

Inclusive development & digital transformation in Africa

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Content

Challenges of evidence–based policy formulation and safeguarding public interest outcomes in increasingly globalised and complex environment

- ▶ ICT ecosystem and digital inclusion and equality
- ▶ Harnessing the economic and social impacts of the Internet
- ▶ Changing environment – voice to data, complexity,
- ▶ Regulation, investment and innovation - supply side
- ▶ Evidence – data - supply, demand, big – as public good
- ▶ Cross cutting nature – high levels of state co-ordination
- ▶ Beyond Access barriers – demand stimulation
- ▶ Wider issues of affordability and new forms of access
- ▶ Localisation and local content
- ▶ Skills development – e-literacy to engineers, lawyers, coders, economists – knowledge economy

...To complex ICT ecosystem

Internet as a global distribution network, stimulated by convergence between media, telecommunications and IT, facilitated the provision of content (audio visual) over converged IP networks, across multiple devices, with layers of governance at the international, regional and national level.



Changed market conditions

- ▶ So dynamic old measurement instruments no longer appropriated especially for predominantly pre-paid mobile market in Africa
- ▶ Saturated voice markets shifting to data
- ▶ Introduction of low-end smart phone driving data demand
- ▶ Declining revenue from traditional services, data revenues growing
- ▶ Operators fear becoming ‘dumb pipes’
- ▶ Multiple new business models emerging from data competition to retain and attract new customers
- ▶ Zero-rated services, social media bundles, blended bundles, build-your-own-bundle.
- ▶ Multiple user strategies to access and use Internet – substituted voice and text data services, public wifi for updates, U-tube.
- ▶ More users, more devices, more services, more demand vs amplified inequality – access, intensity, and capabilities.

Complex adaptive systems/regulation

- ▶ ICT ecosystem characterised by exponential technological development and increasing dependency on connectivity for positive social and economic national outcomes.
- ▶ Complex adaptive systems that innovative to circumvent bottlenecks often through disruptive competition
- ▶ Need to move from regulation of static linear value chain to adaptive, flexible regulation that does not stifle product, pricing and user innovation
- ▶ Competition regulation (static efficiency) needs to be complemented by understanding of dynamic, complementary relationship between different elements in ICT ecosystem
- ▶ Unintended outcomes of instrumental regulation for one objective (competition) produce negative outcomes in other (eg. Innovation)

Key regulatory issues?

- ▶ Where will market power, possibly even monopoly, be a persistent problem?
 - ▶ Higher likelihood in fixed than in wireless markets.
 - ▶ Higher likelihood in access than in services markets (infrastructure as a bottleneck)
 - ▶ Higher likelihood in sparsely populated and/or regions with low purchasing power (alternative strategies to largely failed USO/USF strategies in rural self-provision, low cost white space, and even 2G free low speed Internet, limited bandwidth free high speed public wi-fi).
 - ▶ Significant market concentration in new economy and information markets (e.g. search)
- ▶ Where can regulation improve outcomes? Enforceability?
- ▶ Which instruments (especially in fast-changing markets)?
- ▶ How can regulation best cooperate with other policy makers (e.g., competition authorities, economic development, education, health)?
- ▶ Institutional arrangements required for regulatory effectiveness?

Arising competition/regulation issues

- ▶ Traditional business models and conditions enjoyed by incumbents challenged by introduction of broadband technologies, networks and devices (smart phones) that have enabled low and no-cost voice services (in particular)
- ▶ Hit traditional mobile voice and SMS business models that have driven the revenues of mobile models for two decades.
- ▶ Like fixed line incumbents, some mobile incumbents have resisted shift to new data models but other have embraced these inevitable developments to positive effects with positive consumer welfare outcomes.

