

**FREE WIFI
HOTSPOT**
500MB per day.



Digital Inequality in South Africa

Alison Gillwald, Executive Director, Research ICT Africa
Adjunct Professor: Nelson Mandela School of Public Governance
University of Cape Town

APC, CRASA workshop Durban 2018

IDRC  **CRDI** .zadna

7 ICT indicators, 6 targets under SDG Goals 4, 5, 9,17

- ▶ Target 4a: Proportion of schools with access to the Internet for pedagogical purposes
- ▶ Target 4a: Proportion of schools with access to computers for pedagogical purposes
- ▶ Target 4.4: Proportion of youth/adults with ICT skills, by type of skills
- ▶ Target 5b: Proportion of individuals who own a mobile telephone, by sex (ITU)
- ▶ Target 9c: Percentage of the population covered by a mobile network, broken down by technology (ITU)
- ▶ Target 17.6: Fixed Internet broadband subscriptions, broken down by speed (ITU)
- ▶ Target 17.8: Proportion of individuals using the Internet (ITU)



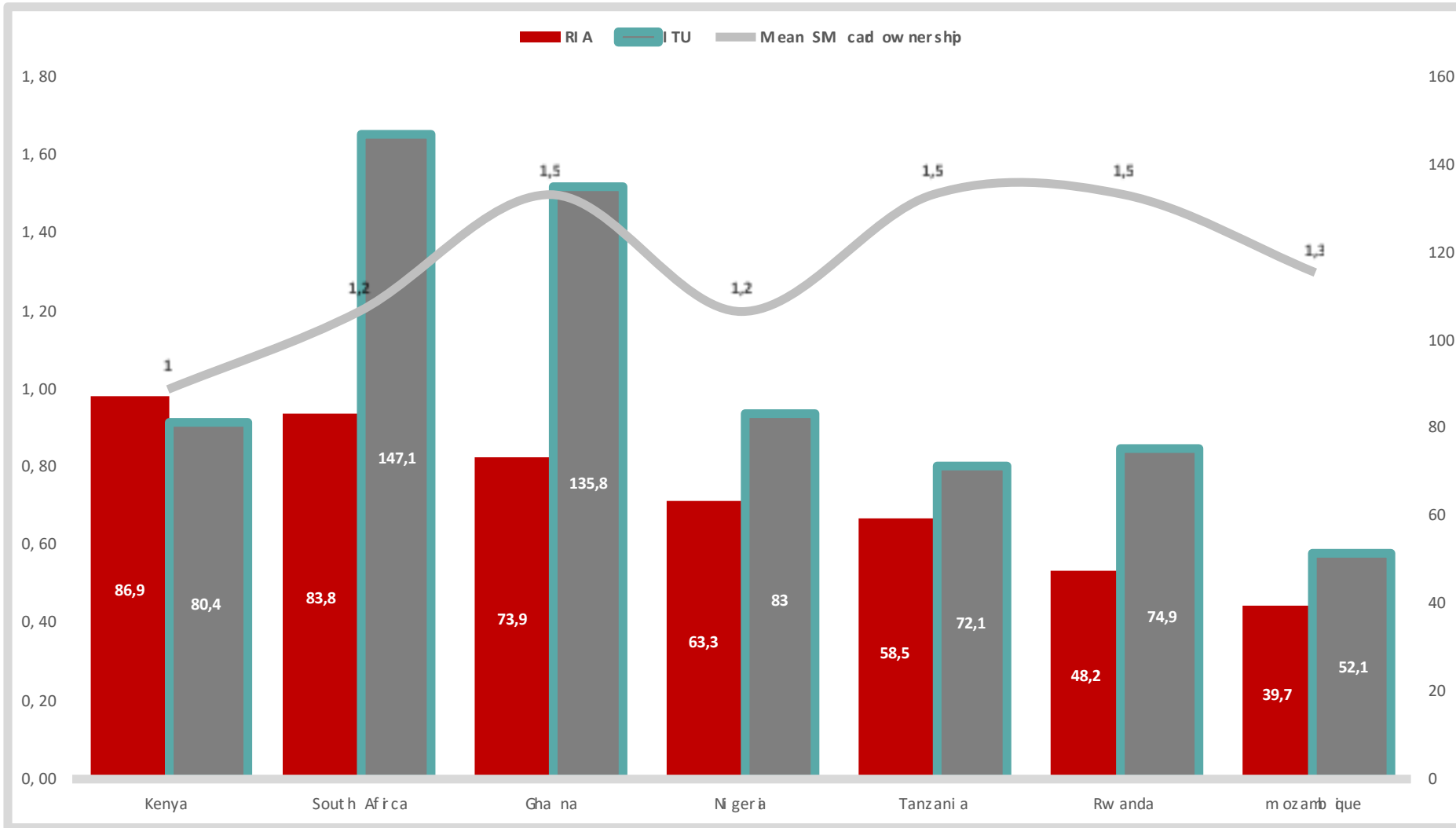
We do not have the official data to know our progress

We do not have the official data to know where we are or progress to SDG targets.

Table 1: South Africa's performance on ICT indicators in relation to the SDGs

SDG GOALS AND TARGETS	INDICATOR PERFORMANCE	SOURCES
1.4) and 9.1) Households with broadband Internet access	11%	After Access Survey, 2017
4.4) Individuals with ICT skills	Unknown	
5.b) Individual mobile phone ownership	84%	After Access Survey, 2017
9.c) Broadband Internet prices (1GB of prepaid mobile data)	USD 8.28	RAMP Index, Q2 2018
9.c) Mobile network population coverage	3G: 99% 4G: 80%	Annual reports: Vodacom, 2018
	3G: 98% 4G: 80%	Annual reports: MTN, 2018
16.10) and 17.8) Individuals using the Internet	52%	After Access Survey, 2017
17.6) Fixed Internet broadband subscriptions	2%	ITU, 2017
17.8) International Internet bandwidth (bps per inhabitant)	263 029.93 bps	ITU, 2017

Supply vs Demand-side indicators what's the story?



- ❖ Active SIMS vs Unique subscribers.
- ❖ Disaggregation by gender, income, education, location.

How does South Africa compared with other African countries (35th out of 49)

