

International gateway liberalization

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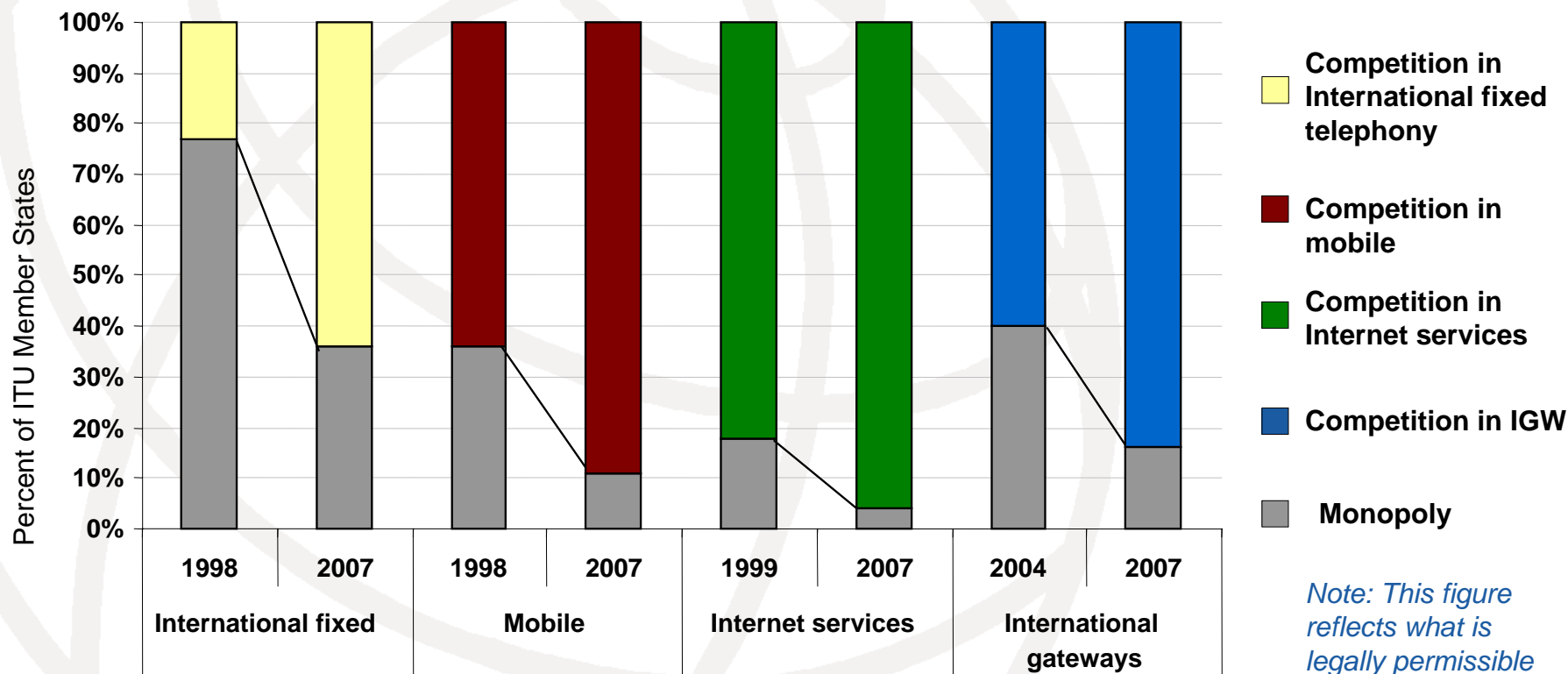
Infrastructure sharing: extending ICT access to all

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Trends in Liberalization of ICT markets

Liberalization, which in general refers to fewer government restrictions in exchange for greater participation of private entities, has become more widespread, including by percentage of ITU Member States and types of ICTs.