Reform 0.3 - From static to dynamic regulation

Creating conditions that facilitate high capital investment required for deployment of next generation networks to support innovation

- ▶ Static regulation transition from monopoly to open market (assumes core network infrastructure in place)
- ▶ Structural and conduct regulation at wholesale level (interconnection, unbundling, price regulation).
- ▶ Digitisation and convergence allows for multiple entrants, migration of services and content across platforms
- ▶ High levels of substitution - fixed, wireless, instant messaging, social networking
- ▶ New complementarities - content & apps drive data

Underperformance

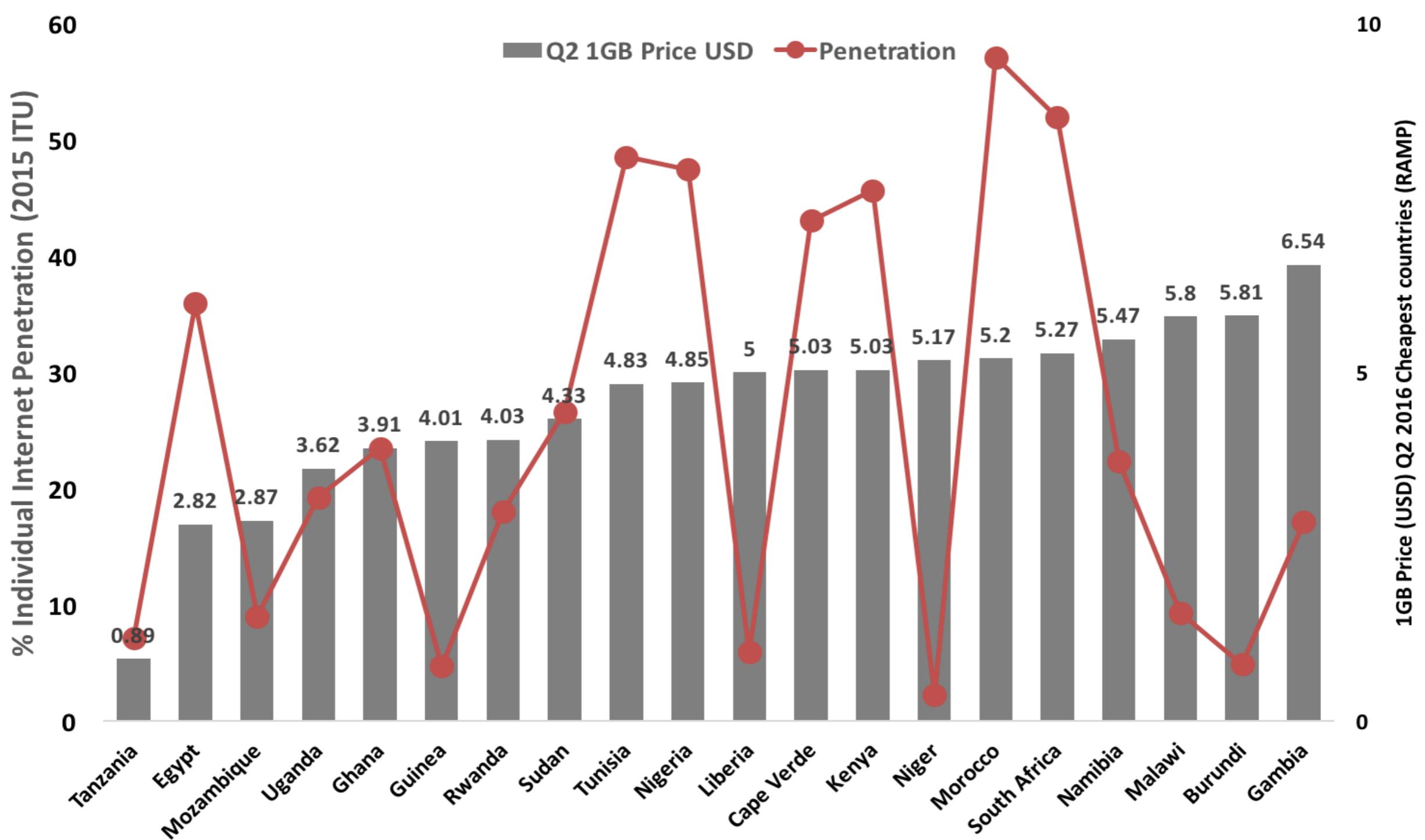
- ▶ Dynamic systems such as the advanced ICT system may be “stuck” in an underperformance state (“attractor”)
- ▶ – Insufficient investment and innovation – Inefficiently high or low prices
- ▶ Multiple causes
 - – Regulatory—regulation outside the workable performance zone (too strict, too lax)
 - – Political—veto players capable of blocking change/innovation
 - – Institutional—capacity/capabilities constraints – wider institutional and political endowments.
 - Can be overcome but only after considerable costs

