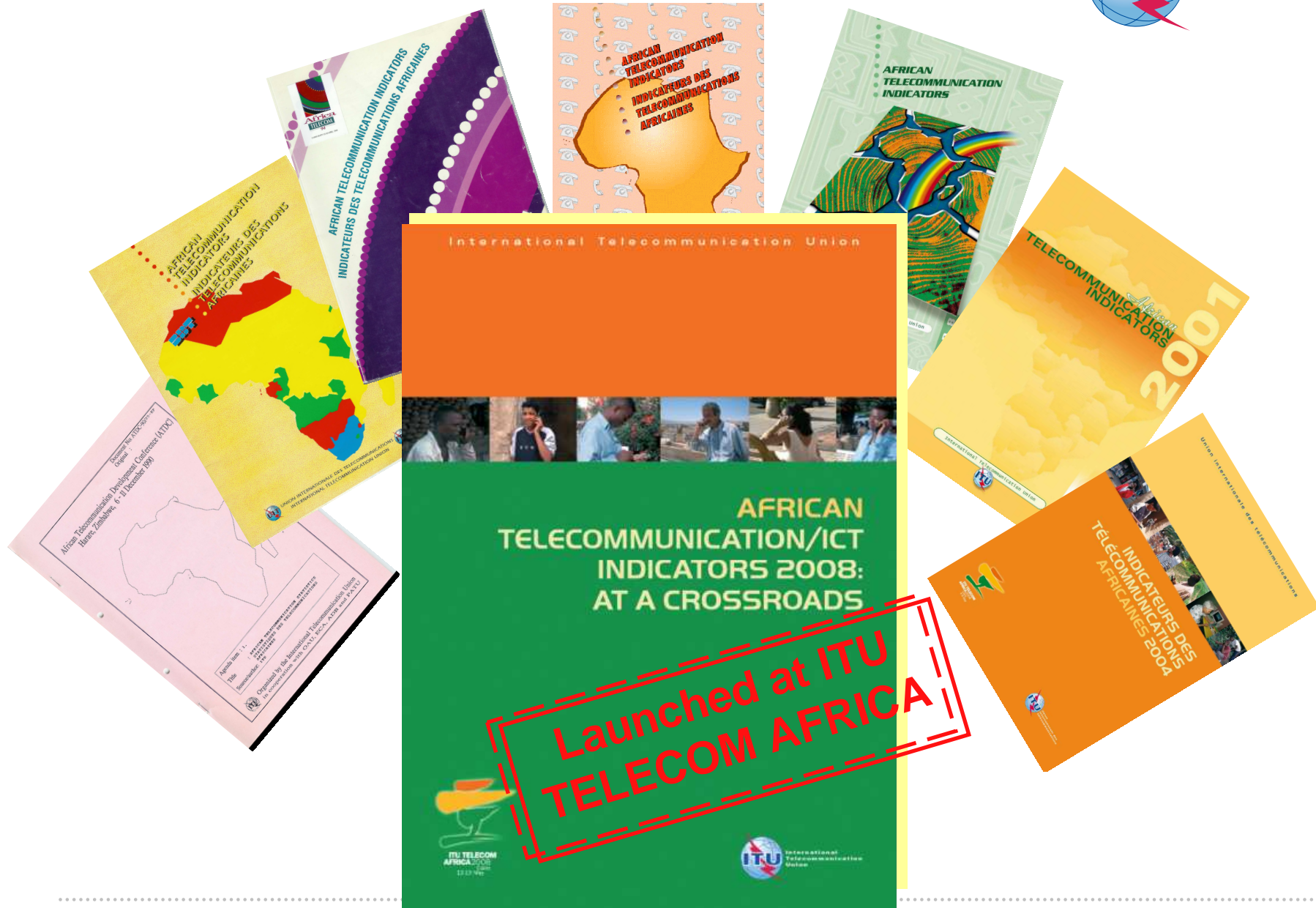
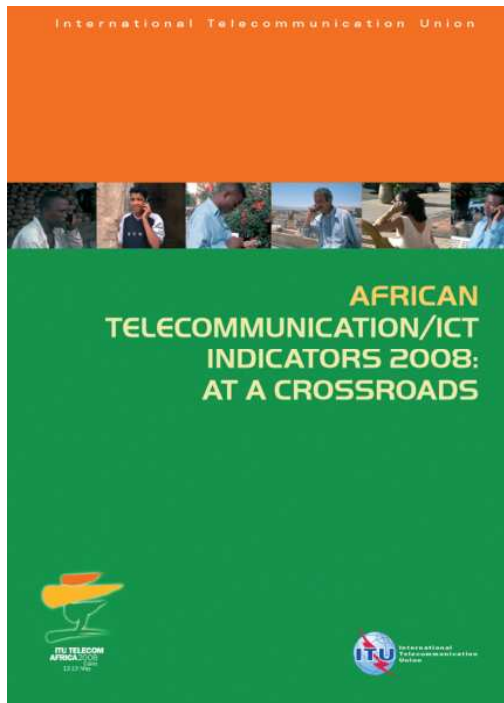