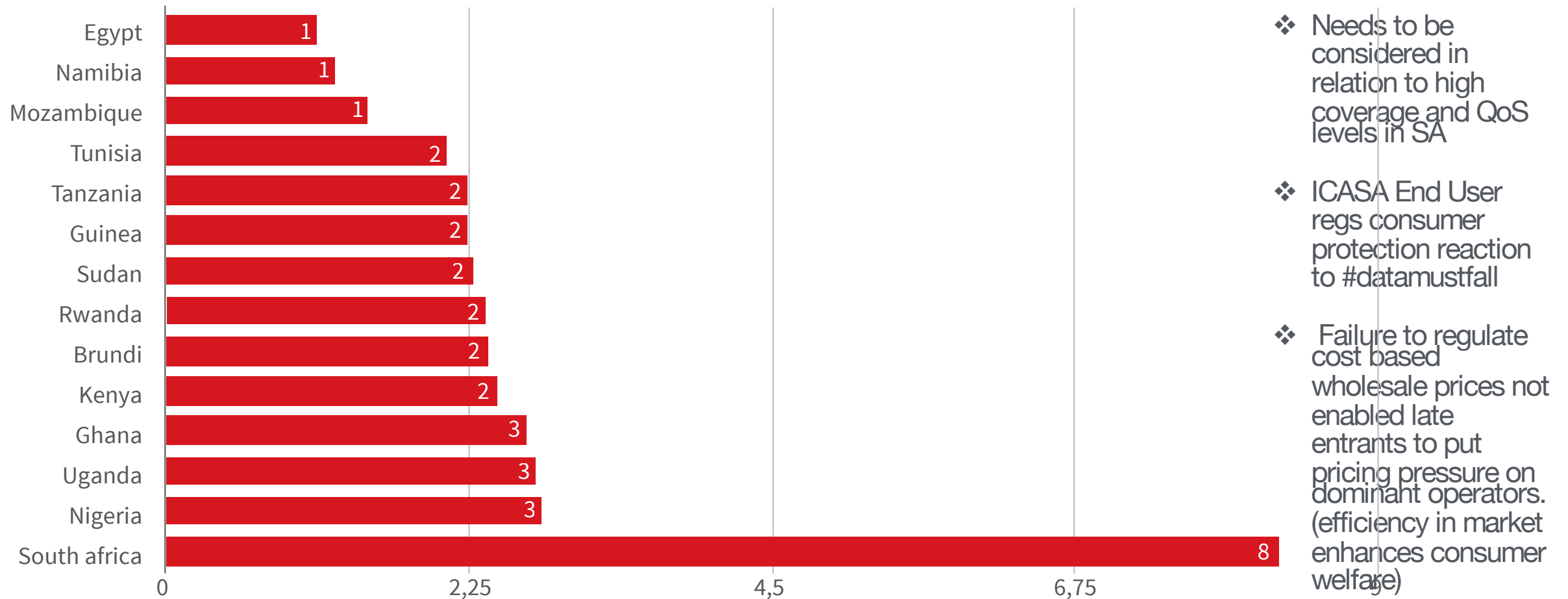
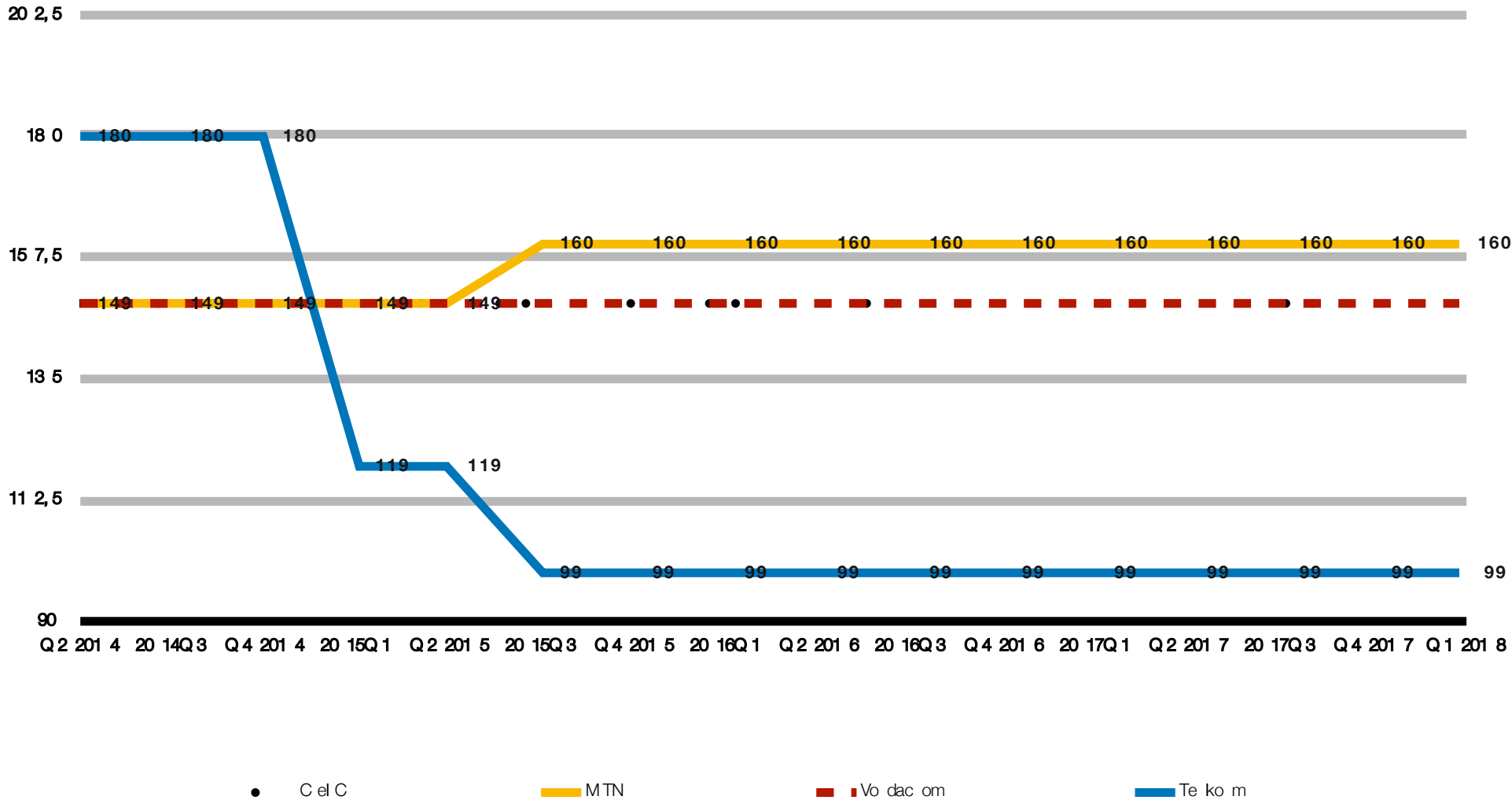


Figure 8: SA's cheapest prepaid mobile 1GB baskets compared to Africa's top performers (USD)

Source: RAMP Index, 2018

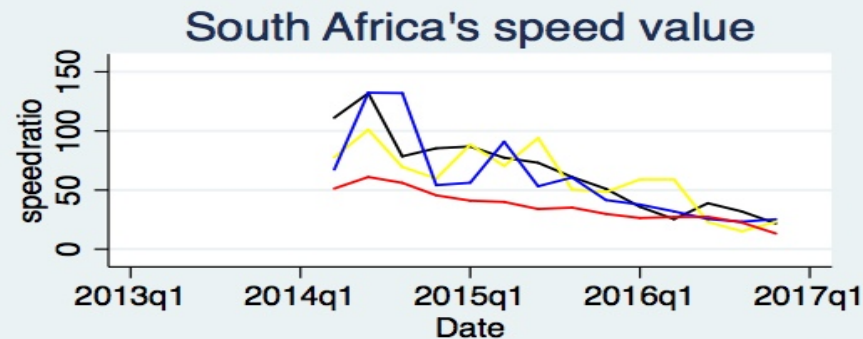
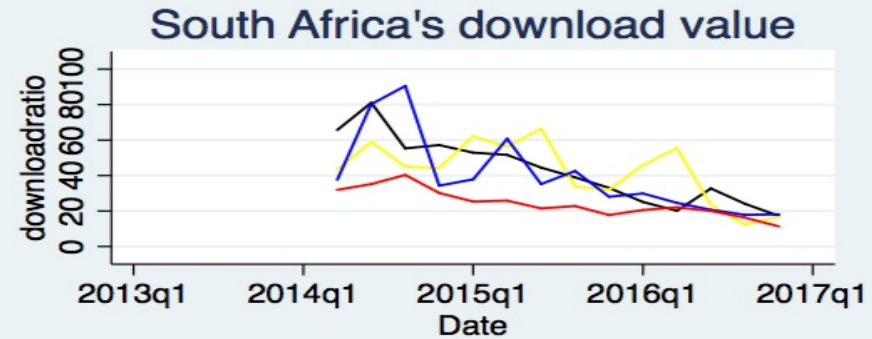
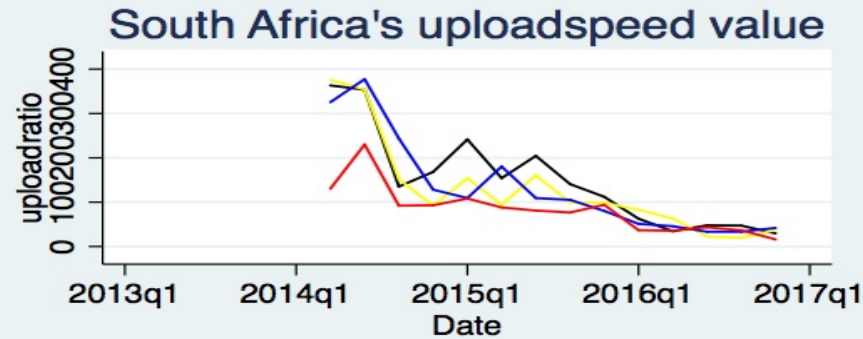
Data prices not going down, subscribers' not switching to cheaper operators