Promises and Expectations of Liberalization

Telecommunication sector in general:

- Increased investment:
 - Market players are able to take rational “Buy or build” decisions.
- Increased competition:
 - New market players.
- Better and newer services
- Lower costs and lower prices
- Faster growth of the market:
 - Increased teledensity;
 - Increased usage of services.
- Contribution to economic growth

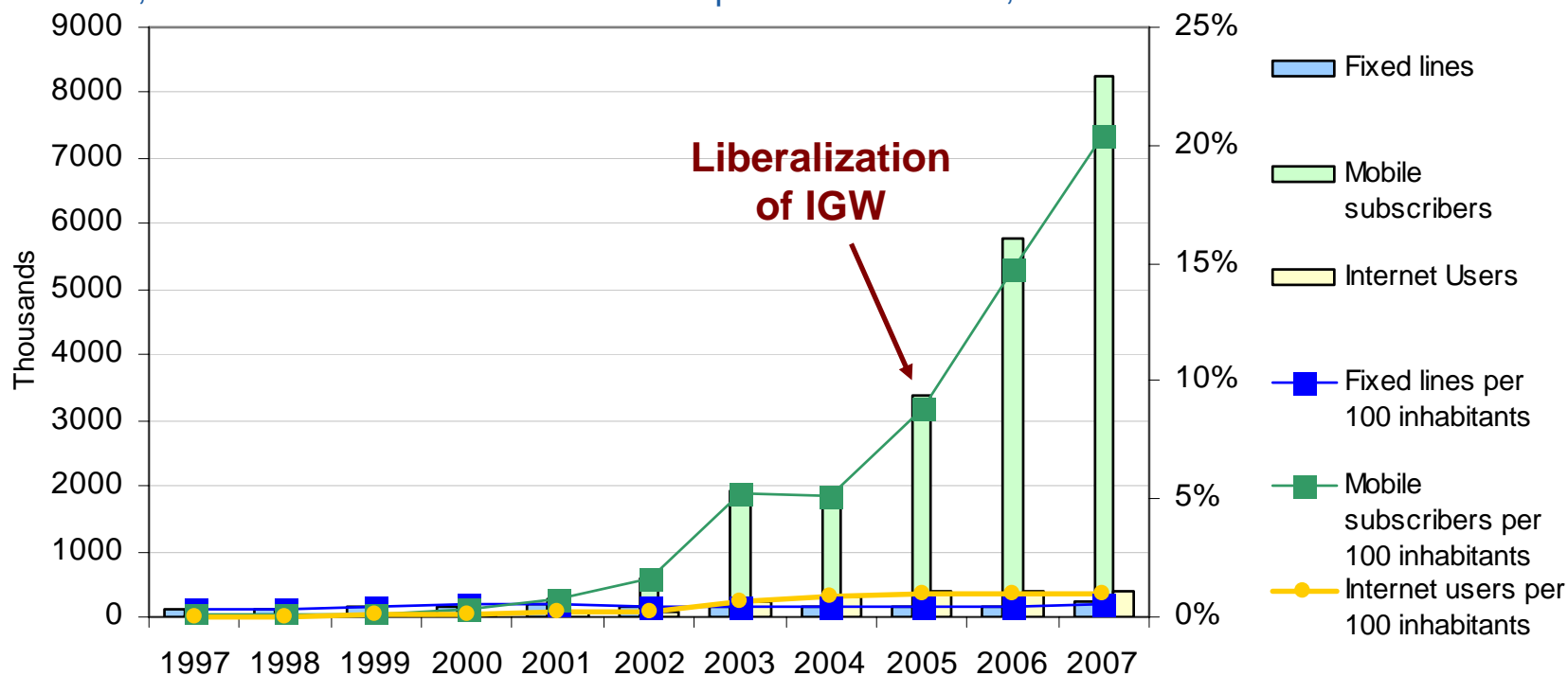
International gateways:

- Increased investment:
 - Investing in new gateways;
 - Upgrading existing gateways to meet increased demand.
- Bigger choice of international connectivity providers.
- Lower prices of international communications.
- Increased international bandwidth.
- Faster market growth:
 - Increased traffic and use.
- Contribution to economic growth:
 - Decrease in grey markets;
 - Increase in state revenues.

