is a priority area (Welfare Benefits Board, 2022).

South Africa allowed for various forms of digitally enabled registration for its COVID-19 relief grant. The government provided a range of options, including registering via the government website, WhatsApp and other messaging platforms, SMS, USSD, phone calls and paper-based forms. Despite the option being available, only 10% of potential applicants used the government website to register for benefits. Over 70% used SMS or USSD, indicating that low technology solutions were still prevalent. Also worth highlighting is that only 1% registered manually using paper-based forms (Figure 33). While the lack of reliance on paper-based forms is promising, it is possible that this number may increase in non-COVID-19 settings as people revert to their pre-pandemic lifestyles.

FIGURE 33: Use of application channels (% of applicants) – South Africa

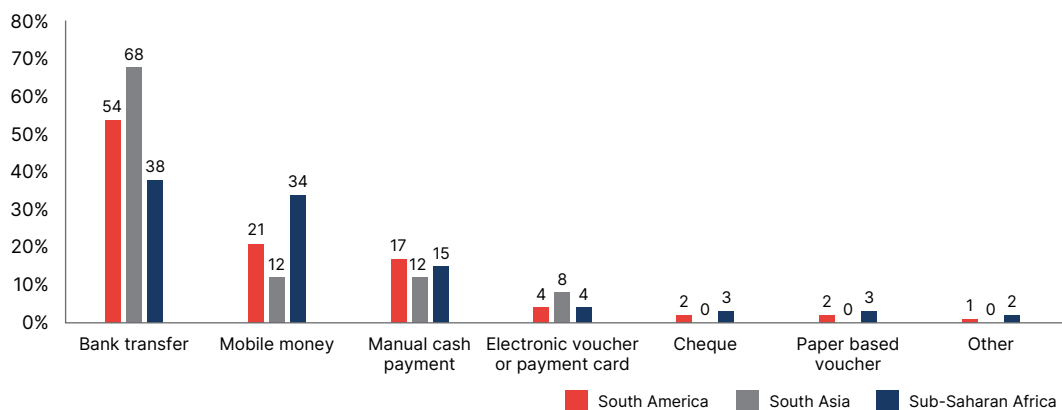


Source: RIA (2021)

Various delivery channels would be suited for different types of benefits. The scope for digitalising delivery of in-kind assistance is relatively limited (unless online vouchers or the like are used). However, there is a strong case to digitalise the delivery of cash transfers. During the pandemic less than 20% of programmes across South Asia, South America and Sub-Saharan Africa utilised manual cash payments. Bank transfers were the norm for most programmes across the three regions. Noteworthy is that mobile money was also a commonly used channel in Sub-Saharan Africa.

In cases like Sri Lanka, adding regulated government and private banks as cash out points would increase the number of cash out points four-fold, which in turn would likely reduce the transaction costs (travel and waiting times). LIRNEasia (2022) estimated that making direct transfers to banks and mobile money accounts would halve the travel distance for those in the lowest socio-economic indicator deciles.

FIGURE 34: Delivery channels for programmes during COVID-19



Source: International Policy Centre for Inclusive Growth, 2021

As earlier described, many social assistance programmes are targeted. Some schemes determine eligibility for schemes using means testing (using income and/or expenditure). However, in many developing countries, there is a dearth of verifiable data on income and expenditure. Therefore, many schemes use proxy means testing to determine eligibility for programmes. These indicators are more easily observable. Further, data on these may already exist in other government and private sector datasets. This can yield multiple benefits. There is also a growing body of evidence suggesting that big data (such as satellite imagery, call detail records) that are generated to serve other purposes may be useful for eligibility assessment. (Grosh et al., 2022). However, the evidence on the effectiveness of the targeting methods are mixed, and context specific (see, for example, Masaki et al. (2020) and Aiken et al. (2021)).

Traditionally, data to determine eligibility for these programmes were collected through household surveys. Using existing datasets to verify data can lead to lesser data collection costs. The opportunity for rent-seeking enumerators to input incorrect data will also reduce. Similarly, relying purely on pen and paper-based registration methods can provide high discretionary power to government officials who are tasked with delivering applications to data entry officers. A few such cases were observed in Sri Lanka, where no online application system (LIRNEasia, 2023). Switching from a manual to a digitalised registration system should reduce the power of rent seeking officials, while also reducing the transaction costs for applicants.

However, digitalised registration processes, once implemented, pose their own set of challenges. Datasets need to be updated, digitised and in a sharable form.

Foundational IDs would have to be in place to allow for the different datasets to be combined. Data owners, particularly those in the private sector, may need to be convinced to share data with government agencies spearheading social protection programmes. If extensive data sharing is taking place between agencies and sectors, data protection regimes must be developed.

In Peru, individuals were required to have a National Identity Document Account (NIDA), an email address and mobile phone account in their name to register for the Yanapay Economic Bonus (YEB). Many who could not fulfil these requirements could not access the YEB. This highlights the need to ensure that processes take local contexts into consideration and are widely piloted before implementing (which may be more practical in non-COVID-19 settings). Further, technical support should be available and accessible to applicants for troubleshooting.

8

TAXATION

The devastation wreaked by the pandemic compounds the existing problems associated with taxation mobilisation as a core aspect of state formation and capability in many countries in the Global South. These problems constrain the expansion of the revenue base essential for the reconstruction of a viable state and political stability. As Toye (2000) in Di John (2006) argued in the wake of the 2008 fiscal crises, it has become imperative for states in Sub-Saharan Africa and Latin America to design tax systems that can provide incentives for growth. Tax systems also need to meet distributional demands and increase the revenue collection function that is central to a state's viability and effectiveness.

In the context of the digital economy, there is potential for significant resource mobilisation. On one hand, there is the angle of providing visibility for the previously invisible firms to maximise revenue collection for the state – though this is often minuscule as these firms fall under the threshold. However, on the other hand, as these informal firms trade with larger formalised firms, it will allow greater visibility of large firms' transactions, thereby making it easier to tax them. This opportunity also brings with it the challenge of developing an effective taxation policy for digital services – the very nature of the problem being that they are global and cross-jurisdictional. Digital platforms such as Facebook, Amazon, and Google are leveraging network effects to dominate online services markets even in developing country markets. In Africa alone, there are over 21 million people engaged in e-commerce, with Facebook having a user base of over 200 million (UNCTAD, 2018).

The rise of the 'gig economy' in which tasks are fragmented to be completed piecemeal by remote workers enables platform intermediaries to evade the labour taxes that traditionally form the social safety net for workers. By avoiding being regulated as employers, platform intermediaries avoid payment of unemployment insurance, health insurance, and occupational safety costs. Although not traditionally regarded as taxes, these levies on earnings are often paid to the state to underwrite social security measures. Shortfalls must therefore be made up in some other way.

At the global level, developments both through the base erosion and profit shifting (BEPS) regime reforms and the e-commerce tax dimensions deliberated at the World Trade Organization (WTO) present opportunities for resource mobilisation through minimum taxation rates for multinationals (including big tech corporations) and taxation on income at sources of revenue generation, even when companies do not have a physical presence in that jurisdiction. However, while WTO efforts to waive customs and excise duties on digital products (potentially like the African Continental Free Trade Area (AfCFTA)) threaten current sources of state revenues, the BEPS provides new opportunities for resource mobilisation.

8.1. TAXING THE INFORMAL SECTOR

Statistics on the informal sector in developing countries point to the fact that it is large and growing which also makes it challenging for these countries to mobilise enough funds for sustainable development financing from taxation (Heggstad, Ustvedt, Myhrvold-Hanssen, & Briseid, 2011; Kundt, 2017a; Ligomeka, 2019; Mpapale, 2014). Some research also points to the fact that most informal firms in developing countries fall under the tax threshold, and very minute amounts, if any are transferred from the income made in the informal sector to state coffers as tax (Joshi et al., 2014; Makochekanwa, 2020; Mbilinyi & Mutalemwa, 2010). On the other hand, the magnitude of the informal sector offers a worthwhile opportunity to widen the tax base and indirectly facilitate the graduation of informal businesses into the formal sector and minimise the impediments to formalisation (IEA's Budget Focus, 2011). Digitalisation has made this a reality more than ever, offering an opportunity for previously invisible firms to gain visibility through digitised transactions for instance. In addition, digitalisation offers the state an opportunity to provide much-needed welfare support for informal firms that are often struggling, in the form of disaster relief, training, and unemployment insurance amongst others.

