

Lagging ICT adoption in SA reflects social and economic inequalities

- ❖ **Although South Africa has far more Internet users than other African countries, half of the population is still offline.**
- ❖ **The 50 percent that are online earn more than ZAR 7 167 a month.**
- ❖ **The lack of Internet-enabled devices and digital literacy, both of which are associated with poverty, are the main barriers to getting online.**
- ❖ **Mobile phone penetration among owners of informal and/or small businesses is very high (93%), yet less than a fifth of them use of mobile phones for business processes and management.**
- ❖ **A perceived lack of need for the Internet as well as it being unaffordable are the main inhibitors of internet use among small and informal businesses.**
- ❖ **The 2017 After Access Survey shows that in the seven countries surveyed, the micro-work penetration rate is as low as 2 percent, with only 7 percent of Internet users doing micro-work. Only 10% of Internet users in South Africa do platform-work.**

Introduction

Increasing Internet connections suggest a bridging of the digital divide yet, as more people are connected, digital inequality paradoxically increases. Inequality exists not only between people online and offline, but also between those who have the skills and financial resources to use the Internet optimally, and those who do not. Without policy interventions to reduce these disparities offline inequalities will simply be mirrored online - or potentially even amplified. Many individuals and households do not use the Internet or do not have the devices to access the Internet. RIA's 2017 After Access Survey finds that South Africa has the highest mobile phone (84%) and Internet penetration rates (53%) of the seven countries surveyed, but not when compared with all sixteen countries surveyed across the Global South.

Digital divide a reality in South Africa

The survey findings indicate that technological forms of exclusion are a reality for significant segments of the South African population, and that digital exclusion reinforces and deepens existing social exclusion reflected in low income, unemployment, poor education and social isolation. In the case of South Africa, a society with more pronounced income and educational inequalities, the Survey shows that despite the hype around smartphones connecting the poor, the digital divide between the poor and the rich is significant. Furthermore, the data shows that while the digital gap between men and women is diminishing it persists

between urban and rural dwellers: about 40% of rural dwellers using the Internet, and only 39% of urban residents are unconnected (see Figure 3).

Digital inequality associated with offline inequalities

As Figure 1 shows, mobile phone penetration and use of the Internet is broadly aligned with gross national income (GNI) per capita. Figure 2 shows this pattern is broadly true of the gender gap too. Although GNI per capita masks extreme inequalities in South Africa, the country performs well regarding gender equity.