Committed to Connecting the World



African Telecommunication/ICT Indicators 2008: At a Crossroads



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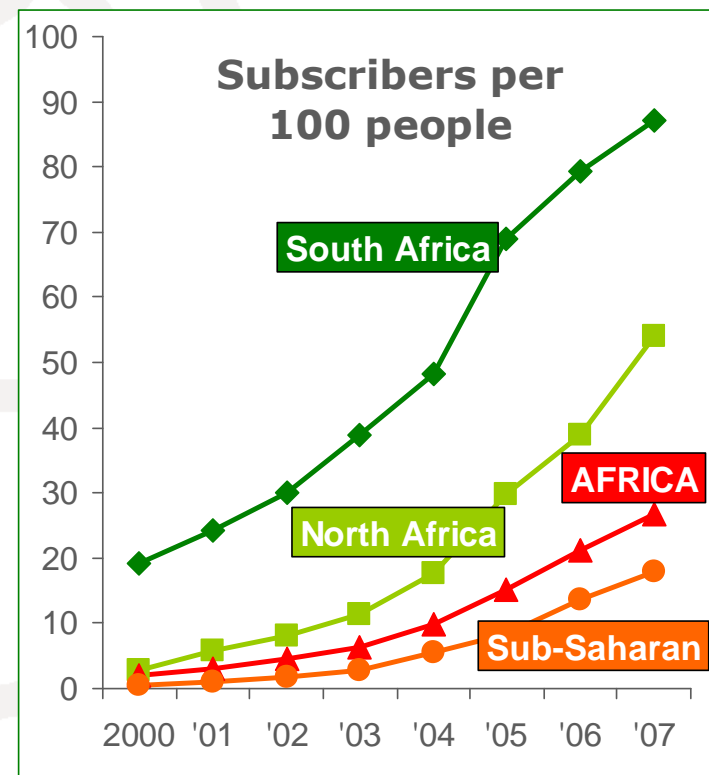
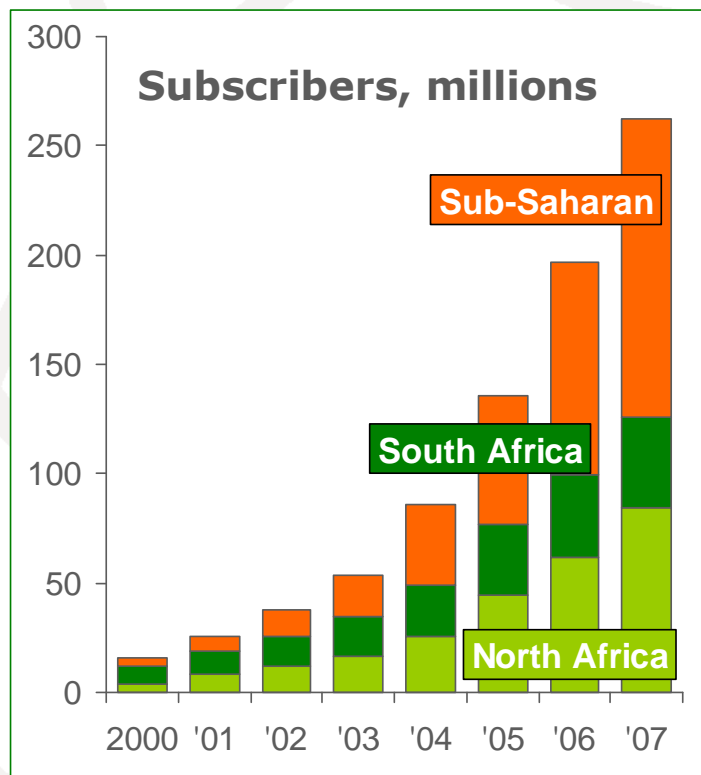
Market Information and Statistics Division
Telecommunication Development Bureau
International Telecommunication Union