Over recent years, there has also been a proliferation of large multinational corporations operating in developing countries but headquartered overseas. In as much as they are critical for employment creation, there is an issue of how these multinational corporations exploit gaps and mismatches in tax rules to artificially shift profits to low or no-tax locations where there is little or no economic activity or to erode tax bases through deductible payments such as interest or royalties. Digital companies operating globally have become major players in the world economy. Taxing these firms is particularly challenging because tech-based companies do not necessarily have to be physically present in a location to do business there. Furthermore, there is little consensus about how to allocate the right to tax income that is generated from cross-border activities in the digital age (Onuoha and Gillwald 2022). The OECD's BEPS Action Plan identified tax challenges arising from the digitalisation of the global economy as one of its main areas of focus. Experts in the field now widely recognised that measures seeking to separate or 'ring-fence' a subset of digital economy firms or activities would not be feasible (OECD, 2014).

Informal firms make up the majority of businesses in the Global South. South Africa for instance has an estimated 2.3 million micro, small, and medium enterprises, a significant percentage of them being informal businesses.

This sector makes up 27% of the workforce and contributes 8% to the GDP. The informal sector in Nigeria is made up of more than 41.5 million enterprises, and these enterprises contribute around 50% to the nation's GDP, making the informal sector a significant source of livelihood and economic growth (SMEDAN 2019). The situation is no different in South East Asia, with more than half of the workforce earning their living in the informal sector (Sciortino, 2021).

One of the conventional ways that these businesses gain visibility and formalise is through registration for taxes (e.g. VAT) and registration with the local authorities. Table 6 shows the distribution of tax registration of SMEs (formal and informal) in South Africa and Nigeria, with some overlaps where firms are registered for more than one category.

TABLE 6: Distribution of tax registration of SMEs (formal and informal) in South Africa and Nigeria

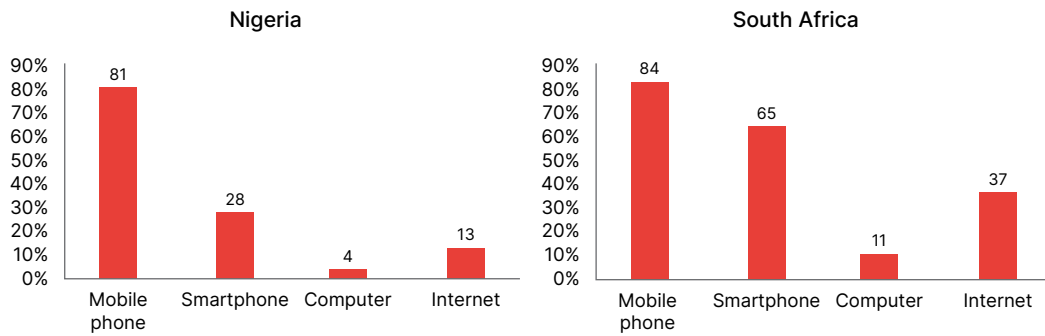
COUNTRY	FORMALITY	REGISTERED FOR TAX	REGISTERED FOR VAT	REGISTERED WITH LOCAL AUTHORITY (E.G. MUNICIPALITY)	REGISTERED FOR AT LEAST ONE OF TAX / VAT / LOCAL AUTHORITY
	Total	11%	12%	17%	23%
SOUTH AFRICA	Informal	0%	0%	0%	0%
	Formal	50%	54%	71%	100%
	Total	3%	4%	16%	18%
NIGERIA	Informal	0%	0%	0%	0%
	Formal	17%	21%	94%	100%

Source: After Access: RIA, 2022

As shown above, there are low levels of tax and local municipality registration in both countries. We found that all the informal firms surveyed are not registered for tax or with the local authorities in South Africa and Nigeria, thus confirming their informality and invisibility to the state. However, we see that formal businesses are at least registered for either tax or VAT or with the local municipality or more than one. Compared to Nigeria, South Africa has higher levels of registration across all categories. The survey results overall show low levels of tax and local municipality registration across all countries. These results point to the existence of weak state structures that lack the requisite capacity and resources to effectively expand the tax base to include the informal sector. There is therefore an urgent need for tax reform in the Global South in regard to widening the tax base. The reforms that seek to broaden this tax base in the informal sector should however be friendly to the operators in the sector so as to minimise further tax-avoidance opportunities and strengthen tax mobilisation strategies (Matey, 2018).

However, it is important to realise that the transactions of informal firms often are not observable and minimal. They also seldom keep records and do not have paper trails. Digitisation and datafication through informal firms' use of the Internet offers a plausible way that the state can observe these transactions but also provide records. The 2022 round of the After Access microenterprise survey showed that 37% of micro and small business owners had access to the Internet in South Africa. A total of 84% of these used their mobile phones to access the Internet.

FIGURE 35: Access to Internet by micro and small businesses in Nigeria and South Africa

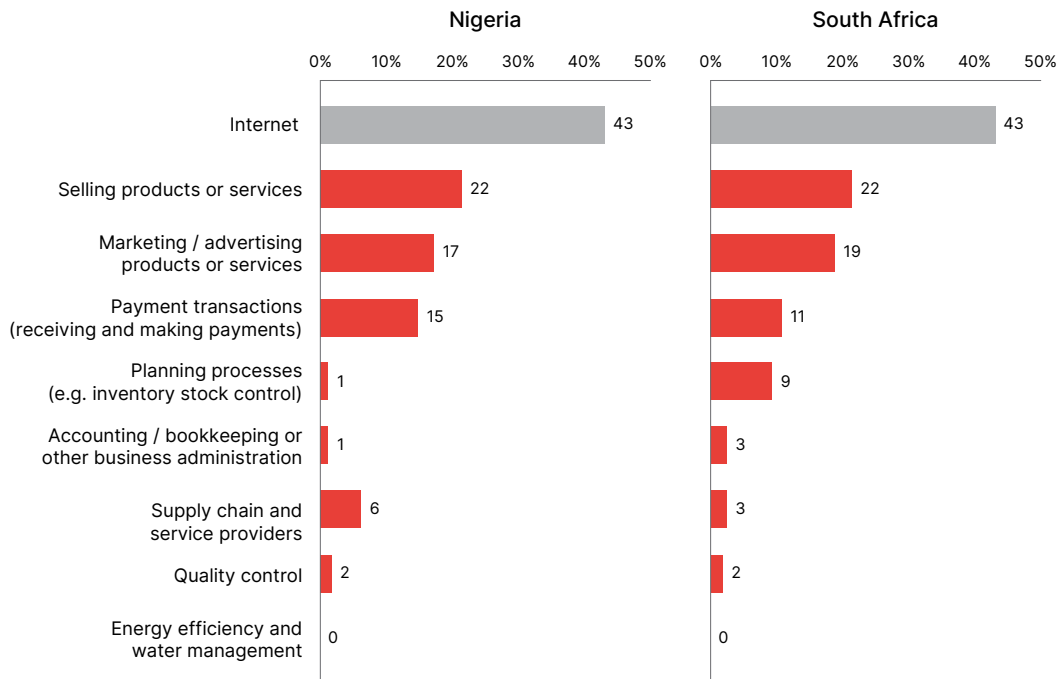


Data Source: RIA, 2022

In Nigeria, the usage of the Internet is lower in comparison to South Africa with 13% of business owners having access to the Internet. Similar to South Africa, though, the majority of use (81%) is through mobile phones.

The firms surveyed used the Internet for a number of reasons in their business operations primarily selling products and services, planning, marketing and payment transactions. Figure 36 below shows how micro and small firms in Nigeria and South Africa use the Internet in their business operations.