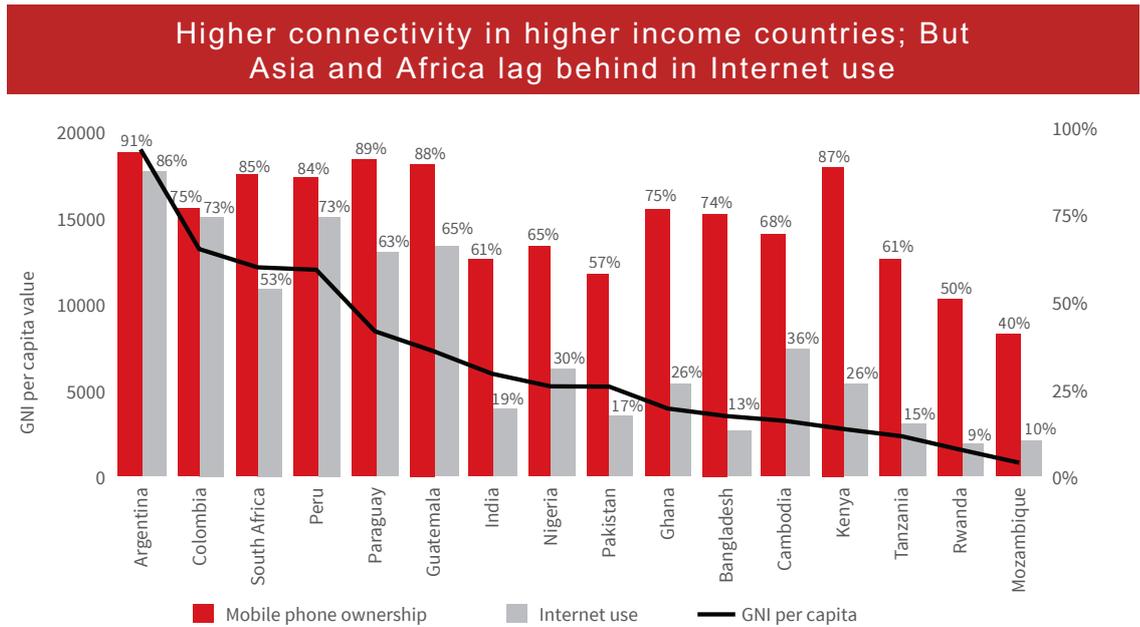


Figure 1: Mobile phone ownership, Internet use and GNI per capita

Source: RIA After Access Survey data, 2017; World Bank, 2018

Although South Africa’s mobile phone and Internet penetration are high compared to other African and Asian developing countries it does not perform as well when compared with countries in Latin America with similar incomes. With only half the population online, the potential of the Internet to drive social and economic inclusion in a developing economy is not met.

Mobile penetration and Internet use is broadly aligned with GNI per capita and representative of the gender gap too.

The general alignment of mobile phone ownership and Internet penetration with GNI per capita is broadly true of the gender gap also. Overall, the five Latin American countries surveyed, together with South Africa, are the richest among the countries surveyed and they show the lowest gender gap. South Africa performs particularly well in relation to mobile phone ownership with near parity, though with regard to Internet there is a larger gap of 12 percent. This is in stark contrast to the poorer African countries surveyed that reveal high gender disparities in mobile phone ownership but particularly Internet use.

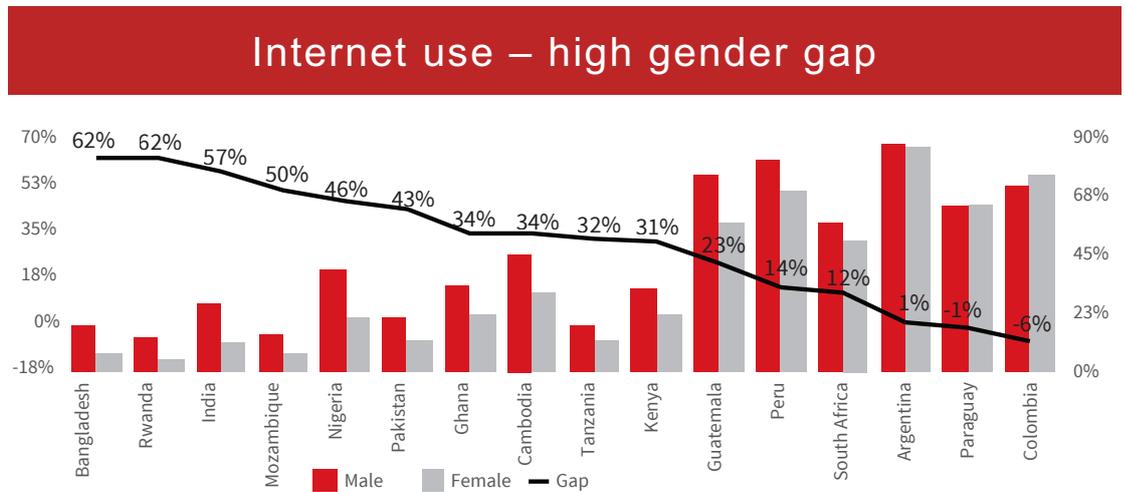


Figure 2: Gender disparity in Internet use

Source: RIA After Access Survey data, 2017

Digital inequality is even higher between dwellers of urban and rural areas, with less than half of the rural population not connected to the Internet. The portion of South Africans living in urban areas and using the Internet is 61%; higher than the 53% referenced in national statistics.