Content

- Sector overview
- Universal service and access
- Enhancing the enabling environment
- Recommendations
- African Telecommunication/ICT Indicators (21 country/regional tables)
- African Telecommunication/ICT Organizations

Mobile: The African success story

- Even the most optimistic projections have been surpassed! Today Africa is home to more than one quarter billion mobile subscribers or more than one mobile for every four people.



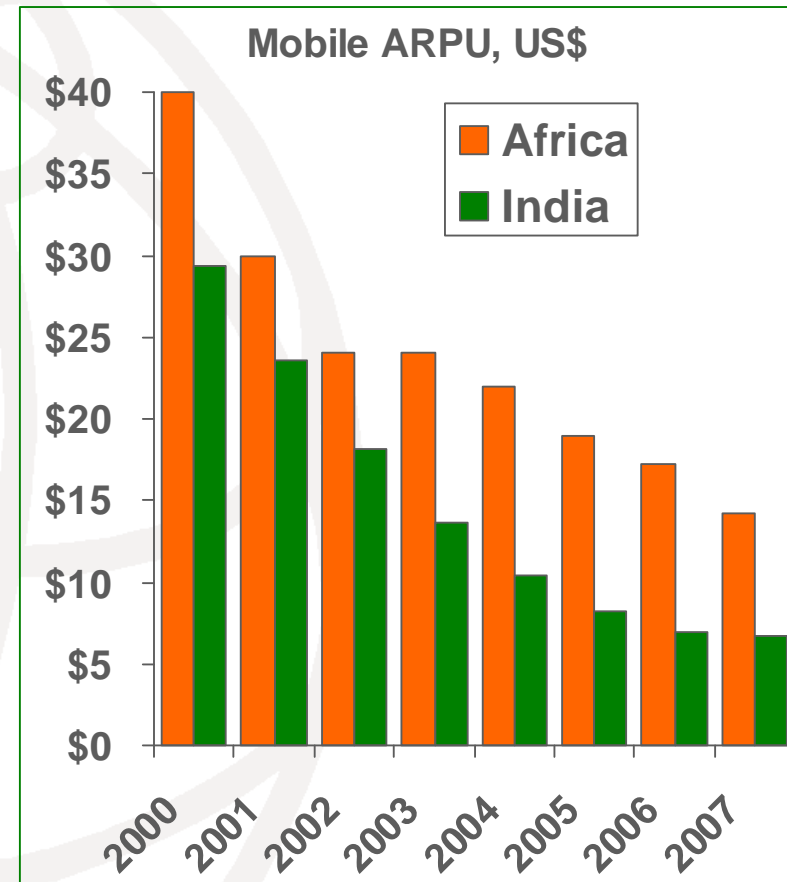
At a crossroads

- While there has been rapid expansion in access to ICTs, Africa must sustain and deepen growth and expand access, especially in Internet.
- 2 paths:
 - ICT policy makers continue as is, with an unfinished liberalization framework. Additional use of ICT services needs to come from lower income segments. These customers are highly sensitive to pricing. Without deeper reform, it is unlikely that prices will drop sufficiently to sustain growth.
 - Unleash fresh growth and investment by dealing with regulation, taxation and electricity issues that are hampering the sector's development. This will lower costs and prices.