FIGURE 36: Micro and small business use of the Internet in Nigeria and South Africa



Data Source: RIA, 2022

Overall we see that in both countries 43% of the businesses use the Internet for their business. In South Africa, most of the businesses use the Internet to sell products and services (22%), on the other hand in Nigeria most of the businesses use the Internet for planning processes (22%). A total of 11% of the firms in South Africa use the Internet for payment transactions compared to 6% in Nigeria.

In as much as these percentages are low, the visibility that is offered through the use of the Internet by informal businesses can provide an avenue through which the government taxes informal businesses. The provision however is that the businesses that are taxed lay above the stipulated thresholds.

This is to mitigate against the fact that most informal business owners are poor and many are women, taxation of the informal sector thus risks being high-income and gender regressive. Some higher-earning businesses evade taxation by not registering. Most importantly, by tracking the informal firms who transact with formal firms that may be evading tax, the state is able to tax the latter effectively.

In the Global South however, the opportunities for exploiting digital data raise additional challenges because the powerful are also able to informally violate or change rules in ways that are less visible, and therefore even more difficult to regulate or mitigate (Ramanathan, 2016). Therefore, digital technologies may exacerbate pre-existing asymmetries of power. Further already capable firms may benefit, less capable firms in the 'informal sector' may face much stricter enforcement of their violations and higher compliance costs, higher informal costs of evasion, or forced exit from many areas of activity (Bellagio Centre, 2017). Larger formal sector firms are often politically networked and in a position to engage in extractive informal transactions that digitalisation alone cannot restrict.

Thus, while digitalisation creates tools for the enforcement of formal regulations, formalisation can be unequal. Instead of greater inclusion, the result may be greater inequality, higher entry barriers into markets and greater difficulties in improving their technological capabilities.

Thus as these taxes are being designed, policy makers should inadvertently not increase incentives for individuals and firms to remain in the informal sector.

8.2. MULTINATIONAL CORPORATIONS AND CROSS-BORDER TAXATION

Figure 37 shows the usage of social media platforms across four countries: India, Sri Lanka, Nigeria and South Africa. The data shows that there is low to moderate usage of social media platforms in these countries, which goes to illustrate the dominance of these global digital platforms but also the missed opportunity by states raising tax from these platforms.

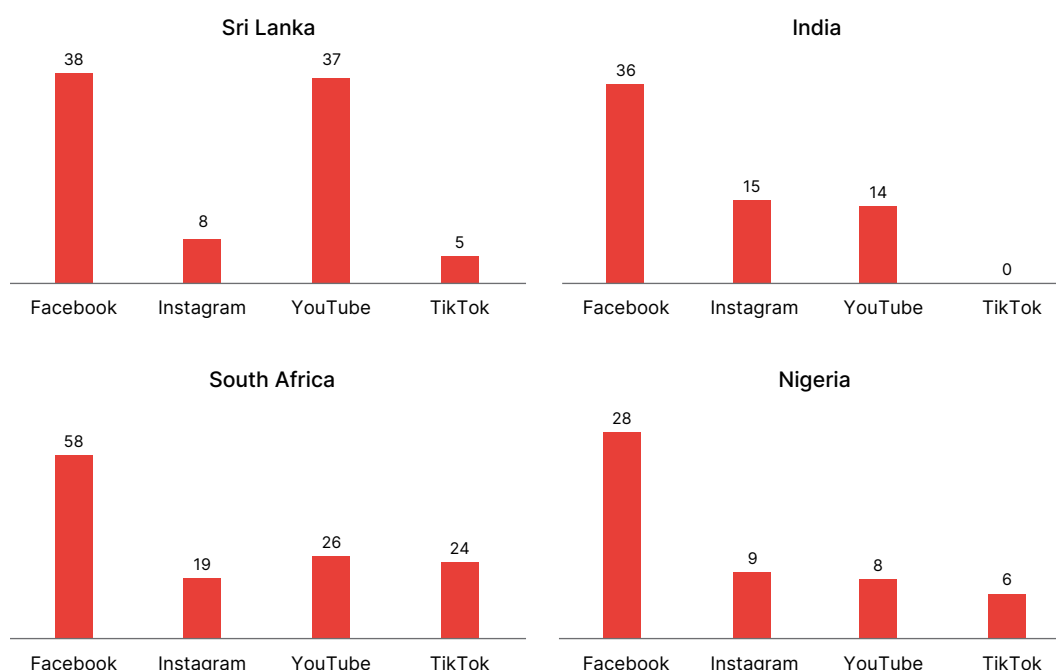
However, this began to change as governments realised the potential of taxing digital services and started moving unilaterally. These unilateral measures were felt to be even more necessary given that even with the multilateral BEPS process there were emerging indications that developing country jurisdictions would not really benefit from the

proposals when compared to the level of tax avoidance that developing countries have been confronted with. Although the emerging unilateral approaches across the world were implemented by individual countries, they were mostly designed from within the principles engaged in the multilateral processes and coordinated at the regional levels. In Africa, while there has been relatively less coordination at the regional level (with the African Tax Administration Forum (ATAF) only contributing to global debates on digital taxation in the past few years), the trend towards unilateral tax was catalysed by the increasing pressure to raise revenues given the low tax-to-GDP ratios of most countries (Kenya and Nigeria for example), and in some cases by the socio-political desire to restrict public access to digital platforms and social media (as in this case of Uganda and Tanzania). In South East Asia, the Asia Pacific Tax Hub plays a similar role to ATAF in helping to develop multilateral, consensus-based solutions to support domestic revenue mobilisation and foster international tax cooperation.

There are three main unilateral approaches (some proposed, some already being implemented) to taxing the digital economy across the continent. We highlight these below:

- Significant Economic Presence (SEP): here the taxable nexus for a digitalised business (with or without a permanent establishment status) is determined by three factors: revenue, local digital presence, and user base. They have adapted this in Nigeria, as well as Indonesia.

FIGURE 37: Social media use (percentage of age 15-65 population, 2021, 2022)



Source: After Access: RIA, 2022, LIRNEasia, 2021

- Alternative Minimum Corporate Tax (AMCT): in this approach, the taxable nexus is based on the gross revenues (turnover) of the digitalised business (Durst, 2018). This is adopted in Cameroon, the Democratic Republic of the Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Guinea, Madagascar, Mauritania, Senegal, Indonesia, and Tanzania.
- Formulary apportionment unitary taxation: in this approach, the taxable nexus is determined by a unilateral formula apportioning the taxable base (share of global profits) of all the entities of a corporate group within a jurisdiction based on assets, labour, and sales (Picciotto, 2016). This approach has been considered for South Africa.

It is important for digital tax policy to be designed for a fair distribution of global value.

Within the ambit of an equitable value distribution with reference to developing economies, a revenue threshold that is based on the size of customer payments within the country to a non-resident provider of services; whether they are digitised or not — is the most effective and easiest to apply in determining a taxable nexus. The BEPS Pillar One⁷ has developed an approach based on sourcing rules for determining the tax base, which incorporates a methodology for attributing profits from sales where appropriate to users. However, this approach will not be equitable for developing economies without an optimised formulary apportionment (using the three-factor components — sales, physical assets, and people or employees) for resolving the issue of allocating what are essentially global profits according to the activities of the global firms in each country. This optimised approach can be achieved by expanding on the profits-split methodology used in the transfer pricing framework that the OECD and G20 have put forward. While the current BEPS proposals have unfairly focused on the residual profit split (which first applies the transfer pricing methods to define a routine profit from so-called routine activities, and then only splits the so-called residual profits), there also needs to be an incorporation of the contribution profit split for a fairer assessment, which looks at the contribution of all the firm entities concerned.