Pricing

- ▶ Although data prices, plummeted with increasingly competitive products and services, as new models emerged an operators sought to attract new (data) customers and retain customers, prices in SA have now stabilised.
- ▶ These remain, and still remain far too high for the average pre-paid user to be downloading U Tube or doing software updates off their regular data packages that would drive the take off data services, as they have in jurisdictions where the prices are lower or peoples incomes are on average higher

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Supply side solutions

Creating enabling environment for next generation networks and services with positive consumer welfare outcomes

- ▶ State create enabling environment for investment and innovation – PP Interplays, alternative policy/ regulatory strategies that leverage public and private resources, harness national multistakeholder skills base.
- ▶ Allocate high demand spectrum so operators can efficiently provide services
- ▶ Service neutral licences and services so operators and service providers can develop flexible complementary relationship
- ▶ Confirm consumer welfare and particularly pro-poor outcomes
- ▶ Ensure that rights and cybersecurity framework in place to created trusted environment

Demand side strategies

Dependent on supply side measures – affordability, quality of services, trusted environment (secure and rights) - but also stimulates demand cost effectiveness

- ▶ Wider issues of affordability and new forms of access
- ▶ Localisation and local content – innovation conditions, incentives, mobile content – information, education, entertainment.
- ▶ Skills development – e-literacy to engineers, lawyers, coders, economists – knowledge economy – schools development

Recommendation 1: Free Slow Internet...(2)

Progressive pro-poor, pro-public intervention

- ▶ **Automatic access to the internet without airtime on the phone**
- ▶ **Ability to send and receive messages via OTT irrespective of airtime balance**
- ▶ **Ability to communicate with public service providers such as local government and health clinics regardless of airtime balance**
- ▶ **Ability to receive notifications and information from government and public service providers, such as disaster warnings.**
- ▶ **Better mobile coverage by incentivising mobile operators to upgrade to 3G and 4G since the operating cost is much lower compared to data using 2 and 2.5G technology.**

Recommendation 2 : Free public wi-fi

Limited fast free citizen's internet

- ▶ even when people are able to access networks people do not use them optimally (intensity of use low), as they cannot afford to stay on line, and this is particularly so for the poor
- ▶ advent of Over the Top (OTT) services such as Whatsapp and FB means that people are able to substitute traditionally far higher cost voice and SMS services with relatively small amounts of data.
- ▶ qualitative public wifi study found that people bought their small data bundles for their interpersonal communications and then used the public wifi to download their high bandwidth content such as youtube, software updates and the like
- ▶ participants working on gender in urban and rural settings highlighted the limitations the high cost of data for ordinary communications, they also appealed for greater access to public information that existed but was seldom shared.
- ▶ Deploying the universal services fund for the development of free public wi-fi networks is being more people online

Recommendation 4: Widen Evidence Base

- ▶ **Need for more qualitative research to understand intersectionality of inequality.**
- ▶ **Open government, open data, institutionalise data collection**
- ▶ **The lack of gender disaggregated quantitative analysis also points to the need to develop analytical capacity outside the CSO**
- ▶ **Use of social media and community radio in dissemination would significantly increase the awareness, spread and use of gender-related data, if provided in appropriate formats for public use**