Mobile affordability

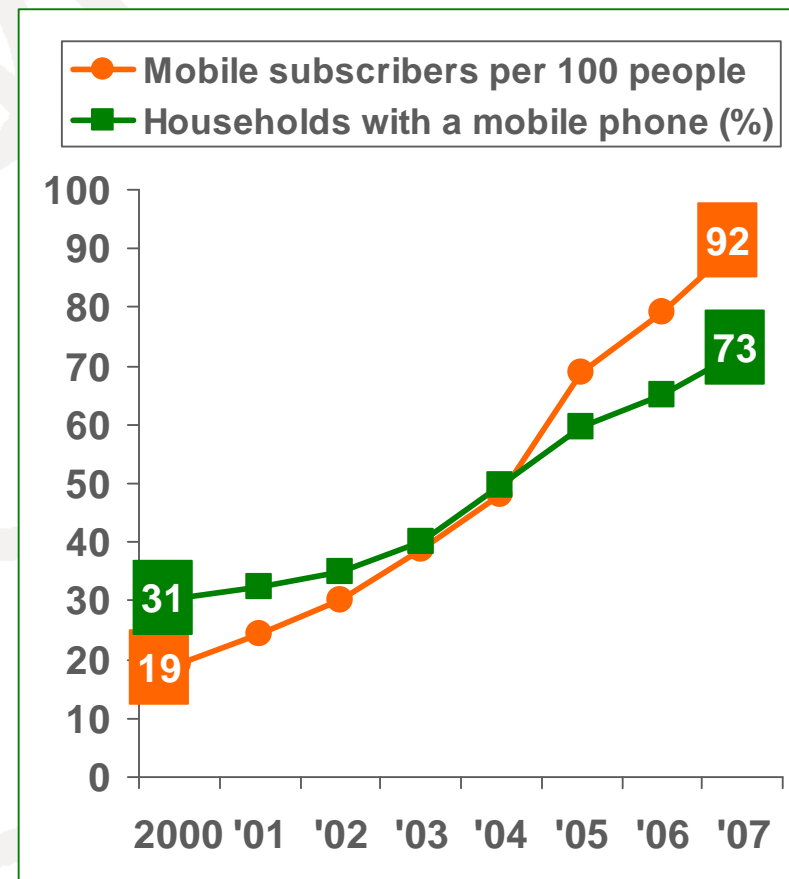
- Competition has been a key driver in reducing mobile prices across the region.
- ARPU has fallen in line with tariffs.
- There is plenty of scope for prices to come down even further, in order for mobile phone ownership to reach new customer segments among the broader population.



Mobile – South Africa



- First African country to introduce mobile competition
- Has remained at forefront of mobile liberalization:
 - Only African country to introduced Mobile Virtual Network Operator (June 2006)
 - 1st to introduce mobile number portability (Nov. 2006)
- Highest mobile penetration in Africa and on target to reach 100% by end of this decade
- Highest number of 3G subscribers in Africa
- Monthly prepaid basket price is 3% of income, one of lowest in Africa



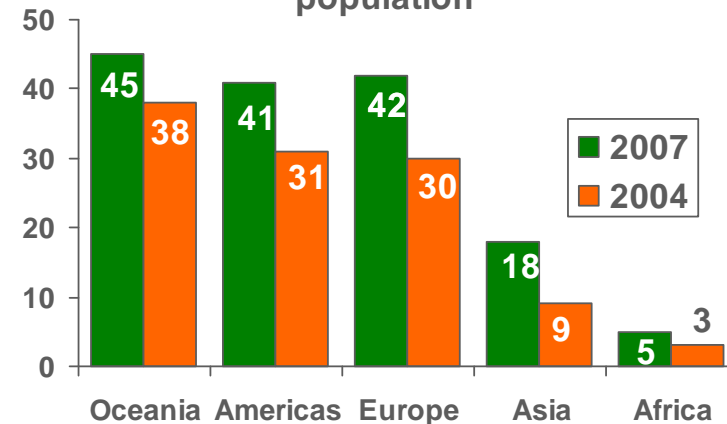
Fixed telephony

- Africa's dramatic growth in mobile communications has left fixed telephone lines behind. At the end of 2007, there were 35 million fixed lines on the continent, equivalent to an overall teledensity of 3.3 fixed telephone line subscribers per 100 inhabitants. This is up only slightly from 2.8 fixed lines per 100 inhabitants in 2002.
- Incumbents and new entrants are seeking to increase the popularity of fixed telephony through the expansion of fixed wireless networks. CDMA2000 1X has emerged as the de facto technology for fixed wireless in Africa with 31 countries deploying the technology.