It is also important that the required technical and policy support for effective implementation is set in place. As robust tax systems are being designed in developing countries, there is a need for holistic and multidisciplinary research standing committees at a national as well as regional level (for example at the African Union level, because the technology challenges affect all African countries). Their mandate should encompass assessing the technical aspects of the digital economy, in collaboration with regulatory and policy experts at the national level, in framing model legislations periodically, as well as determining contextual tweaks for local implementation. In addition, capacity development efforts in Africa with respect to digital taxation should leverage more South-South rather than the current North-South cooperation model if the existing problems for the region, as espoused within the BEPS process, are to be effectively addressed. Global North countries developed their expertise and are wedded to tax principles favourable for capital-exporting countries. For example, as an alternative, African countries should engage more with countries from the Global South who have a different perspective, particularly India and Brazil (key countries for Africa), as well as some others in Latin America, such as Argentina, as well as China.

9

PRIMARY AND SECONDARY EDUCATION

The spread of COVID-19 resulted in countries going into various stages of reduced mobility in Asia, Africa and Latin America. For primary and secondary schools, this meant shutting them down to in-person learning. Attempts were made to engage in learning and teaching using various methods, including using ICTs, broadcast (TV and radio) and the distribution of printed teaching material. The length of closures and impacts of lack of in-person learning varied by region, country, and age group. In many (larger) countries, the length of closures varied by state or area, depending on the spread of the disease.

9.1. USE OF ICTS FOR LEARNING DURING LOCKDOWNS

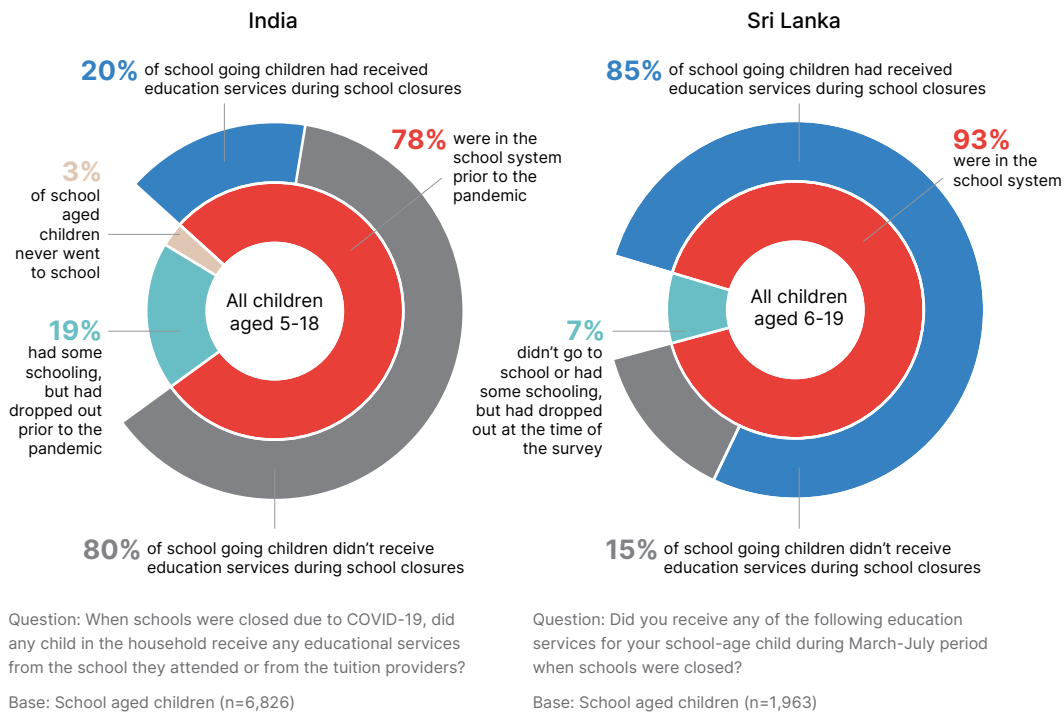
The implications of the disruptions in child education across the three regions were bleak. Eastern and Southern Africa saw the highest percentage (49%) of pre-primary to upper-secondary school students who could not be reached by remote learning approaches when compared with other regions in the world (31% globally) (UNICEF Data, 2020), due to the lack of household infrastructure to access instruction and/or policy support for remote learning. West and Central Africa, and North Africa and the Middle East follow close behind.

Over the three years, consequences for African children included reduction in mental development, increased incidence of exploitation and child marriage, poor nutrition, widened gender inequalities, and stress (WHO Africa, 2020).

According to UNICEF (2021), 800 million children across Asia were at risk because their education was impacted by COVID-19-related shutdowns since early 2020. Schools in Asia were closed for an average of 50% of teaching days. In some countries, the number was much higher – the Philippines and Bangladesh closed schools to in-person learning the entire period from 2020 until the second half of 2021. Some countries had almost two years of school closure.

Pandemic-induced uninterrupted school closures in Latin America were among the longest globally (World Bank, 2022), staying shut on average for nearly a year and a half (O'Brien, Benveniste, Di Maro, Gasparini, Olivieri, & Di Gropello, 2021). Much like their Asian and African counterparts, students in the LAC experienced a decline in socio-economic wellbeing: the loss of guaranteed school meals, shared family economic distress, declining mental health, and increased likelihood of adopting “risk behaviours” (World Bank, 2021).

FIGURE 38: Access to education during COVID-19 lockdowns in India and Sri Lanka



Source: LIRNEasia survey, 2021

In India and Sri Lanka, survey respondents who had at least one child in school (in kindergarten up until grade 12/school year 12) before the lockdown were asked the question: “When schools were closed due to COVID-19, did any child in the household receive any educational services from the school they attended or from the tuition providers?” Highly contrasting responses were received across the two countries. In India, among households that had children already enrolled in school prior to the pandemic, only 20% of children received education services, while in Sri Lanka a much higher 85% did (Figure 38).

The data from Nigeria and South Africa is not directly comparable. However we can see from Table 7 that about half of the children living in households with adults who had a mobile phone and used the Internet received remote education during the lockdown. We also see that the majority used the mobile phone for remote education, while computers came in second, closely followed by tablets.

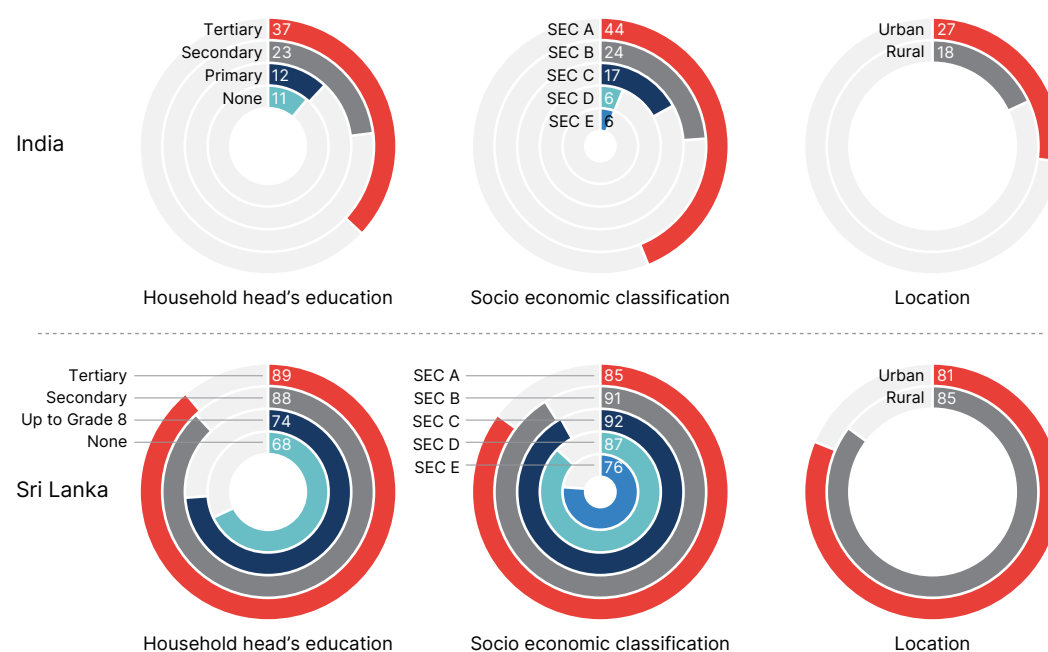
TABLE 7: Remote education among children of adult mobile phone users who use the Internet