Experience: Tanzania (1)

- Liberalization of IGW in 2005 together with introduction of converged licensing framework
- By May 2006 four new service providers were licensed that are rolling out wireless services

Fixed, mobile and Internet markets' development in Tanzania, 1997-2007

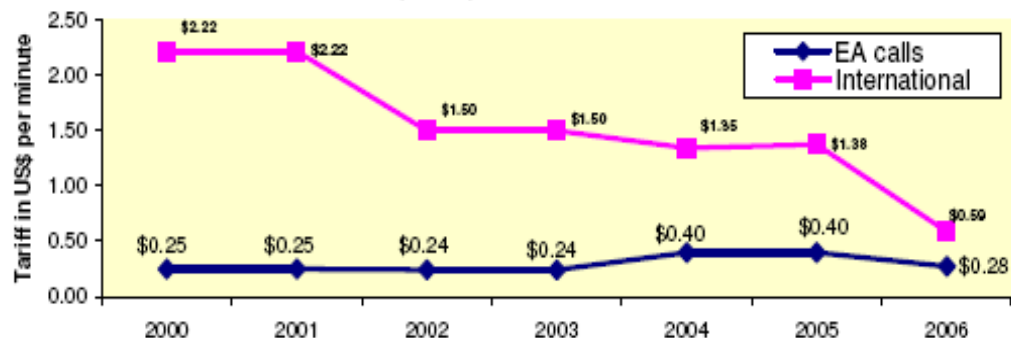


ITU World Telecommunication/ ICT Indicators database

Experience : Tanzania (2)

- Fixed international tariffs:
 - From 2000 - 2005 average tariffs of international calls dropped by 38 percent,
 - From 2005-2006, after liberalization of fixed telephony market and international gateways, they decreased by 57 percent.

Evolution of International Tariff (Fixed)



- Mobile international tariffs:
 - 2000 - 2005 average tariffs of international calls dropped by 49 percent,
 - From 2005 - 2006 they decreased by 68 percent.

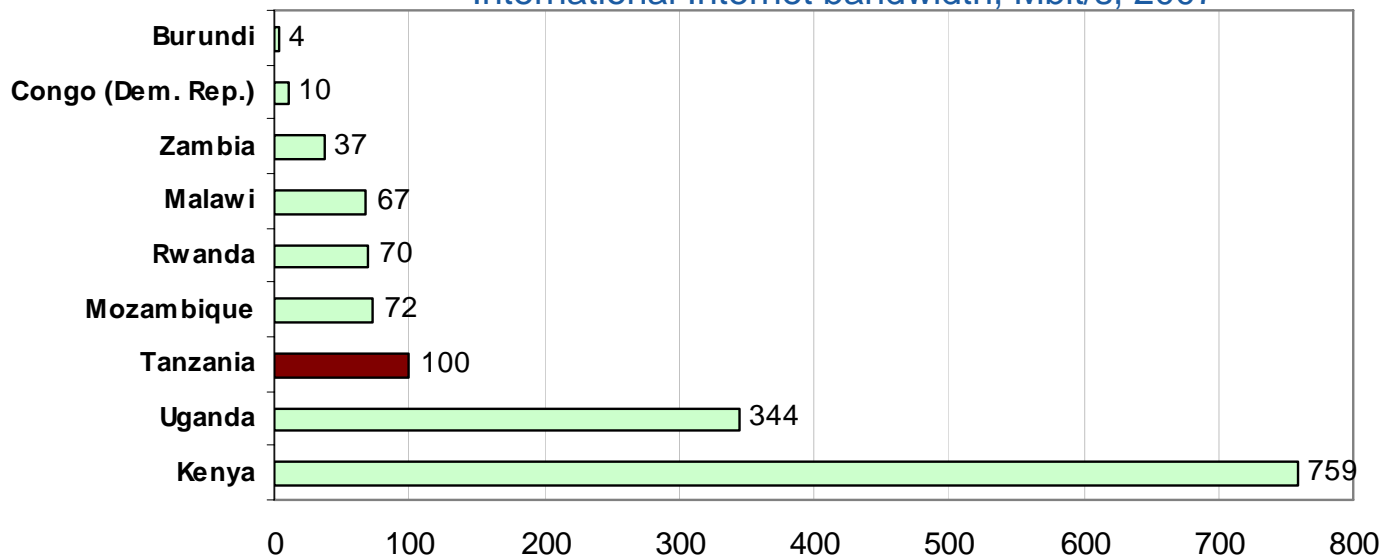
Average Mobile Tariffs - International



Experience : Tanzania (3)

- The cost of connectivity in 1999 was extremely high with a mere 32kbit/s link costing about USD 16'000. As a result of converged licensing framework and increasing number of ISPs the bandwidth prices have dropped to about USD 3'000 per Mbit.
- In developed countries, however, bandwidth of 1 Mbit is available for as low as USD 300.
- Like many other African countries, Tanzania lacks a cheap and high-capacity Internet connection. All ISPs are connected via expensive satellite connections.