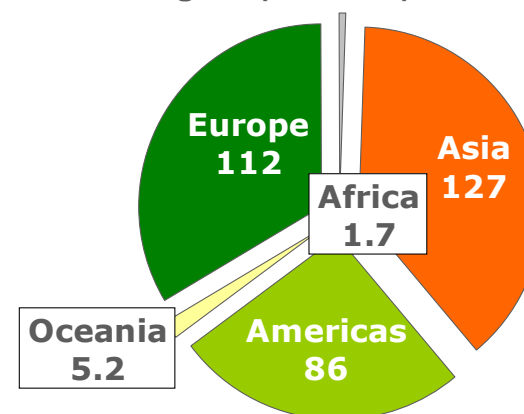
Internet

- Africa has about 50 million Internet users = about one user among twenty persons. Over half of the region's Internet users are estimated to be located in North African and South Africa.
- Bandwidth is scarce and Internet access is relatively expensive in most countries
- Levels of international Internet connectivity are quite low in most African countries. Africa as a whole had in total around 40 Gbps of international bandwidth in 2007, of which over 90 percent was devoted to North African countries and South Africa.

Internet users as percentage of total population



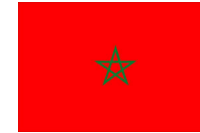
Fixed broadband subscribers by region (millions), 2007



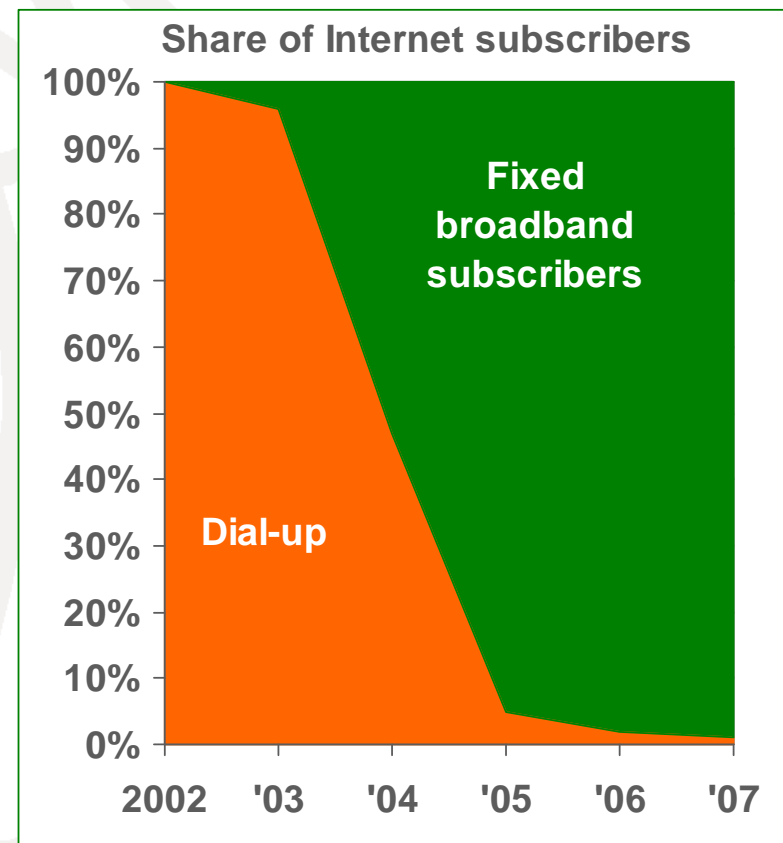
Wireless broadband

- 3G and WiMAX starting to emerge as viable broadband solution for Africa
- Provide promising alternative to shortage of fixed broadband options
- Countries with *both* wired and wireless broadband options have lower prices and higher broadband take-up