	NIGERIA	SOUTH AFRICA
Share of adult mobile phone users who use the Internet , the share of which:	54%	62%
... have children living in the household	53%	66%
... the children had some form of remote learning during the lockdown	51%	46%
... the children used each of the following devices for their remote learning:		
- Computer/laptop	34%	19%
- Tablet	14%	18%
- Cellphone	68%	70%
- None of the above	1%	1%

Source: RIA Mobile Phone Survey 2021

In India and Sri Lanka, children in richer households, children from households with more educated parents, and more urban households were more likely to have had education services compared to those from poorer households, those located in rural areas, and those with less educated heads of households (Figure 39). This

FIGURE 39: % of children who received education services, by location, household head's education and socio-economic classification



Source: LIRNEasia survey, 2021

intuitively makes sense since the richer, urban, educated households are more likely to have good digital connectivity, have parents who might have resources (including time) to ensure education is accessed, and have children attending more economically affluent schools (including private schools) that are known to have delivered more consistent remote education during lockdown.

This pattern was not dissimilar to the findings of the phone survey in Nigeria and South Africa. The nationally representative surveys in the two countries show the urban children were far more likely to have received remote education when compared to rural children.

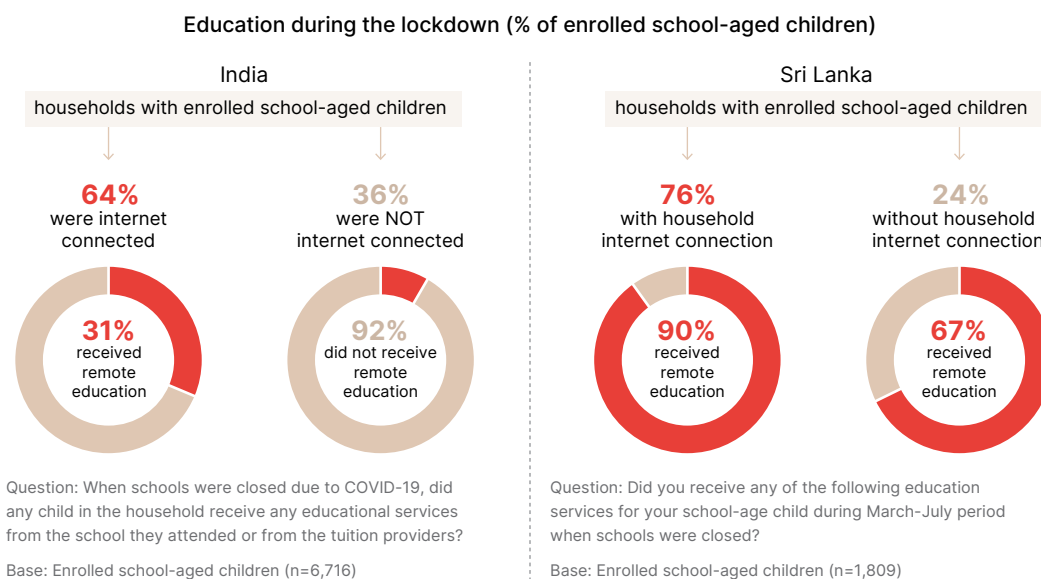
TABLE 8: Urban-rural divide among children receiving remote education during COVID lockdowns in Nigeria and South Africa

	NIGERIA			SOUTH AFRICA		
	RURAL	URBAN	TOTAL	RURAL	URBAN	TOTAL
Share of adult mobile phone users who use the internet :	45%	58%	54%	52%	72%	62%
... that have children living in the household	43%	56%	53%	67%	66%	66%
... where children had some form of remote learning during the lockdown	35%	53%	51%	37%	52%	46%
... where the children used each of the following devices for their remote learning:						
Computer/laptop	27%	35%	34%	12%	24%	19%
Tablet	5%	16%	14%	13%	20%	18%
Cellphone	89%	66%	68%	82%	64%	70%
None of the above	0%	1%	1%	2%	1%	1%

Source: RIA Mobile Phone Survey 2021

We saw in a previous chapter that the gender gap in Internet use is still significant in India, at 37%, and less in Sri Lanka at 7%. However, when it comes to education, we find there is not much difference in girls versus boys receiving educational services. In India, 19% of girls and 22% of boys received education during lockdown. The same numbers for Sri Lanka are 84% and 85%. It therefore appears that as long as there was education being delivered, children accessed it irrespective of gender (though of course location, income and other household factors played a part, as we saw earlier).

FIGURE 40: Access to education services by connected versus unconnected households in India and Sri Lanka



Source: LIRNEasia survey, 2021

In both Sri Lanka and India, having Internet access made a substantial difference according to the data. In India, at the time of the survey, of the households that had children in school before going into lockdowns, 64% had a working Internet connection, and children in 31% of these households received educational services. On the other hand, in the 36% of households that had no Internet connectivity, only 8% of children had educational services delivered. Similarly in Sri Lanka, of households that had children of school going age going into the pandemic, 76% had a working connection and 90% of the children in these households had access to educational services. On the other hand, in the 24% of households that had no Internet connectivity only 67% had access to educational services (Figure 40).

Furthermore, education was a key driver of Internet adoption. In 2020, around 81 million Indians came online for the first time.

Among them, 43% said needs that arose during COVID-19 were the reason they came online – needs such as working and education. In Peru, 52% of people surveyed mentioned that their use of the Internet compared to before the pandemic had increased for educational purposes; a similar percentage was found in Colombia (59%).

The importance of mobile technology was highlighted through findings in South Africa and Nigeria where 15% and 19% of respondents in the mobile phone survey claimed to have children in the household use the Internet for online learning during COVID-19, of which 68% and 70% respectively did so through mobile phones.

In both Sri Lanka and India, challenges were faced by students, families and teachers in receiving or providing educational services. Many were digital challenges. Among households that received education for their children, poor signal quality (48% of Sri Lankan households and 26% of Indian households), high data costs (46% in Sri Lanka, 32% in India), and insufficient number of devices (34% India, 33% Sri Lanka) were among the more frequently cited challenges. In Peru the implementation of measures to provide connectivity in prioritised zones within the Amazon region under the Emergency Decree No. 014-2021 faced similar challenges.

Not all challenges to remote education were digital. Schools being unprepared to deliver remote education was cited as a problem in 34% of Indian households, as were too much content being received during remote education (21% of Indian households), children not being attentive (35% of Indian households), and not feeling comfortable allowing children to use the Internet alone (19% of Indian households).

These patterns were also evident in Sri Lanka. In Africa few countries offered teachers national-level remote learning transition training (UNICEF Data), and studies found that those countries that did provide training post-outbreak were not completely successful in training teachers in effectively engaging their students using remote systems (UNICEF Data). Consequently, many African children received no education following school closure, received no instruction or feedback from teachers, and studied less content and fewer topics (Human Rights Watch, 2020). Qualitative research from Nigeria showed that the government attempted to introduce e-learning through other channels such as radio and TV, but due to the economic strain during the pandemic, many households were unable to afford batteries to power their radios.

10

CONCLUSION

The COVID-19 pandemic brought unprecedented challenges to individuals and countries in the Global South and exacerbated inequalities within countries. It has also highlighted that, as in many developing countries, the political economies of the countries in this study, characterised to different degrees by poor institutional endowments, fragile democracies, weak financial fundamentals, low levels of sustained economic growth and poor human development, have constrained State formation as the base for the realisation of strong democratic social contracts between states and their citizens.

This applies to the social compacting between states and society (e.g. the welfare state) and between specific segments of society, capital and labour (e.g. minimum wage and collective bargaining agreements). As highlighted above, there is widespread acknowledgement of the need for new social contracts for the 21st Century that consider both new and old political, social, and economic realities, including in the changed world of work.