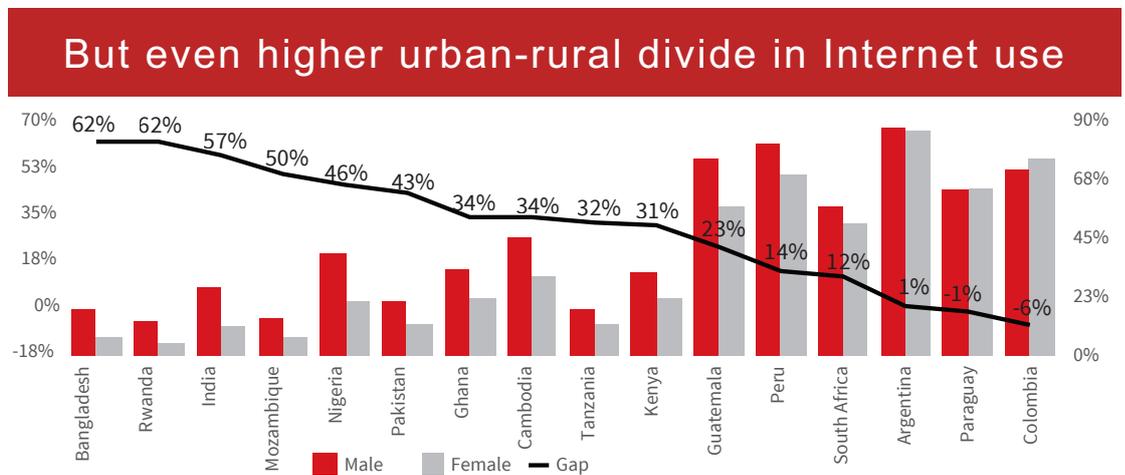


Figure 3: Urban-rural divide in Internet use

Source: RIA After Access Survey data, 2017

The increase in Internet use is driven mainly by a swelling appetite for video and over-the-top (OTTs) services. The latter are known as social media and communication platforms, such as WhatsApp, Skype, FaceTime and Facebook Messenger, that allow consumers to make voice and video calls using their mobile data at a much lower cost¹.

¹ This “lower cost” claim as made here applies only to voice calling since the high bandwidth consumption of video calling typically increases mobile data costs considerably.

Smartphones are drivers of Internet adoption in Africa with about 30% of mobile phones in Africa being smartphones, correlating strongly with the 28% Internet penetration figure.

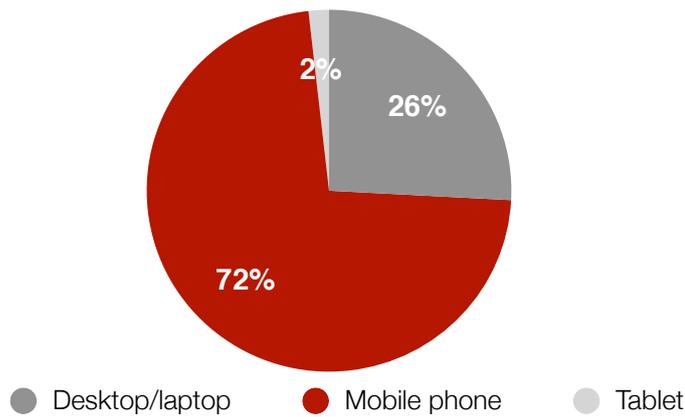


Figure 4: Population grouped by 'device used' to access the Internet

Source: RIA After Access Survey data, 2017

When asked about the activities they perform online, the majority of South African's (73%) declared that they mostly use the Internet to access social networks, while 44% access educational material, 30% perform work-related activities and 26% use the Internet to search for jobs.

Table 1: Activities performed online					
	National	Urban	Rural	Male	Female
Educational	44%	45%	42%	45%	43%
Social networking	73%	75%	68%	71%	76%
Work related	27%	30%	17%		
Shopping	10%	13%	4%		
Government	8%	7%	8%		
Job searching	26%	26%	26%		
Online banking	17%	21%	6%	32%	22%

Source: RIA After Access Survey data, 2017

The majority of South Africans use the Internet to access social networks and educational content.

The increased utility of smartphones correlates strongly with the demand existing within the youth demographic. About 81% of those aged between 15 and 24 are likely to access the Internet using smartphones; whereas people aged 25 and above, who are more likely to be employed and have an income that affords laptop and computer purchases, tend to access the Internet either at work or cafés.