Broadband - Morocco



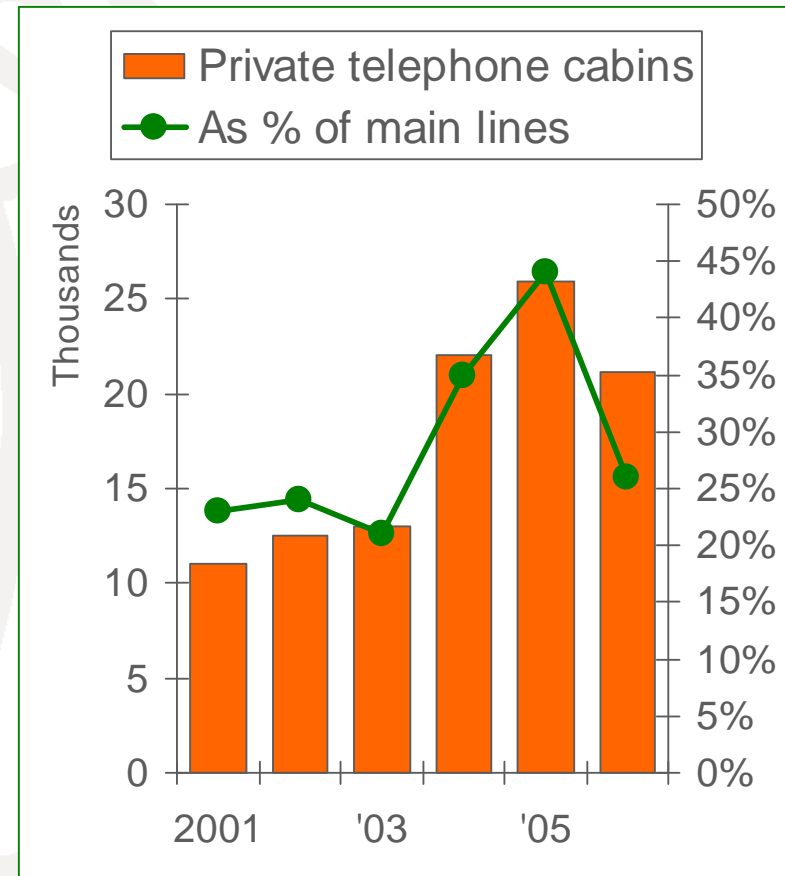
- Inter-modal competition between ADSL and 3G
- Broadband prices are the cheapest in Africa, at US\$ 18 per month for a 256 kbps package
- Offers highest broadband speeds in Africa (20Mbps)
- The 4th highest broadband penetration in Africa and practically all Internet access through broadband
- First African country to launch IPTV



Payphones - Togo



- West Africa is a leader in the liberalization and spread of privately operated pay phones
- Togo has the highest ratio of public pay phones as a % of fixed lines
- Almost 25% of Togo's main lines are connected to private telephone cabins
- Togo's two mobile operators provide public telephony through GSM cabins which numbered over 10'000 in 2006
- Average distance to reach a public telephone facility in the country is around 400 meters

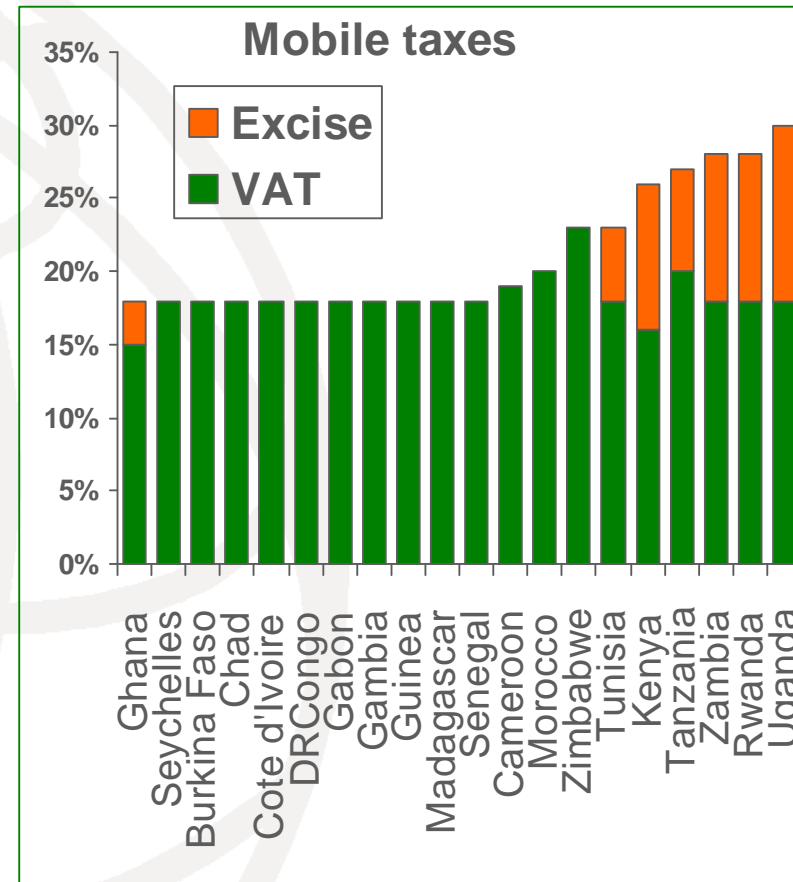


Deepening reform

- Create fully independent and adequately resourced regulatory authority
- Only half of countries have private incumbents.
- More competition and lower prices through
 - Infrastructure sharing
 - Mobile termination
 - MVNO & MNP to increase competition
 - Internet Exchange Points
 - VoIP
 - Reduce licensing fees and unify licenses