The pandemic also highlighted the importance of digital connectivity that in a context of digital substitution has become essential for remote work, education, healthcare, social welfare and social interaction. Without far greater access to affordable, high-speed bandwidth the potential to harness the intensifying processes of digitalisation and datafication as an enabler and equaliser of any contemporary democratic social compacting is limited. Indeed, a lack of access will exacerbate existing inequalities as the study has shown. This will require a serious commitment to developing alternative digital policies and strategies to the ones that have so far had suboptimal results in Africa and in Asia, and in Latin America in dealing with the persistent though much smaller number of digitally excluded people.

Digital inequality had a compounding effect on already existing socio-economic inequalities during the pandemic lockdowns for those people unable to digital substitute who became further marginalised from social and economic activities. Moreover, even amongst those with access, significant inequalities were observed with marginalised groups less able to derive meaningful benefits from digital activities.

These inequalities are a product of, and cannot be separated from, underlying structural and intersectional inequalities that prevent equitable access to and use of digital services, and the ability to create digital opportunities. Bridging the gap therefore requires prioritisation of demand-side constraints – particularly in relation to education which determines awareness of and ability to use the Internet and the extent of its use. This focus on demand-side constraints is necessary in order to ensure that the

root problem is addressed and that supply-side developments are able to lead to inclusive socioeconomic development. The policies aimed at supporting individuals to gain the means to effectively use digital technologies in developing countries have tended to go through the conventional channels such as the labour market and the education system. As these are the precise systems which have resulted in and entrenched the socioeconomic inequalities present in society, this approach will result in an exacerbation of inequalities through the digital economy, rather than helping to reduce them. Implementation therefore needs to go through channels outside of these conventional channels systems and instead focus on channels which can best reach marginalised groups such as women, rural dwellers and microenterprises.

A significant proportion of the population in the Global South lacks access to the Internet. This is particularly the case in Africa. Further, inequalities in access, use and appropriation continue to be a challenge. Addressing the digital divide and ensuring equitable access to the Internet is crucial to promote inclusive economic and social development and to build resilience against future crises. To be able to understand and address digital inequalities from an intersectional perspective, and to be able to look beyond access to also assess equality in use, there is a need for nationally representative data which can be disaggregated across multiple layers of society. This data needs to cover the barriers preventing access as well as the limitations faced by those who receive access. Currently this data is limited to only a handful of countries, and is in particular short supply in the Global South where there are limited resources available to this end but where there is the greatest need for this data for evidence-based policy making.

As such there is a need by policy makers to revisit the current indicators used to inform high-level policies on ICT access and use. In particular, there should be measures which are able to simultaneously incorporate multiple variables in order to account for the intersectional nature of inequalities. Further, national governments should develop an integrated digital disaster plan that takes the learnings from COVID-19 to derive solutions which can be implemented in the situation of future pandemics and external shocks in order to prevent the exclusion of marginalised groups as appeared to be the case with COVID-19.

A critical aspect of harnessing digitalisation for state formation pertains to resource mobilisation by the State so as to be able to provide a minimum number and level of services required by an equitable social contract. Historically this has been one of the biggest challenges given the invisibility of large numbers of citizens and microfirms to the State. Given the sheer size of the informal sector in these economies, digitalisation provides the visibility that is needed by the State to collect legitimate taxes in order to offer better safety nets, which increased visibility of microbusinesses and individuals through digital transactions. However it is critical that the tax system design should avoid creating perverse incentives for individuals and firms to remain in the informal sector. The visibility provided should distinguish clearly between those who are earning too little to meet VAT or income tax thresholds and those 'hiding' in the informal economy to evade taxes. Simpler value-added and corporate tax systems (with minimal or no exemptions and loopholes) with lower rates, as well as low payroll taxes, could help reduce informality.

Policy makers could consider supportive social protection systems, including progressive income taxes and protection for the poorest, to help address distributional aspects. There is also an opportunity for states to increase their tax base by accessing the super profits of big tech companies from within their respective countries. In addition, to offset the tendency that is now becoming prevalent of imposing regressive digital taxes, states need more vigorous engagement at a bloc or regional level and co-ordination to represent common interest in international forums. Policy makers should use reliable and accurate data on the digital economy to develop better fiscal, economic and social policies within a process that is transparent and participatory and which is more likely agreeable to stakeholders to deliver essential digital public goods.

Governments should further incorporate digital technologies and data into social protection systems, provided these are used in a purpose-limited and rights-protecting way.

This can play a key role in improving social protection programmes across the delivery chain by reducing transaction and administrative costs, and potentially allow for more real-time updates on need. Some caution is needed though, as relying solely on digital for outreach, and intake and registration, for example, could further exacerbate exclusion errors. Therefore, these access and use gaps should be considered when designing programmes. Big data should only be used for analysing and targeting but this always requires human decision-making to ensure where no one is made worse off due to the adoption of these new methods.

As revealed by the negative welfare impacts of the pandemic, and the realities of informality and unemployment in most developing countries, newly defined social protection schemes, such as universal social protection, also require citizen-based rather than the current worker-based inclusion only. Digitalisation of the delivery of the social protection delivery process such as outreach and registration can help increase coverage, but some countries were insufficiently equipped to do this.

The pandemic also had a more adverse impact on older adults as compared to other age groups. They faced a number of limitations which included the widening of pre-existent digital gaps, but also regarding their access to services necessary to fulfil their basic needs. Any effort to close the digital gap that negatively affects older adults will have to include an emphasis on closing the gaps in ownership of devices that can connect to the Internet within this population group, through economic aid, increased affordability, or some such other relevant mechanism. In addition, there is also a necessity to address the educational aspect of the digital divide through public policies aimed at the provision of digital skills for the older adult population. These services, as was shown by the qualitative data, would need to be specifically designed and oriented towards this population group, as standard educational services oriented for the general population are often seen by older adults as distant and generally related to diminished motivation for participation. Limitations in access to services were related to the characteristics of services offered. The difficulties include physical limitations such as reduced visual acuity and motor skills, as well as some that relate to the possibility of cognitive decline. Thus, public services designed with older adults in mind will have to take into consideration these characteristics if they are to be accessible for all older adults.

Importantly, quality of service, not only access and affordability of the Internet, was highlighted during the lockdowns. Poor signal strength, inadequate devices to meet the competing needs of various household members, and other challenges related to digital access and use impacted the workforce's ability to work from home. We also saw that having Internet connectivity made a significant difference in the likelihood of accessing education services during the lockdown, but that adequate bandwidth and type and number of devices in the household profoundly influenced the quality of remote education. Evidence from South Asia shows that households with connectivity were far likelier to have children accessing education compared to households without. Schools were unevenly not ready, with private and better-resourced urban schools better equipped to pivot to remote learning. Across all the countries, however, the connected households were still likely to be richer, more educated and more urban — all factors that drive the demand for more and better quality education in the first place. In addition, parents and children faced significant technical challenges due to poor connectivity, not having sufficient devices, and unaffordable data connectivity prices as they attempted to access education.

The challenges were not only technical. Delivery of education services is not the same as positive or meaningful learning outcomes. The benefits of ICTs can only be experienced to the extent that curricula and teaching methods change to incorporate ICTs, including recognising that across different strata of society children found it difficult to concentrate on remote lessons.

While the use of ICTs to deal with the shutdown of schools can be considered a holding pattern, the loss in education that accrued has to be solved with particular attention and care and will only be felt in the coming years.

The limited nationally representative data on ICT access and use in the Global South shows that men use the Internet more than women and that this inequality is loosely tied to the education that underpins disparities in the level of economic development and the level of digitalisation. The data also shows that men and women are not homogenous categories. A new social compact needs to prioritise getting women at the intersectional of other inequalities particularly class, race, ethnicity, and rurality online. It also needs to ensure that once online they are able to use digital services and tools to make a meaningful difference in their lives and, as development literature and evidence shows, that of their families.