Internet affordability

Although Internet-based services provide cheaper communication alternatives, data services and products are still unaffordable to almost half of the South African population. When asked what the factors that limit Internet use are, about 47% of South Africans stated that the Internet is too expensive to use. This limits the economic and social gains to be had from network operators investing in their

infrastructure to improve their network quality, coverage and access, which in South Africa has led to nearly 100% of the country being covered by 3G networks.

The Survey finds 50% of the population to not be connected to the Internet, and most of those people belong to the two lower-income groups (earning less than ZAR 7 167 per month), while all members of the wealthier two income groups are connected (see Figure 5).

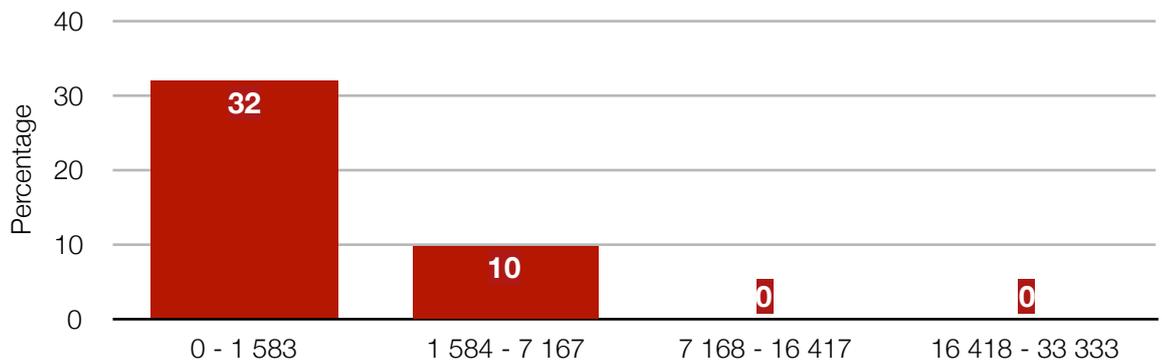


Figure 5: Distribution of individuals using the Internet across income groups (ZAR)

Source: RIA After Access Survey data, 2017

The poor living in urban areas are more likely to use the Internet than those who live in rural areas.

The Survey finds that the urbanised poor – those living in cities with income less than ZAR 1 583 a month – are more likely to use the Internet than the rural-poor. Interestingly, the Survey further discovered that those earning between ZAR 0–1 584 and the next-lowest income groups, those who live in rural areas are more likely to use the Internet than those who live in urban areas.

Table 2: No Internet access by location and income (ZAR)		
	0 - 1 583	1 584 - 7 167
Rural	40%	8%
Urban	27%	10%

Source: RIA After Access Survey data, 2017

Micro-work and mobile money

The use of mobile applications has grown exponentially. One such application is ‘M-Pesa’, which provides money transfer, financing and micro-financing services. It was launched in 2007 by Vodafone for Safaricom and Vodacom, the largest network operators in Kenya and Tanzania. Although it was initiated in Kenya, the platform has spread to 10 countries including South Africa. As of 2016, M-Pesa had around 30 million customers served by 287 400 agents.

With most South Africans banked, if underbanked, there has not been as much demand for M-Pesa services.

While M-Pesa has been a success in East African countries, M-Pesa never reached its target in South Africa. By 2015, only 76 000 people subscribed to it. The Survey shows that M-Pesa services are mostly used in Kenya (83%), Ghana (54%) and Tanzania (45%) while only eight percent of South Africans use M-Pesa’s services. The low uptake of M-Pesa’s services in South Africa can be attributed to low

demand as the South African population is highly banked. The Survey shows that 57% of South Africans have a bank account.

	M-Pesa	Bank account (ownership)
Ghana	54%	27%
Kenya	83%	34%
Nigeria	3%	34%
Rwanda	26%	28%
South Africa	8%	57%
Tanzania	45%	11%