Taxation

- Import duties on IT equipment, VAT on goods and services and excise taxes on communications services raise prices, limit take-up and discouraging use.
- A 1% drop in the price of a handset in Africa could boost mobile penetration by 2.4 per cent.
- A 1% reduction in taxes could lead to an average increase in penetration of 0.5 per cent.
- "...elasticity of demand is estimated to be higher in Africa than elsewhere, reflecting the potential for further marginal consumers, and hence to increase penetration greatly by a reduction in [mobile related taxes]."
- Reduction in excise taxes can boost tax revenues for governments due to a larger number of users and spillover effects throughout the economy.

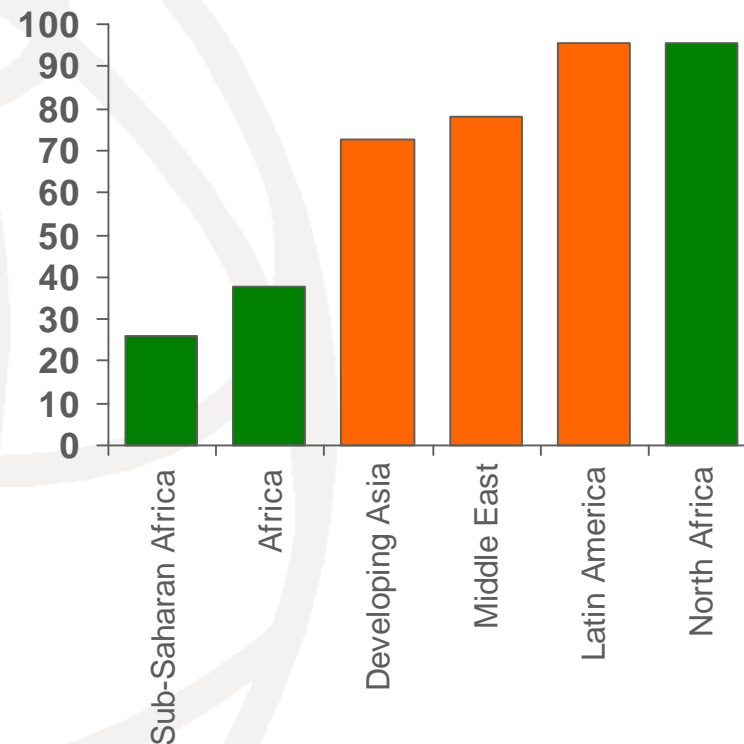


Source: GSM Association.

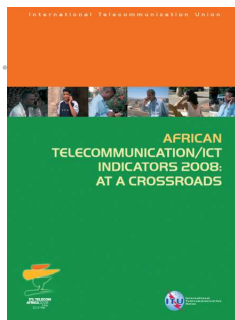
Electricity

- The lack of electricity in Sub-Saharan Africa is a serious impediment to the development of ICT markets.
 - Alternative sources of energy (wind, solar and biofuel powered base stations).
 - Synergies between ICTs and electrical utilities (fiber optic networks; broadband over electricity power lines)
 - Tax rebates to offset high costs of energy such as import duty waivers and tax reductions for companies supplying renewable-based power and equipment to mobile operators.

Per cent of population with access to electricity, 2005



Source: Adapted from World Energy Outlook 2006.



African Telecommunication/ICT Indicators 2008 includes:

Recommendations

- Enhance liberalization and privatization and strengthen regulatory agencies
- Lower costs through license and spectrum efficiency, reducing telecom related taxes, infrastructure sharing and energy incentives
- Promote wireless broadband
- Incorporate mobile into universal access policies
- Expand public Internet access
- Analytical section
- 21 regional tables covering telecommunication/ICT indicators (2006/2007)
- 53 individual country pages with a five year profile from 2002-2007
- A complete list of telecommunication ministries, regulators and operators in the region