MTN offers the cheapest 500 MB data bundles for daily (ZAR 50) and weekly (ZAR 55) periods, but Telkom again offers the cheapest 500 MB monthly bundle at ZAR 69. Similarly, MTN offers the cheapest 1 GB weekly bundle (ZAR 70) but does not compare well in the 1 GB monthly comparison. Vodacom's ZAR 149 promotional package (2 GB) offers the most value with an effective rate of ZAR 74.50 per GB, but Telkom's 1 GB is still the cheapest at a nominal price of ZAR 99.

➤ Rain now offers the cheapest tariffs across the board: a 100 MB bundle will cost a customer ZAR 5, significantly less expensive than the previously lowest ZAR 29 100 MB offering of Cell C, MTN and Telkom. Rain's 500 MB costs less than half that of Telkom's 500 MB bundle and also out-competes its 1 GB bundle price by being just about half the cost (ZAR 50).

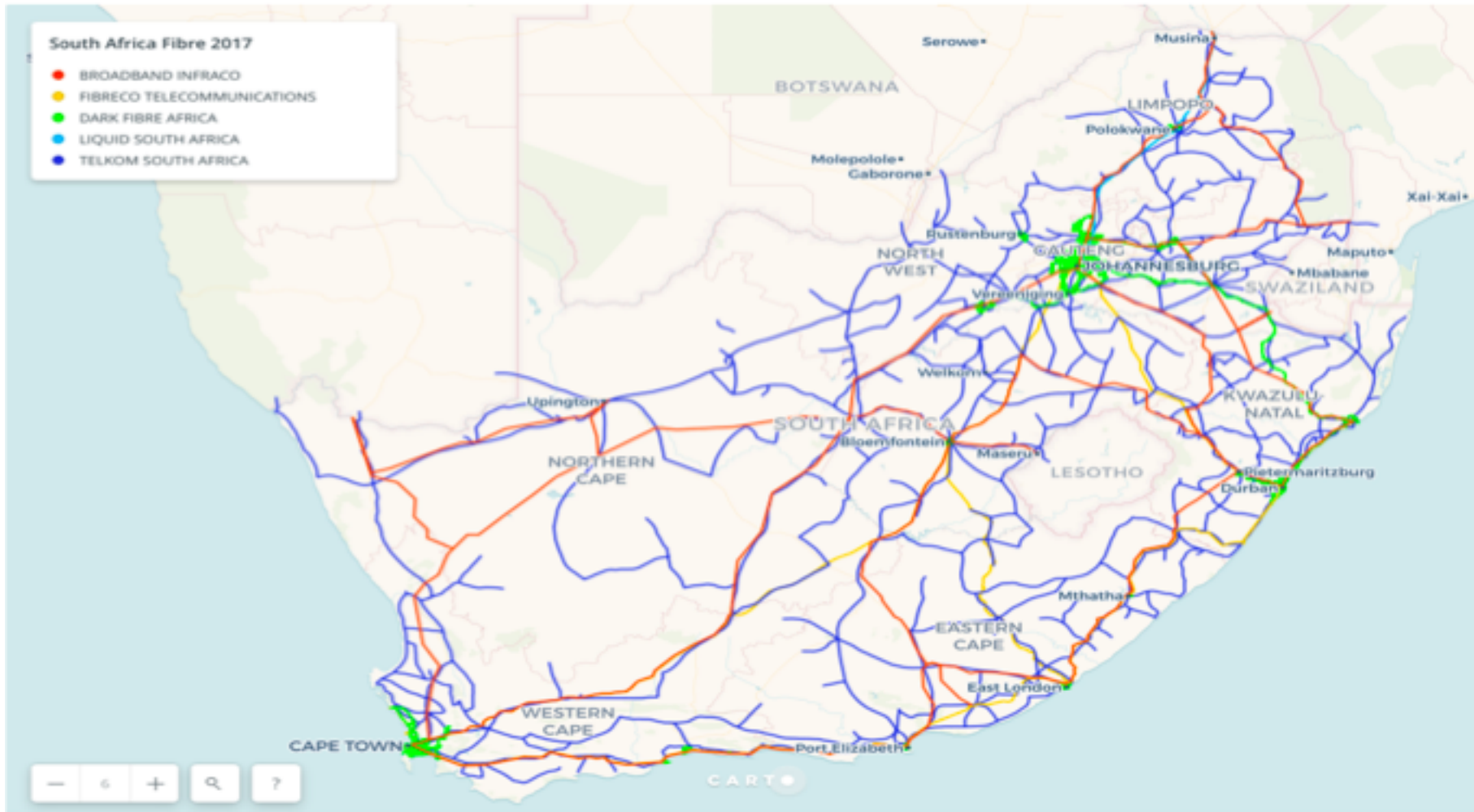
Quality adjusted prices, quality matters when assessing data market



Represents the ratio between the 1GB data basket and the average download and upload speeds, shows that the two dominant operators Vodacom and MTN offer higher quality, respectively.

In the same period Telkom's quality was the lowest. However, since Q1 2016, it seems that smaller operators improved their quality, catching up with dominant operators in Q2 2016 (in line with increased network investments). Vodacom SA's high prices are accompanied by higher Internet speeds, compared to MTN SA and Cell C, which are performing less well on the measure based on average download/upload speed (in Mbps) divided by 1GB basket costs.