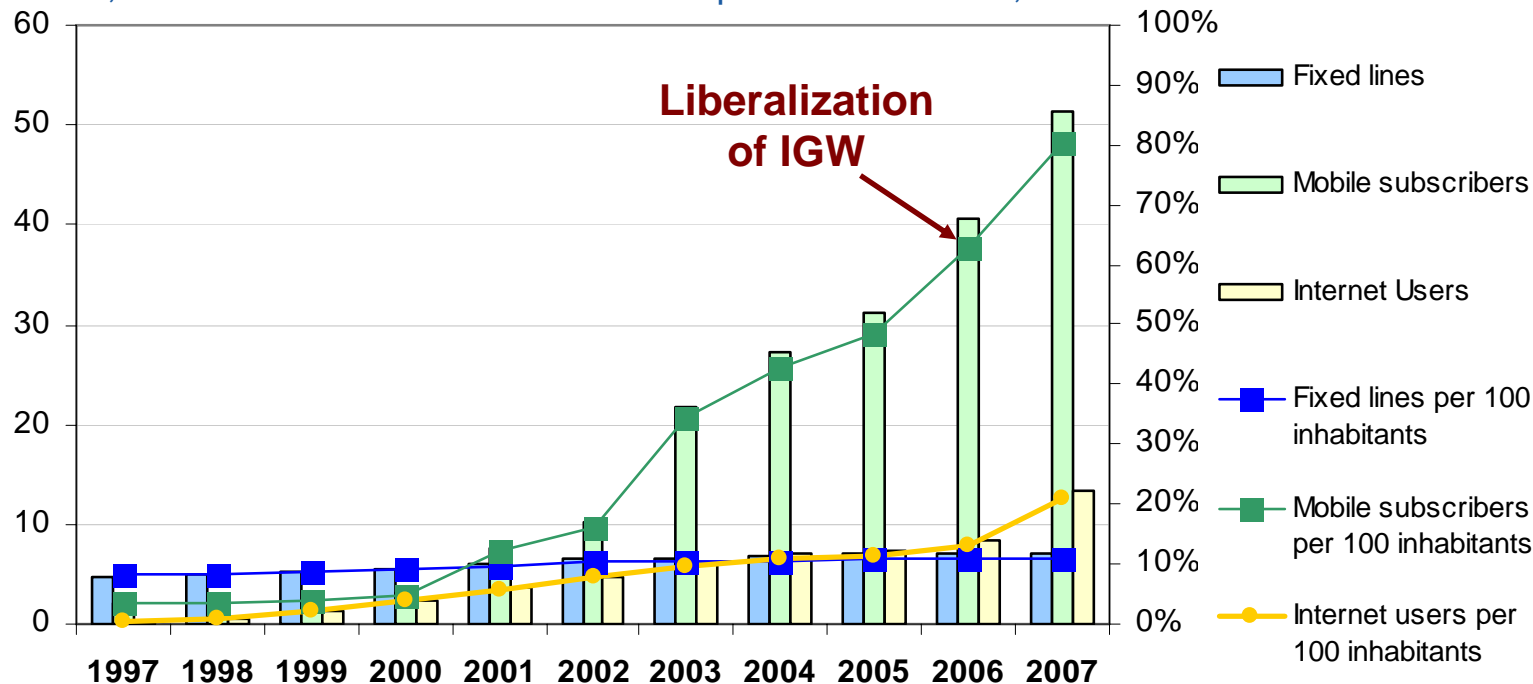
International Internet bandwidth, Mbit/s, 2007



Experience : Thailand (1)

- Liberalization of IGW in 2006.
- There are six international gateway operators in Thailand.
- After liberalization of international gateways, the number of Internet users increases.