Source: RIA After Access Survey data, 2017

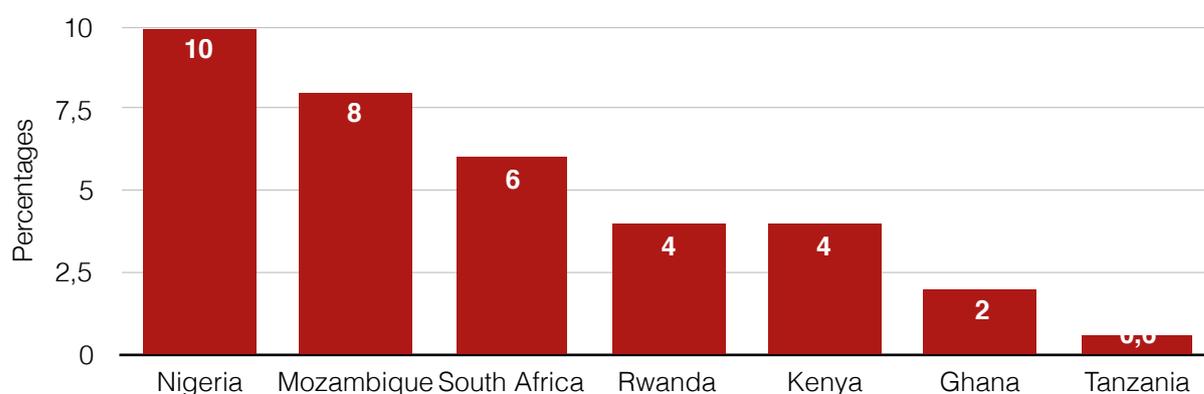
Micro-work platforms allow workers to choose and perform simple tasks online in exchange for payment. Even though these platforms have the potential to generate jobs for the unemployed, the RIA After Access Survey shows that their uptake is still insignificant: the micro-work penetration rate among surveyed countries is as low as 2%; among the Internet-using population, micro-work penetration is a little higher at 7%.

Even though micro-work platforms have the potential to generate jobs for the unemployed, their uptake is very low.

When focused on the group of Internet users, the Survey unveils Nigeria (10%) as the highest adopter of micro-work (where many of the users are graduates), followed by Mozambique (8%) and South Africa (6%) (see Figure 6). The Survey shows that the most common micro-work in South Africa is performing tasks online (45%), such as “transcribing and video tagging”. The second largest activity is “cleaning services” (30%), while 14% drive for online e-hailing services such as Uber, Taxify or Lyft.

Figure 6: Percentage of micro-work participation in the surveyed countries

Source: RIA After Access Survey data, 2017



Small enterprise use of ICTs

To get an indication of the use of ICTs among small enterprises, RIA hitched its Small Business and Informal Sector Survey onto its ICT Access and Use Survey conducted at the household and individual levels. As such, it is not representative

of all small businesses and the informal sector. With a sample of just less than 400, of which 57% are rural and 43% urban, it nevertheless provides meaningful indications of what is happening in the small business and informal sector environments regarding ICTs.

Trading is a common commercial activity among small and informal businesses in South Africa (68%). The Small Business and Informal Sector Survey shows that these enterprises sell goods which are typically available in big retail shops (such as SPAR, Pick and Pay and Shoprite), 8% provide services (such as Internet access and gaming) and six percent run small-scale production lines. Only 33% of these businesses are registered with local/municipal authorities, while 26% pay local taxes and are registered for VAT.

Other than generating employment, the South African Government recognises small enterprises as a driving force for economic growth – it has developed a number of policies aimed at strengthening this sector. However, the Survey shows that most small enterprises use traditional tools to stay competitive: only 23% of small enterprises use the Internet in their business process, procurement and management. Although mobile phone penetration is high among small enterprise owners (93%), mobile ownership by small enterprises is far lower at 18%.

The negative assessment of the Internet's use and a lack of affordability when trying to access it are the main barriers to its adoption, according to the 77% who do not use the Internet in their businesses. Further, more than half (57%) of those who do not use the Internet in their businesses do not see the need to for it, while 24% stated that the Internet is too expensive.

In other surveyed countries, such as Nigeria, the Survey shows that small businesses and informal sector enterprises provide women with an opportunity to generate income and support their families; the opposite is true in South Africa. Most enterprises in the informal sector are owned by males (70%), while female ownership of these enterprises is 58%. This result is consistent with the 2017 Household and Individual Survey which shows that South African women are reluctant to start up their own business.

Of those who use the Internet in their business, about 10% use emails to place orders and communicate with their suppliers, while 5% use social media to this end. In terms of managing customers, 7% of Internet users communicate with their customers through either email or social media platforms.