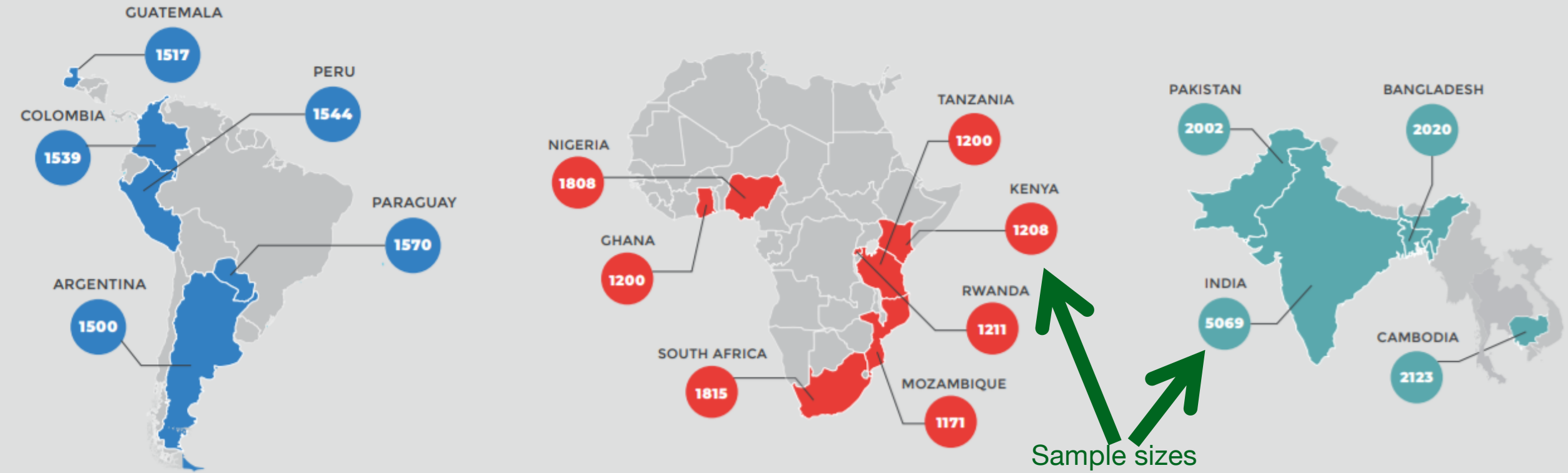
...coverage too



Map shows five major operators: Broadband Infraco SOC Limited, FibreCO

Telecommunications, Dark Fibre Africa, Liquid South Africa and Telkom South Africa. From the map, Telkom South Africa has the most comprehensive fibre coverage, reaching most parts of the country, while other operators like Dark Fibre Africa only provide services in major towns/cities.

Nationally representative surveys of ICT access and use by households & individuals aged 15-65; In 16 developing countries; Data represents 30% of the global population; 28,900 face-to-face interviews; +/-3 margin of error



Sample

- ▶ Two sampling frames were available for South Africa based on the 2011 census: Enumerator Areas (EAs) and Small Layers (SAL)
- ▶ Out of 90, 425 EAs, a total of 75 EAs were sampled using SRS 47 urban areas and 32 rural areas were sampled (60% urban : 40% rural split)
- ▶ The target sample of 1800 was spilt in to 60% urban and 40% rural, yielding a target of 720 rural and 1080 urban households
- ▶ Household and individual weights were then constructed based on the census and world data on urban and rural, male and female proportions

Table 1: SA EA sampling	Rural	Urban	Total
Sample of households	720	1080	1800
HHs per EA	24	24	24
Sampled EAs	30	45	75

Mobile phone ownership, Internet use tracks GNI per capita

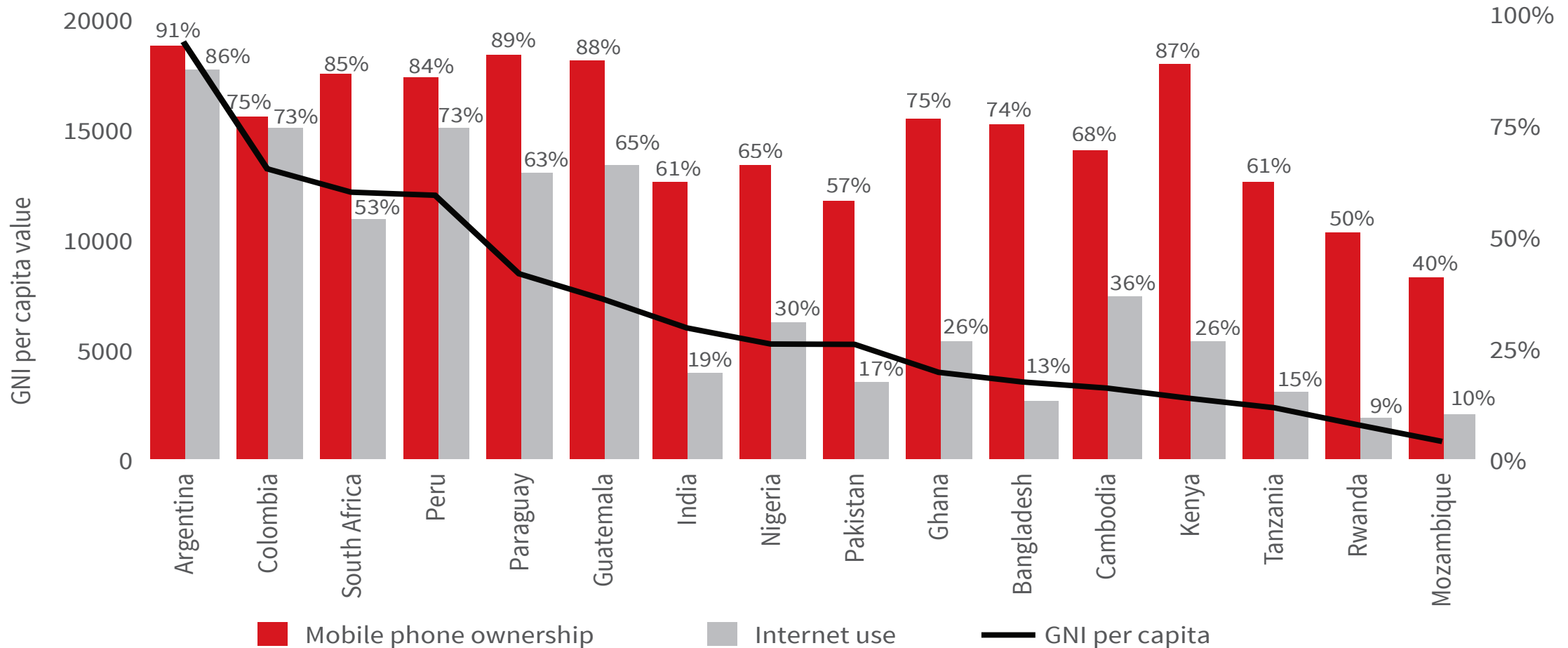


Figure 1: Mobile phone ownership, Internet use and GNI per capita

Sources: RIA After Access Survey, 2017; World Bank, 2018

Gender gap in Internet use also track GNI

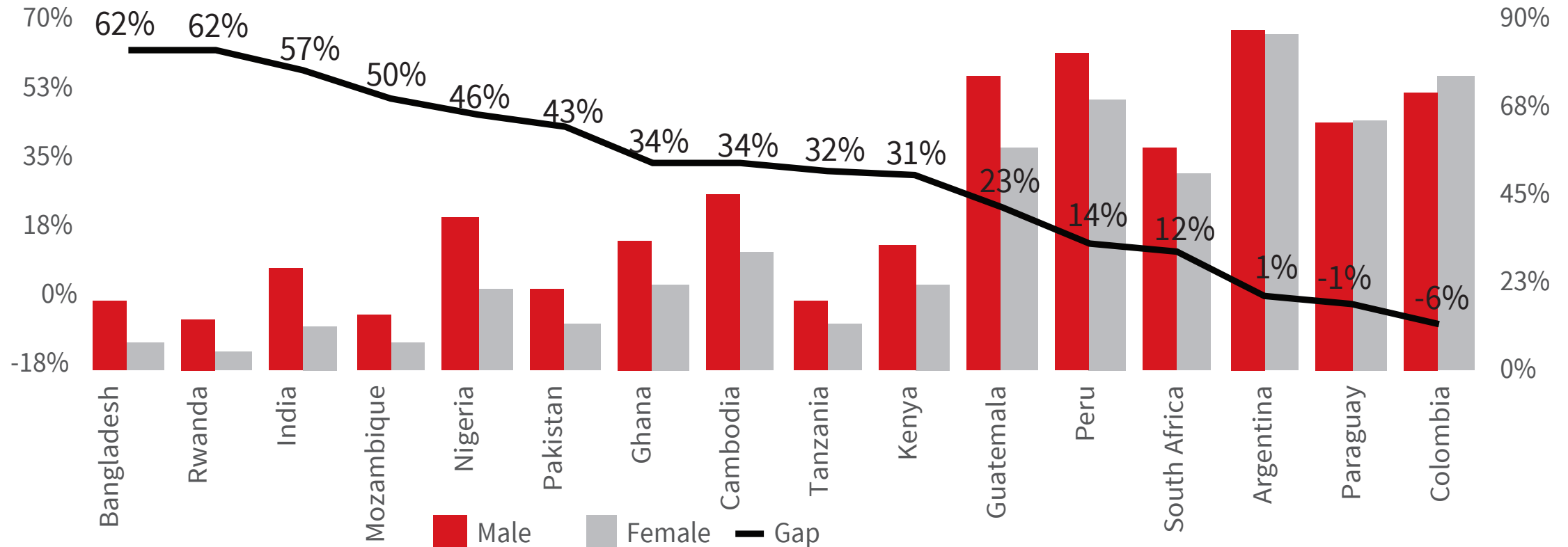


Figure 2: Gender gap in Internet use

Source: RIA After Access Survey, 2017

Urban-rural Internet divide than gender divide (but overlapping)