The different gender gaps observed even in countries with similar levels of economic development and at similar stages of digitalisation shows the strong influence of the institutions which have developed in each country's contexts, based on historic systems of patriarchy and cultural gender norms. Neither digital inequalities nor gender inequalities can be considered in isolation and in order to be effective the social compact needs to take an intersectional view of inequalities. Digital inequalities need to be considered in the context of broader structural inequalities and gender inequalities as interlinked with inequalities relating to geography, income, education, age and race. To be able to understand gender digital inequalities in this regard requires that gendered analysis be disaggregated across several layers of a society simultaneously in

order to account for intersectionality. It is also important that data is able to go deeper than classifying individuals as online or offline and is able to also look at the equality of opportunities afforded to those who manage to get online.

Over the past three decades, the liberalisation and privatisation of traditionally publicly provisioned communications services has driven innovation, creating an increasingly complex and adaptive global digital ecosystem. However, regulation has always lagged innovation and market developments, and is seldom flexible enough to enable market innovation while providing certainty to long-term infrastructure investors, ensuring positive consumer welfare outcomes, and safeguarding citizens from online harms to human rights. Further, the creation of regulated competitive markets for the private provisioning of publicly provisioned goods such as the mobile telecommunications, has not been extended to the Internet or data-driven technologies and platforms. These have evolved largely unregulated and globally dominated by big tech.

Although often presented as successful policy outcomes of the traditional economic and competition regulators, mechanisms of universal services funds to deal with market failures (or more accurately the market efficiency gap) have not been successful. Large parts of the world lack the institutional endowments even to create and effectively regulate private markets, much less the new forms of multi-stakeholder governance required to manage these increasingly complex, adaptive systems. In addition, both driven by and in response to intensifying globalisation, issues of cross-jurisdictional and global governance have arisen. Even where these digital goods were developed in more mature economies, advanced technologies have been treated as private goods, unregulated and highly excludable, despite having been developed with public investments.

To allow citizens to equally to enjoy the benefits of reduced transactional costs and improved informational asymmetries, and increased security associated with the digital delivery of such services (which under conditions of lockdown, were the only form of safe access or access at all in some cases) states will need to build more demand-side valuation into the allocation of resources, particularly to build public value, in contrast to the solely commercial, supply-side valuation that currently characterises resource allocation (from spectrum to data access) and which has resulted in extreme digital inequality.

Organic development of technologies such as the development of Wi-Fi operations on the licence-exempt ISM bands, for which it was not really intended, has already demonstrated the power of the commons and its potential as an access and backhaul technology. The nature of Wi-Fi means that there are very low market barriers for both the manufacturing and deployment of this technology. It has allowed people to build out broadband networks and connect places deemed 'uneconomic' by operators in a manner that was not foreseen by policymakers. This has resulted in a proliferation of independent non-profit community-led initiatives, as well as commercial wireless internet service providers, able to meet some of the pent up small and micro-scale demand. Of course during lockdown, significant numbers of people, primarily dependent on public Wi-Fi, lost access to the Internet.

This has reignited the pre-mobile broadband policy debate in the context of social compacting, requiring high-speed broadband to the home as a basic general-purpose technology, like electricity, if policy is seeking to redress digital inequality and not simply access.

Despite the rhetoric around global digital cooperation and reference to digital public goods there has been little progress in moving beyond the funding of technical assistance and the lobbying by various interests (represented by multilateral agencies, global digital platforms, and industry associations) to ensure the implementation of preferred global frameworks for Internet governance cybersecurity, data protection and data governance at the regional and national level. There needs to be far greater engagement and participation in global governance by developing countries, particularly non-G20 countries, and in relation to international cooperation on the realisation of digital public goods at the national level.

Current challenges to ensuring the provision of increasingly global digital public goods (such as the Internet, data, and cybersecurity) lie in the increasing complexity and adaptiveness of global communications systems. This arises from the fact that policy, regulatory and legal instruments are nationally circumscribed and not underpinned by the global governance necessary to realise them at the national level through implementation and enforcement. The rationale for the policy and regulation of global digital public goods is that they are a common good that has to be made available to all.

While the concept of paying for national public goods, such as providing education or protecting clean air, is widely understood, it is less clear who should be held responsible for general-purpose global public goods, such as the Internet, that serve the common interest. This has produced highly uneven results.

Although investment in global public goods has traditionally taken the form of official development assistance (ODA), new forms of international cooperation and institutions are necessary that will support the development of global digital public goods and ensure greater digital inclusion. More effective and shared measures such as better global resource mobilisation through digital taxes or other solidarity mechanisms that have been discussed in this paper will be essential innovations to ensure the universal availability of these common goods.



POLICY RECOMMENDATIONS

Harness digitalisation and datafication for the new social compact

Under the right conditions and in the context of new social compacting for post-pandemic reconstruction, harnessing the intensifying global process of digitalisation and datafication has the potential to revive state formation efforts, particularly in relation to resource mobilisation, distribution and social protection. In considering minimum thresholds of public provisioning, even if by the private sector, states should be harnessing digitalisation and the increased visibility to the State of firms and individuals for social investment and welfare. Related benefits can also accrue to democratic governance, as digitalisation could enable states to transact more efficiently with citizens and to make public systems more resilient, putting in place a new and more equitable social compact before the next inevitable pandemic.

Policy makers should identify opportunities to use digital technologies and leverage associated visibility for improved taxation. It can also be used for improvements across the social protection delivery chain, including in outreach, registration and delivery of benefits and ensure that social protection systems are designed to adequately protect all citizens across their lifecycle. This should also extend to informal workers, including those working in the digital economy.

Existing datasets should be shared and used to verify the needs of beneficiaries to ensure that scarce budgetary allocations are directed to those who are most in need. Some caution is needed though. Relying solely on digital means for outreach, and intake and registration, for example, could further exacerbate exclusion. These access and use gaps should be considered when designing programmes and governments should incorporate digital and data solutions into social protection systems in a purpose-limited and rights-protecting way.

Build governance frameworks that account for national and global governance requirements of digital public goods

Governments need to ensure equitable access to a digital and data public infrastructure – the foundational broadband network infrastructure, the data and services level, and applications such as digital identification and payment systems. Even if privately provisioned, the State needs, through public interest policy and regulation, to ensure equitable access to public digital infrastructure so that what should be common infrastructures do not serve a small elite segment of the population. National policy needs to align and inform the cooperative global governance necessary to prevent harms and enforce regulation. To this end, there should be more vigorous engagement by Global South states to ensure their interests are reflected in international negotiations, agenda setting and diplomacy.

Develop transversal national digital, social and economic policy and harmonise regionally

Minimising the compounding effects of digital inequality on existing inequities through a new social contract will require moving beyond existing siloed sector policies and formulating transversal policies that will deal with both supply-side and particularly demand-side constraints, which are increasingly the primary inhibitors of Internet uptake and use. To be effective, the social compact needs to take an intersectional view and target policy intervention at the intersections of multiple inequalities. This will require considering digital inequalities in the context of broader structural inequalities and the treatment of groups such as men and women not as homogenous groups, but rather understanding their heterogeneity as being linked to education, income, age, race and geographic location. It will also require returning to the wicked problem of the digital inequality paradox and through policy experimentation addressing not only the supply-side challenges to connectivity where they persist but also the far more overwhelming demand-side challenges that evidence in this report highlights.

For example, more efforts should be made to encourage greater smartphone ownership through cutting or waiving customs duties on entry-level smartphones and regulating prices more effectively.

Develop reliable, timely public data assessing digital inequalities for evidence-based policy making, and institute a global digital solidarity fund to finance data collection. Developing demand-side solutions through an intersectional approach which is able to reach those marginalised from digital services, with a focus beyond access to also address inequalities in use, requires a foundational information base of nationally representative demand-side data which is able to account for specific country contexts and which can be disaggregated on a combination of key variables. For most countries in the Global South this data is not available and there are insufficient resources to achieve it. It is therefore recommended, as RIA has done in context of the GDC and UN Women Commission on the Status of Women, to implement a global digital solidarity fund where countries make a contribution (e.g. 1%) of Domain Name Server (DNS) fees into the fund which is then used to undertake the necessary demand-side surveys to inform the development of digital policies that will redress inequalities and enable the development of resilient and inclusive digital economies.