Fixed, mobile and Internet markets' development in Thailand, 1997-2007

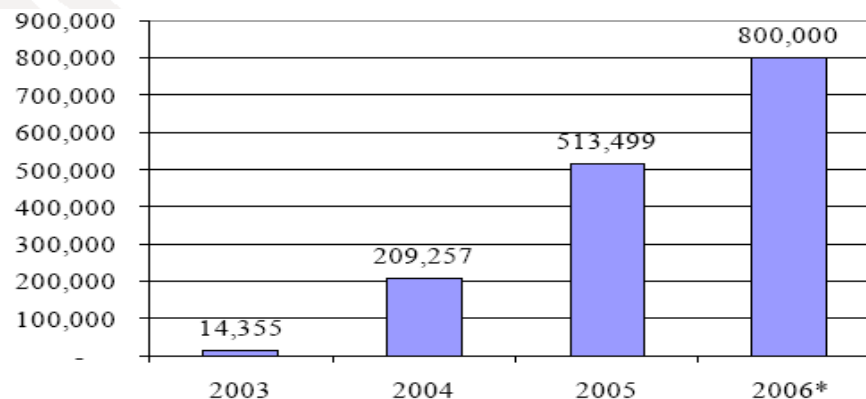


ITU World Telecommunication/ ICT Indicators database

Experience : Thailand (2)

- In line with Internet users, the number of broadband subscribers was growing.
- This means greater required bandwidth.

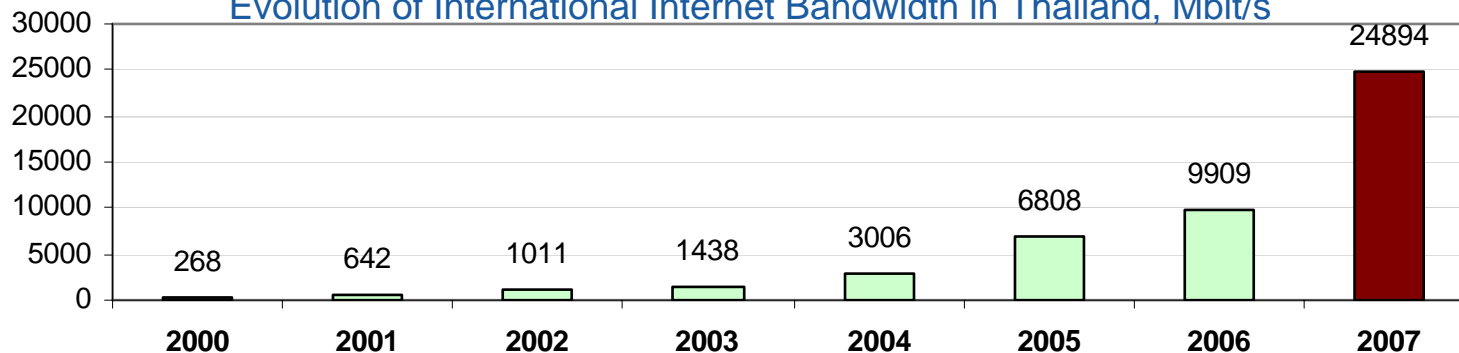
Growth of broadband subscribers in Thailand