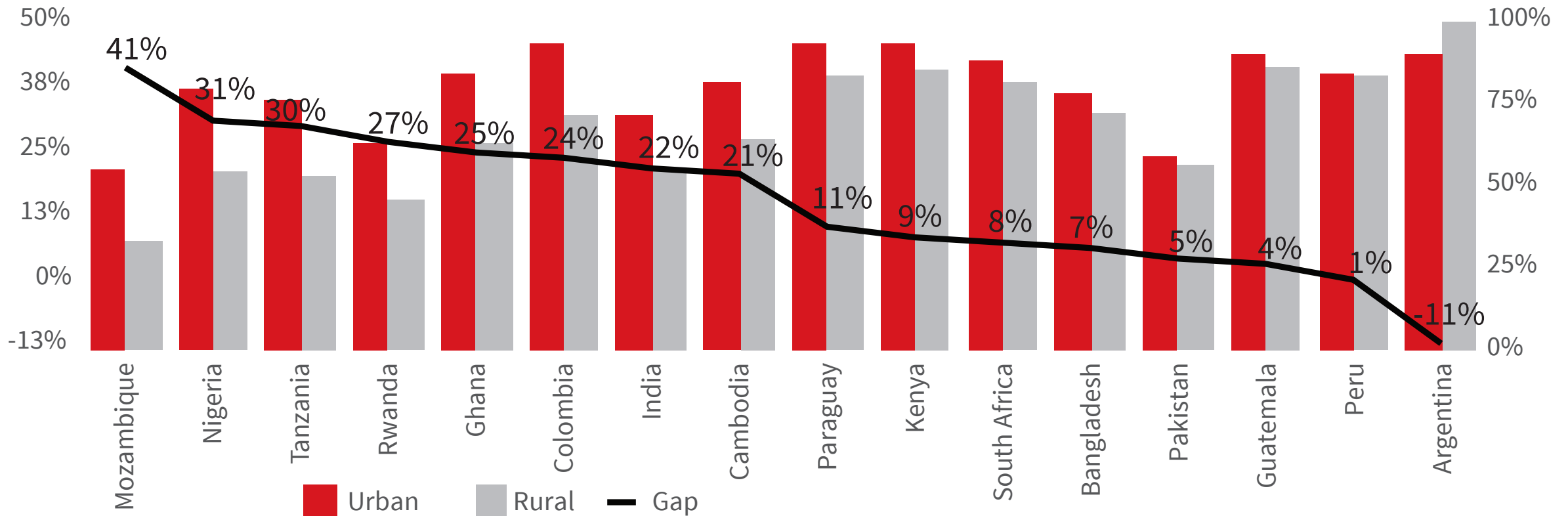
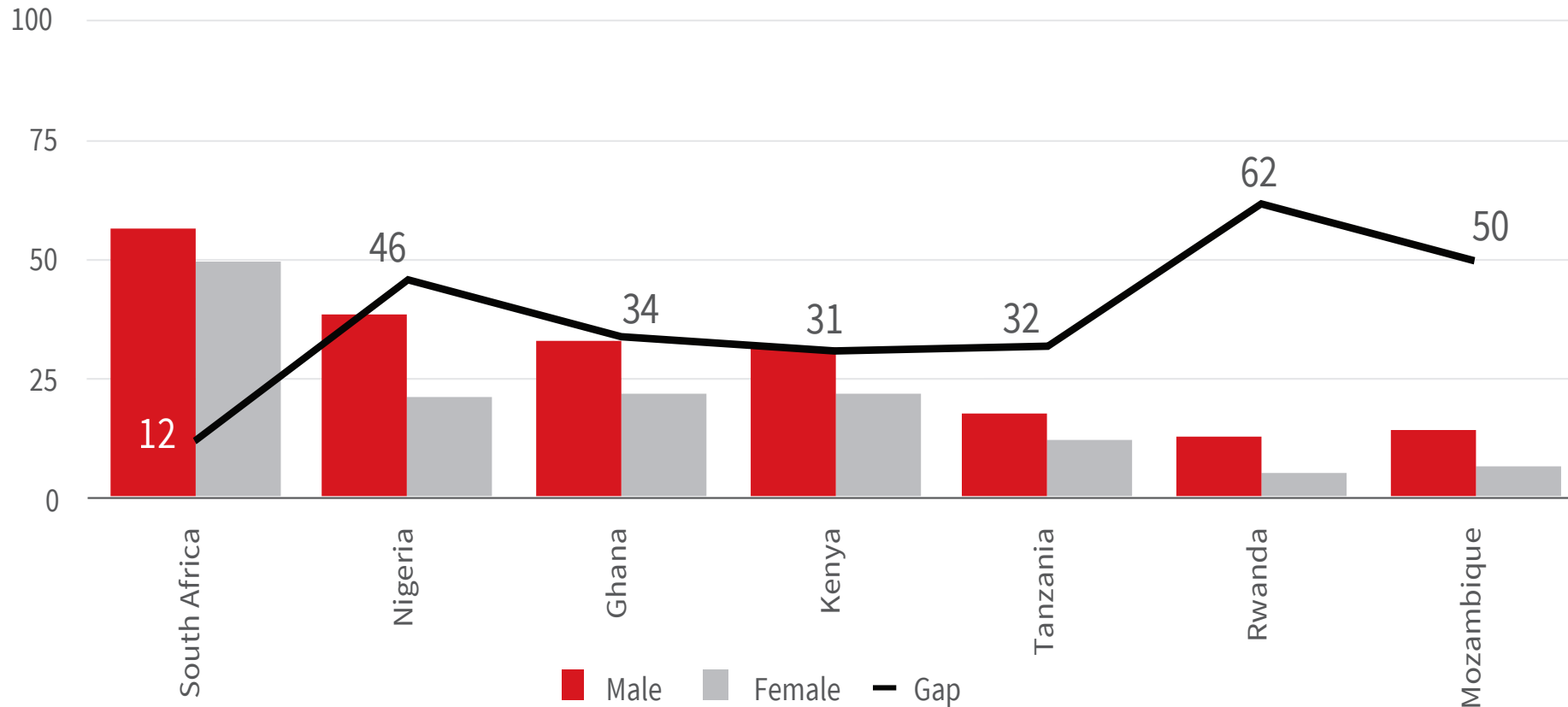