Policy implications and recommendations

What is clear from a supply and demand-side analysis the South African is that even if prices were effectively regulated based on existing business models, licensing frameworks, and spectrum valuing and use, a vast number of South Africans would still not be able to afford to use the Internet in any sustained and meaningful way. With 50% of people offline, current universal access models aimed at filling in the last 10 or 20% of the population are not going to have a significant impact on digital inequality (see [RIA Policy Brief 1, 2018](#)).

Negative perceptions of the need to use the Internet, as well as affordability, are the main inhibitors of Internet use among small businesses and the informal sector.

Secondary taxes on the sector through the universal service fund have been counter-productive, placing a premium on the cost of communications without the effectual use of them to ensure pro-poor outcomes. Alternative access strategies must be considered in the context of the increasing availability of Internet-enabled devices and multiple points of public access and way of supporting this from provisioning. Leveraging of these trends to provide citizens with access to complementary bandwidth and services to enable digital inclusion.

In a digital economy, ICT can no longer be viewed as a sectoral policy issue alone. Rather than narrow percentage-of-revenue contributions for sector development, that have been ineffectually used, and not used, the value operators generate in the digital economy should be considered more broadly. The big data they produce for example is of far greater public value to the country than the secondary taxes they generate for distribution in the sector. With time delays to accommodate the confidentiality of data in a competitive market access to aggregated, anonymised big data could be regulated as a public good. This can be used not only as an evidence base for the sector planning but for national planning across sectors, such as transport for example, for national development.

Such policy needs to be framed in the context of an open data policy which will enable the free flow of information required for more effective planning by government and service delivery entities, development of local language and relevant content and increase the uptake of online rather than face-to-face transactions, and create opportunities for entrepreneurialism.

This requires finalisation and implementation of legislation and guidelines in the areas of cybersecurity, privacy, protection of data and access to information to create a secure and trusted environment for all citizens not only those with the resources to safeguard their rights. Stimulating demand rather than supply side driven initiatives alone, can create conditions for Internet uptake and local innovation.

To ensure this is more even across the population Government will have to address the human development challenges that modelling of the data shows constrains access and use. Education and the correlated factor of income are the primary determinants of Internet access.

The sector can be unleashed by creating and enabling environment for investment, improved economies of scale and scope, by excise duties on equipment and devices for low income users and communities, removing unproductive regulatory transaction costs, secondary taxes and creating fair competitive environment. To do so:

- review all excise duties on feature and entry level smart phones;
- must not only review USASSA but entire USF and the premium secondary taxes placed operators which contribute to high cost of services;
- must enable the public and private extension of free public Wi-Fi to towns and rural areas as proposed by SA Connect with the connection of all public buildings;

- implement SA Connect to drive investment into under-serviced areas through public demand aggregation and the creation of incentives through anchor tenancies, is already well-articulated in the plan;
- Government must prioritise affordable access to communications by ensuring more optimal co-existence of licensed and unlicensed spectrum that will optimise spectrum for diverse needs in the country by different types of commercial and non-commercial service providers remove;
- on this basis it must allow ICASA urgency to release and assign current high demand LTE spectrum to allow operators to provide 4G services on more optimal bands that will make services more cost effective;
- ICASA must assign licensed spectrum required for the evolution of existing services at a competitively determined (efficient use) price to ensure the build-out of capital-intensive networks benefitting from economies of scale and devices (with spectrum trading to correct value/use errors);
- secondary use of spectrum should be made available such as dynamic spectrum assignment for deployment in rural areas, which can be delivered at a fraction of the price of GSM technologies;
- nationally allocated spectrum not in use in should be made available through low cost or licence-exempt spectrum for communities, non-profit providers or micro-networks;
- ICASA must regulate wholesales in markets where there is dominance as this is critical to creating the fair and competitive environment required to produce lower prices, better quality and range of services;
- create incentives for infrastructure-sharing and support complementary investments in broadband networks;
- review wholesale regulation in data market of facilities and bandwidth will reduce input costs for service providers and private networks; and
- identify short and longer term strategies to overcome human development constraints on digital inclusion - not only to enable consumption but also production.

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