Ministry of Information and Communication Technology

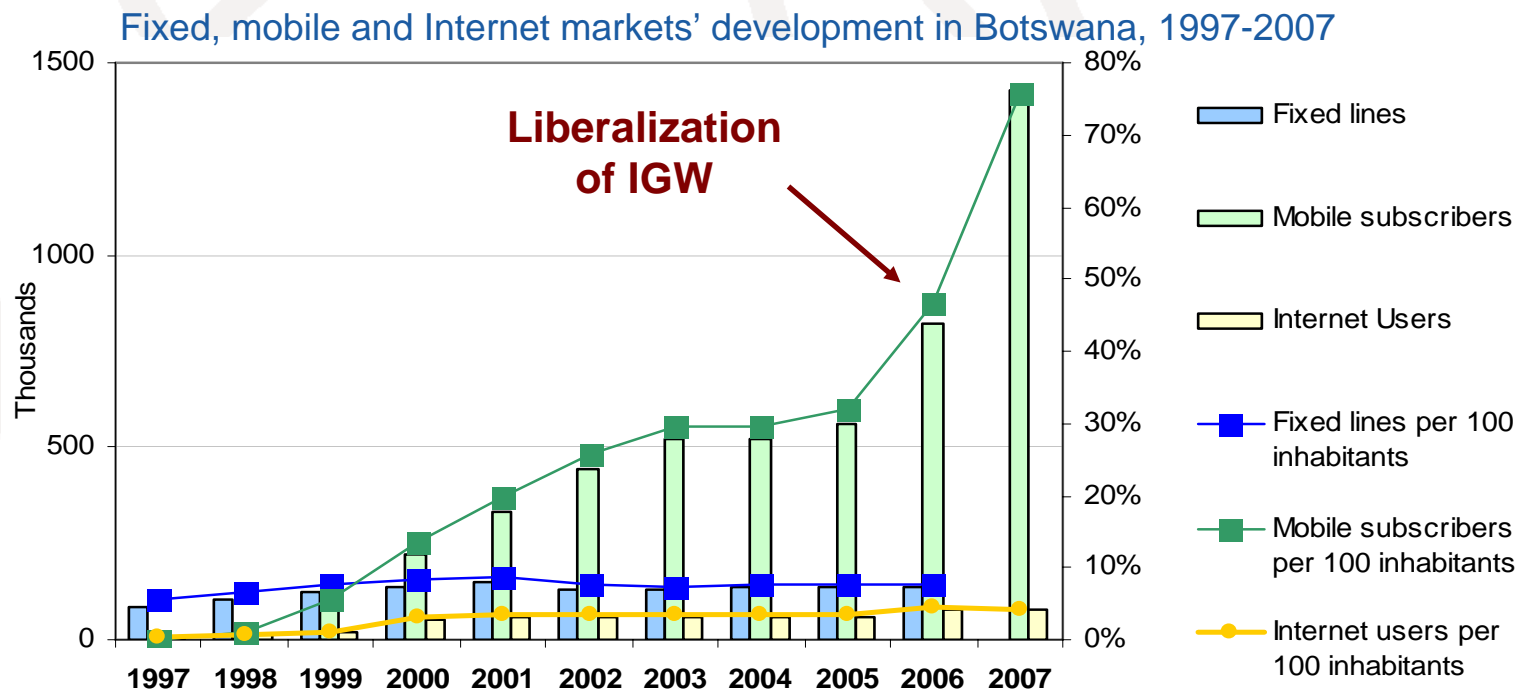
- In 2007 (right after liberalization of IGW) International Internet bandwidth increased by more than 2.5 times

Evolution of International Internet Bandwidth in Thailand, Mbit/s



Experience: Botswana (1)

- In 2006 - Liberalization of IGW and new licensing framework.
- According to the Botswana Telecommunications Authority, during the period of March 2006 - March 2007, fixed telephony experienced a slight increase. The total number of subscribers (lines) increased from 132 to 137 thousand.

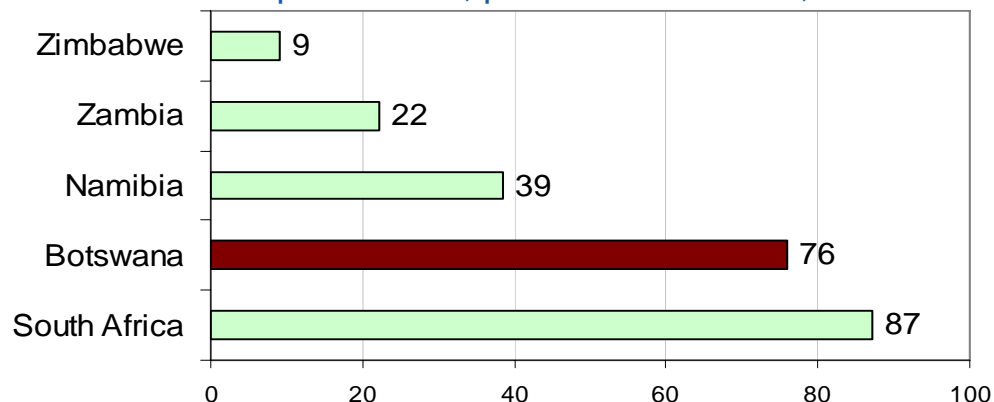


Experience: Botswana (2)