Figure 3: Urban-rural divide in Internet use

Source: After Access Survey, 2017

Gender gap in mobile phone ownership



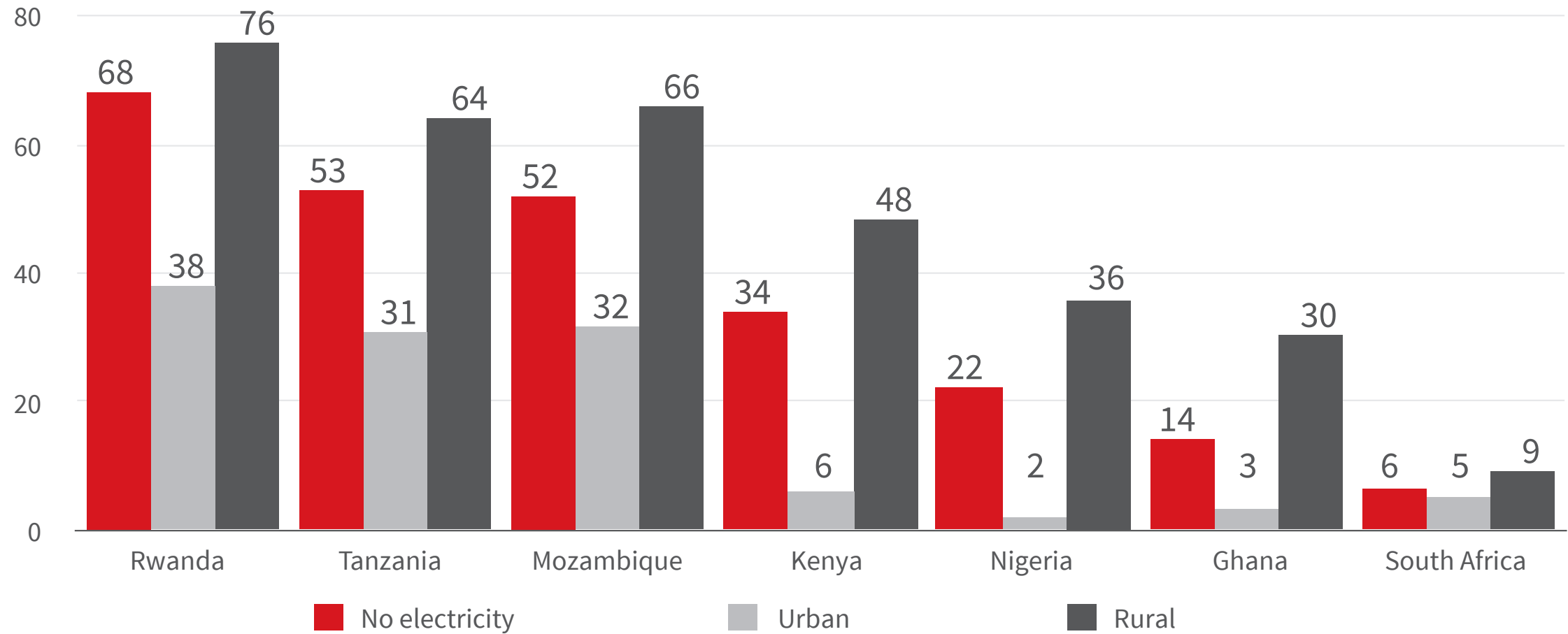
- ❖ As markets become saturate greater parity in ownership
- ❖ Smaller gap than Internet
- ❖ But other cultural, demographic, urbanisation, factors at play

Figure 21: Gender disparity in Internet use in South Africa and other African countries

Source: RIA After Access Survey data, 2017

Major barrier to adoption in rest of Africa is lack of power

South Africa performs very well compared to global south



ICT ownership

Despite lack of policy implementation and effective regulation ICT take-up strong

Table 12: Summary of ICT access

	2008	2012	2017
Household with fixed line	18%	18%	8%
Household with a television	71%	78%	80%
Household with radio	78%	62%	68%
Household with desktop	14%	24%	9%
Household with laptop	14%	24%	17%
Household with tablet	5%	20%	15%
Household with Internet	5%	20%	11%

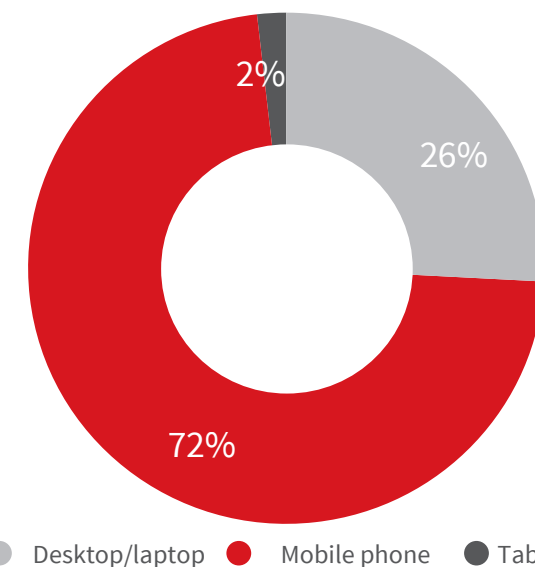


Figure 23: Population grouped by 'device used' to access the Internet

Source: RIA After Access Survey data, 2017

Source: RIA ICT Access and Use Surveys, 2008, 2012, 2017

Ownership and use of ICTs by income

Digital paradox that more people come online greater inequality there is:

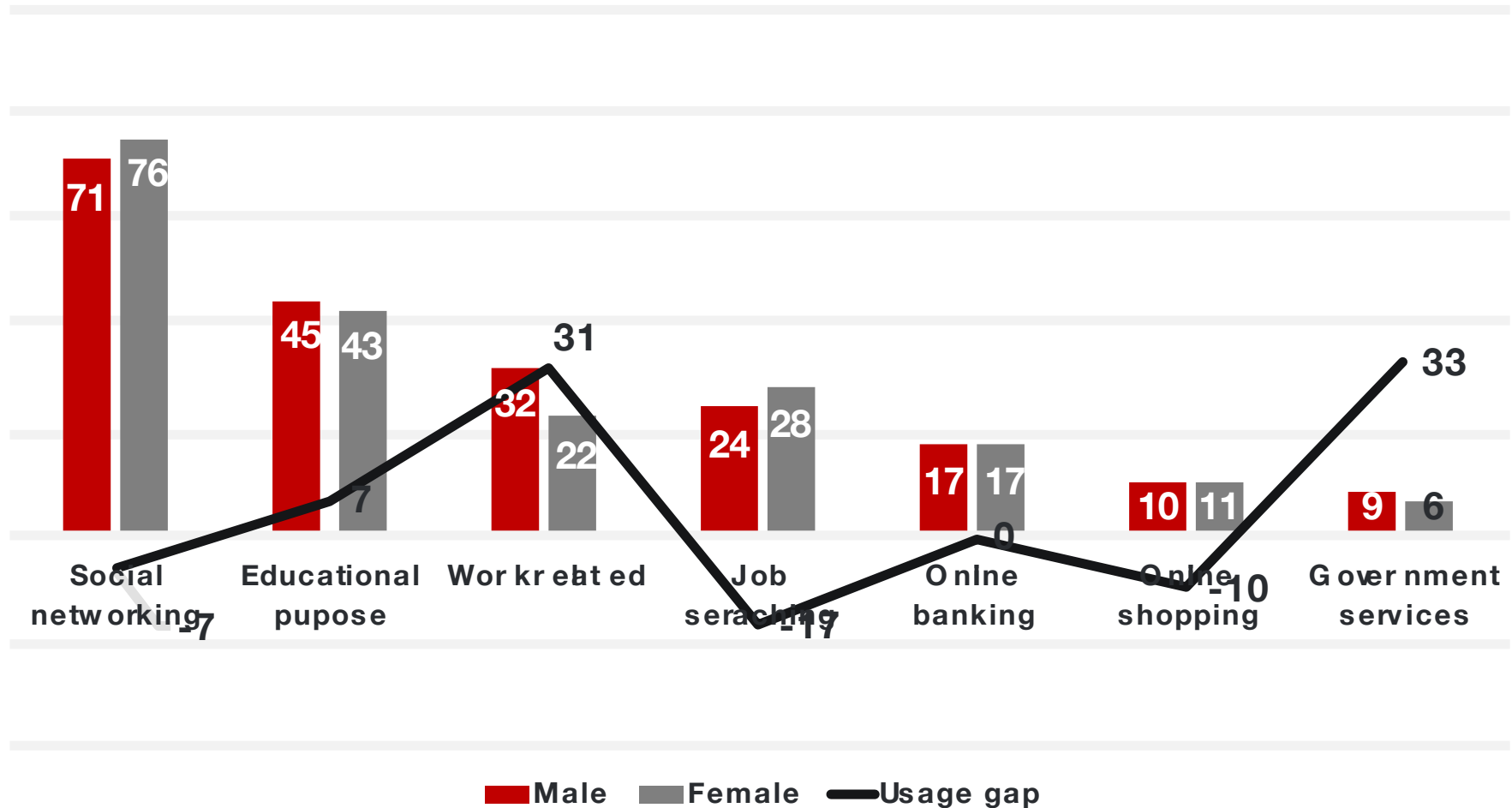
INCOME (ZAR)	MOBILE PHONE	SMARTPHONE	INTERNET
0 – 1 583	82%	45%	51%
1 584 – 7 167	81%	38%	37%
7 168 – 7 167	95%	74%	74%
7 168 – 1 6418	100%	93%	98%
16 419 – 33 333	100%	100%	100%
33 334 – 57 333	100%	100%	100%
57 334 – 123 417	100%	100%	100%
>123417	100%	100%	100%