Develop alternative policies and regulatory strategies to promote access and greater use of digital services

Where progress towards affordable universal access is slowing or stagnant, and levels of digital substitution remain low, governments should pursue alternative access strategies, focusing not only on supply-side deficits but also on demand-side constraints that limit effective digital substitution across all regions. This will require greater policy experimentation to deal with different challenges of bringing the majority of people online meaningfully. It may require balancing commercial supply-side valuation in resource allocation with more demand-side value that recognises the merit and public value of digital public goods as critical inputs downstream in the economy.

Recognising the public good characteristics of digital goods such as spectrum, data, and cybersecurity allows for the regulation as such. It also recognises infrastructure resources as being fundamental to generating greater value when used as inputs into a wide range of productive processes and public goods such as digital and data services and products that are critical resources for consumption and production in the economy. Balancing demand-side valuation with current supply-side valuation in resource allocation (such as in spectrum auctions or accessing public data) enables public interest governance of a resource as a non-rivalrous, low-excludability public good that can be accessed for the purposes of public planning, entrepreneurship, and democratic accountability. Such an approach to the allocation of resources also provides the rationale for the creation of digital commons, such as spectrum commons, data lakes and alternative forms of data stewardship.

This has the potential to provide complementary public services and reduce the cost of services operating on unlicensed spectrum. Practically:

- Connect all public buildings (municipal offices, schools, clinics, police stations) with broadband and free public Wi-Fi.
- With most spectrum still largely unused outside the main metropolitan areas, exclusive national licences need to be revised to enable the optimisation of spectrum use to meet the diverse needs within the countries.
- Besides being very aware of the negative consequences of artificially high reserve prices, policy makers should also draw on licensing and auction innovations being explored by European regulators to ensure more optimal outcomes than are likely from commercial agreements between incumbents and secondary users.
- Building incentives for spectrum sharing into the licensing process at the start of secondary licence assignments or auctions allows for the incumbent in the second round to be given a choice of either granting access under a licence sharing agreement to the winner of the auction or not. If the incumbent accepts, its existing licence fee is reduced. If it rejects, its existing licence fee is increased.
- Design strategies for older adults. Delivering the new social compact via digitalised processes must address the unique needs of older adults. Through economic aid, increased affordability, or such other relevant mechanisms, gaps in ownership of Internet-ready devices within this population can be closed. Additionally, gaps in digital skills could be closed with public policies aimed at the provision of appropriately designed digital skills training for the older adult population. Critically, the design of devices and content have to be cognisant of the variety of age-related conditions (such as reduced visual acuity or motor skills, or cognitive decline) that might compromise older adults' ability to use digital products and services. These considerations should feed into an evaluation of how present social protection programmes account for and are delivered to older adults, and whether the supply of public service is aligned with older adults' variable characteristics and needs. Future digitalised social protection systems should be designed to be accessible to older adults specifically.

Improve the readiness of educational institutions for remote learning

Primary and secondary schools were particularly hard hit by the pandemic lockdowns, and whilst some were able to adapt to remote learning scenarios, our research shows that the results were mixed and uneven. In addition to simple connectivity challenges, other factors such as readiness of schools, digital literacy among students, parents and teachers, as well as digital access and other conditions in the home constrained the effectiveness of remote learning strategies. For educational institutions, the benefits of digitalisation in crisis conditions can be fully experienced only to the extent that curricula and teaching methods change to incorporate digital technologies as a matter of course. Educational systems should mainstream the use of digital technologies in day-to-day teaching and learning and use multiple modes of technology to deliver education.

Subject to the access and use gaps for marginalised students being solved, the use of ICTs in education should be a priority policy focus. However, success happens when the use of ICTs is incorporated into routine learning activities and mixed with traditional modes of learning. Education in much of the Global South is based on top-down education geared towards passing structured exams. Changing pedagogy to include self-learning in addition to traditional teaching could help. Such changes to curricula are supported by the use of various forms of ICTs, not just mobile phones, and have the added advantage of preparing a workforce to address future challenges.

Harness digitalisation and datafication for social protection

Policy makers responsible for social welfare should more actively harness digitalisation and datafication to play a key role in improving social protection programmes across the delivery chain. This can reduce transaction and administrative costs, and potentially allow for more real-time identification and updates on the needs of people. Further, disintermediation of rent-seeking intermediaries can allow for more efficient, streamlined processes.

It is important however, that with the large numbers of people who remain marginalised from digital services that some caution is exercised to ensure that in designing and implementing digitalised services manual or analogue services remain available. Relying solely on digital means for outreach, and intake and registration, for example, could further exacerbate exclusion. Therefore, these access and use gaps should be considered when designing programmes. Big data should only be used for targeting where no one is made worse off due to the use of new methods. Governments should, therefore, continue to incorporate digital and data into social protection systems, provided these are used in a purpose-limited and rights protecting way.

Update labour policies for existing and emerging forms of labour

Although this study focused on remote work, other research undertaken by RIA and IEP has focused on governance of platform work, and within the policy context of this paper drawing on the finding of that research is apposite. With platform work and remote work becoming more commonplace, highlighting the need for policy environments to be conducive to the related new work practices is necessary.

In social compacting, accountable officers need to consider digital workers when creating national and firm-level policies to ensure labour rights are protected.

This is particularly key in the Global South where there is less protection for informal workers. Regulation becomes even murkier when work is conducted outside of the jurisdictions in which the platform or the remote employer is headquartered. Platforms like Uber have resisted complying with internationally accepted basic labour rights on the grounds that drivers are not employees but contractors.

Leverage increased visibility of informal workers and firms for resource mobilisation

Most informal firms are evidently invisible to the State, and as such, do not contribute to the fiscus. The State can use the improved visibility, derived from the increased use of digital services, to widen the tax base through the collection of legitimate tax so as to maximise the benefits of social protection programmes, as well as allow the State to better account for the needs of the informal economy.

Informal firms are also often enmeshed in the supply chains of larger formal firms, and their visibility could enable the State to track and enforce tax collection from these larger formal firms. To effectively manage taxation for larger formal enterprises engaging with informal counterparts, a comprehensive strategy driven by the tax administrator is vital, balancing revenue growth and a favourable business climate. This involves compelling large formal firms to transparently report transactions and submit accurate records of dealings with informal entities. Additionally, facilitating real-time data exchange through digital platforms between these firms and tax authorities can minimise under-reporting risks, ensuring both revenue generation and a conducive business environment.

However, tax mobilisation strategies need to ensure that taxation thresholds do not inadvertently burden microenterprises and marginal informal sector firms and lead to tax-avoidance strategies. The visibility provided by digitalisation should distinguish clearly between those who are earning too little to meet VAT or income tax thresholds and those 'hiding' in the informal economy to evade taxation. Incentives to formalise could include easing regulations and simplifying processes for informal businesses to register, State business development support and relief in times of crisis. Supportive social protection systems, including progressive income taxes and protection for the poorest, could also help address distributional aspects.

Develop strategies to mobilise resources from large multinational corporations

There is an urgent need for tax reform by states in the Global South with the objective of widening the tax base through progressive taxation, including of corporations, rather than current dependencies on regressive VAT or secondary sectoral taxes such as those on social networking and mobile money in some East African jurisdictions.

One way that states can raise resources is through the taxation of multinational corporations – there is an opportunity to access the super profits of big tech companies through the reformed BEPS international regime.

The BEPS tax regime allows states in the Global South to tackle tax avoidance and have the requisite tools to make sure that profits are taxed and economic opportunities are generated and value created. However our research shows that many states in the Global South do not have sufficient negotiating power to influence the current global processes determining the adequate taxation regime. One way of increasing the bargaining power for states in the Global South is through engagement and lobbying through regional bodies such as ATAF in Africa or the Study Group on Asian Tax Administration and Research (SGATAR) in South East Asia.

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