Source: RIA After Access Survey data, 2017

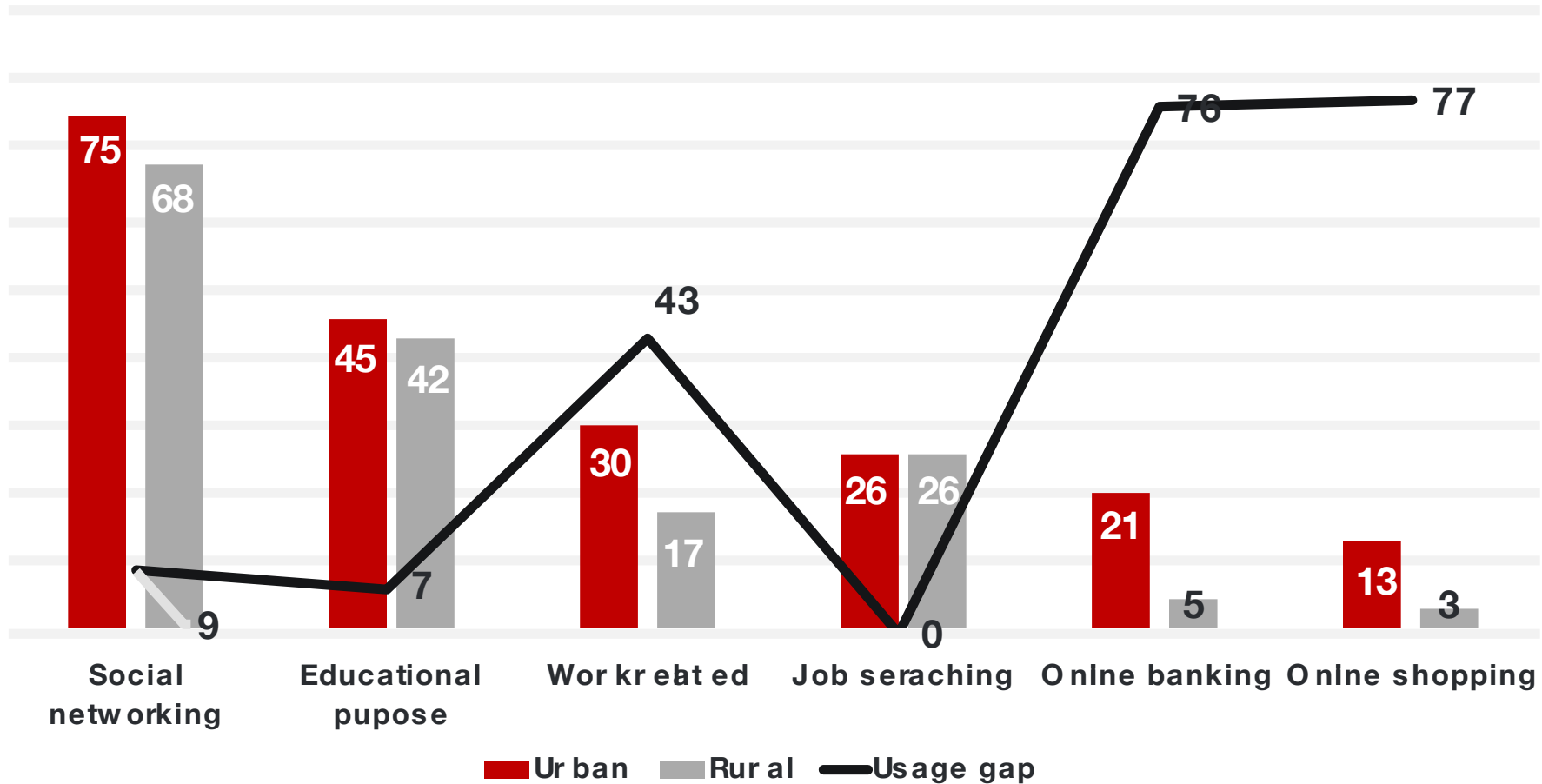
Online activities



Gender gap in Internet activities



Urban-rural gap in Internet activities



Reasons for not using the Internet

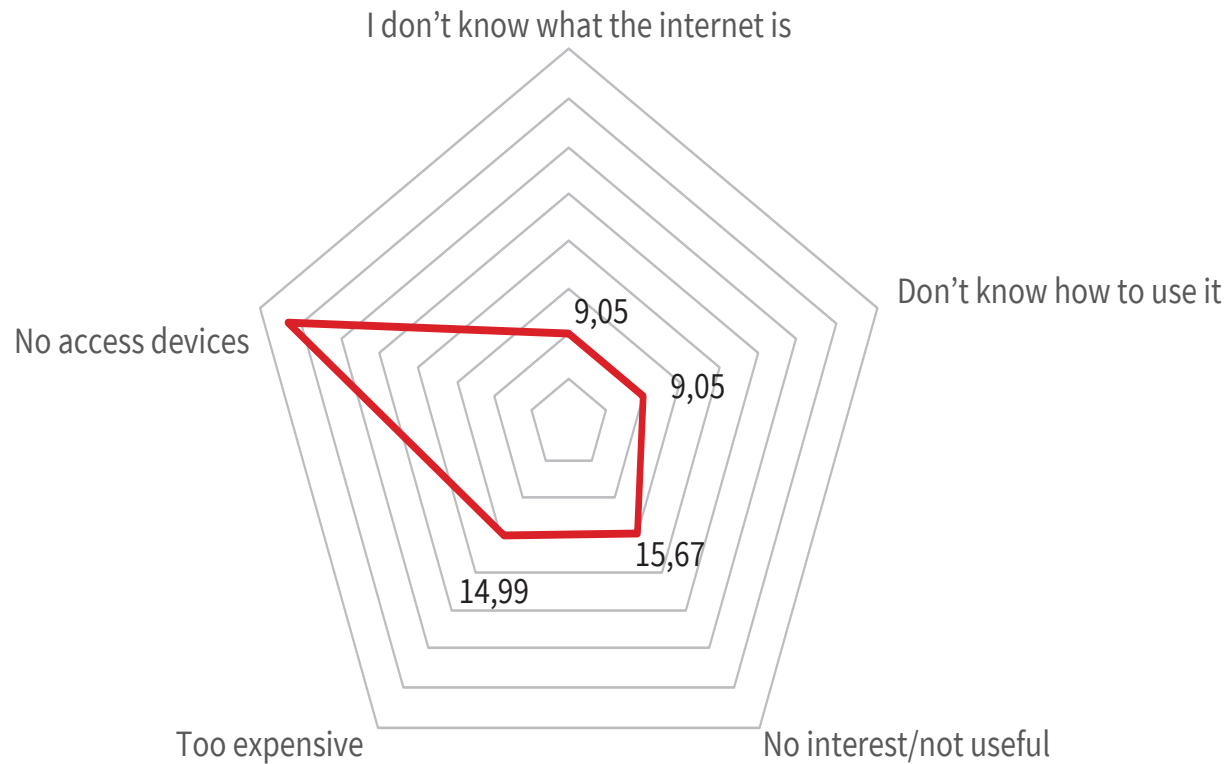


Figure 25: Reasons for not using the Internet

Source: RIA After Access Survey data, 2017

How does South Africa compare with African countries in financial inclusion?

Poor uptake in countries with highly regulated financial services, or well banked

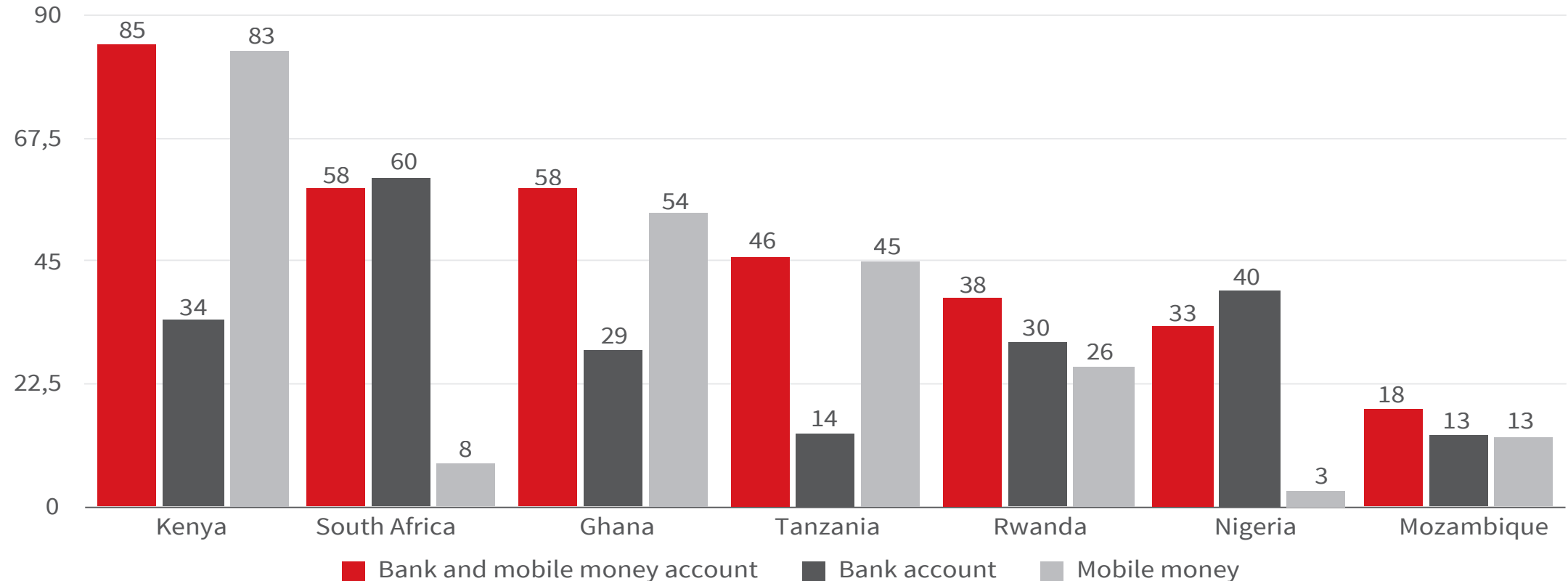


Figure 26: Account ownership in seven African countries

Source: RIA After Access Survey data, 2017

Very few Internet users doing platform work

In Africa mostly database outsourcing of manual labour

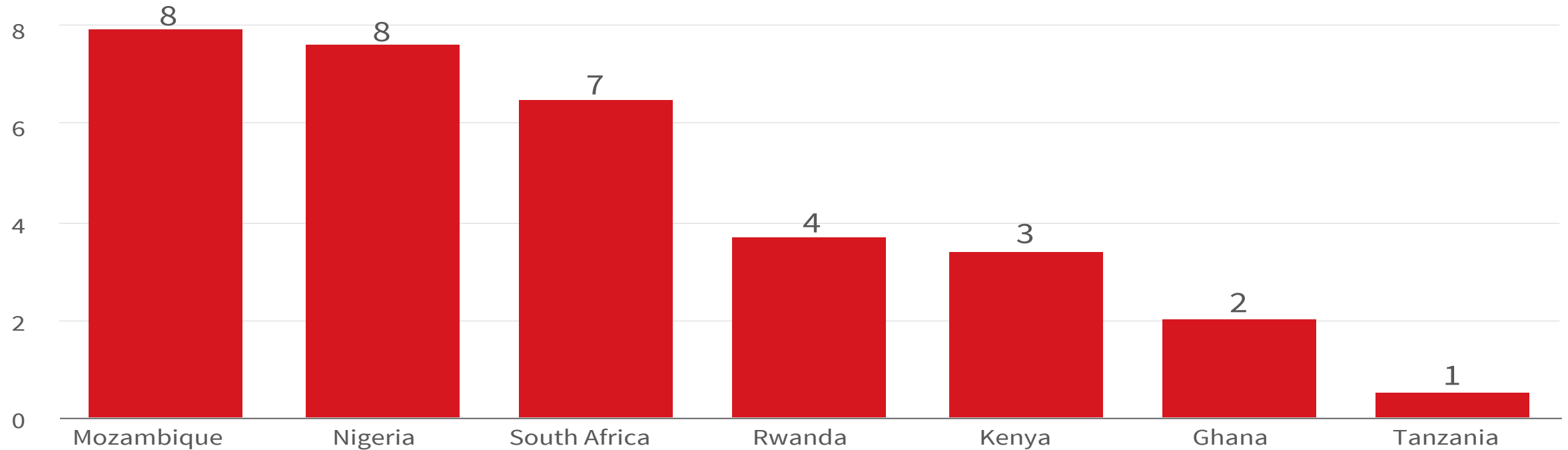


Figure 27: Proportion of Internet users engaged in microwork across countries

Source: RIA After Access Survey data, 2017

Recommendations

- ▶ **Review all national licensing, spectrum and USF models** and strategies – develop alternatives based on realities of extreme inequality
- ▶ adopt wider digital economy approach – create **open data, access to big data**
- ▶ **remove all excise duties** on feature and entry level smart phones;
- ▶ enable **public and private extension of free public Wi-Fi** to towns and rural with the connection of all public buildings;
- ▶ **implement SA Connect to drive investment into underserviced areas** through public demand aggregation and creation of incentives through anchor tenancies
- ▶ more optimal co-existence of licensed and unlicensed spectrum that will optimise spectrum for diverse needs in the country
- ▶ 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** (with spectrum trading to correct value/use errors);
- ▶ **secondary use of spectrum should be made available** 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;
- ▶ create incentives for infrastructure-sharing and support complementary investments in broadband networks;



A few more critical interventions

- ▶ 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.

Thank You

Research made possible



.zadna

omothobi@researchictafrica.net

www.researchictafrica.net

Download paper [here](#)