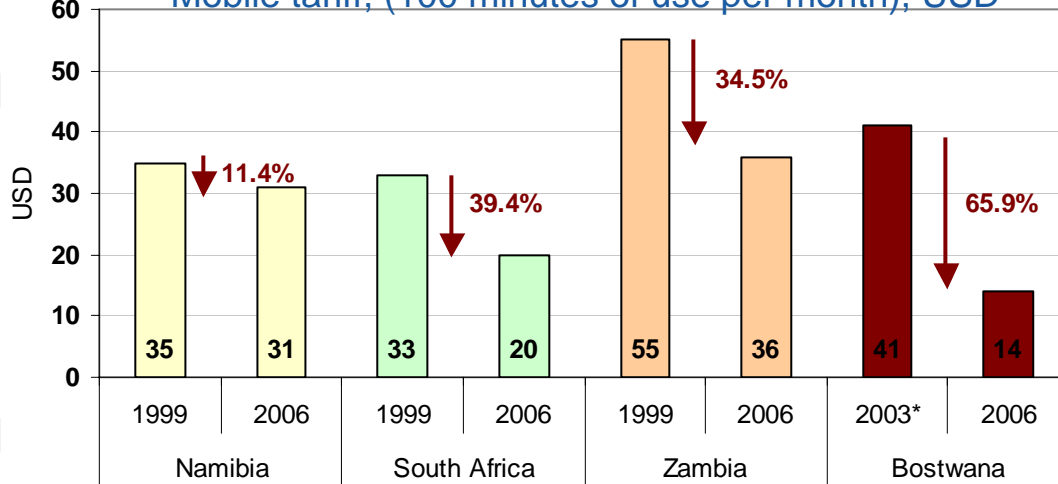
➤ From 2006 - 2007 mobile penetration increased from 47 to 76 percent

➤ Tariffs of mobile services were decreasing in neighboring countries. In Botswana they decreased by 65.9 percent during a three-year period

Mobile penetration, per 100 inhabitants, 2007



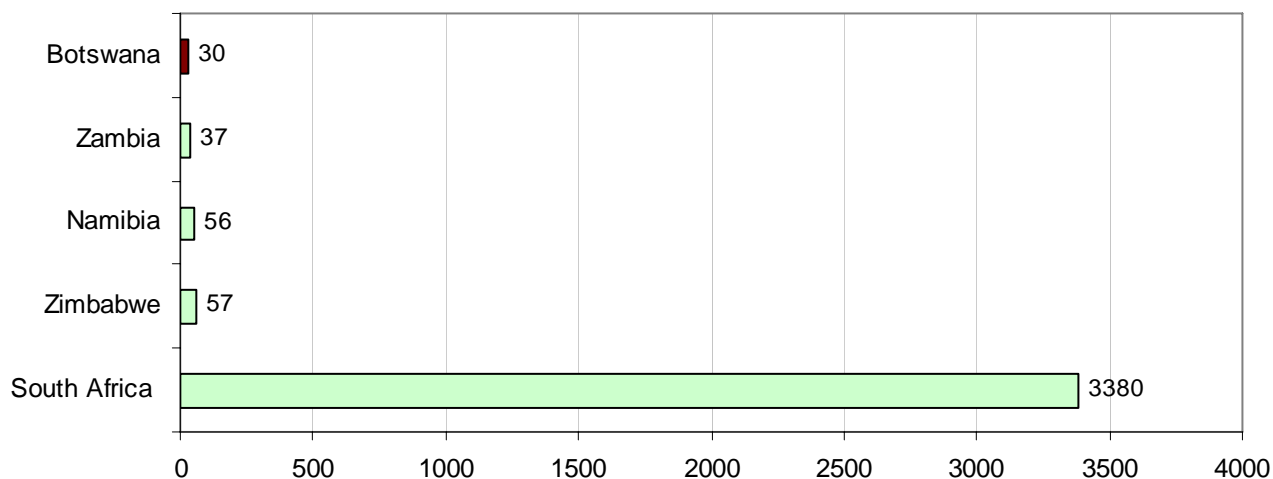
Mobile tariff, (100 minutes of use per month), USD



Experience : Botswana(3)

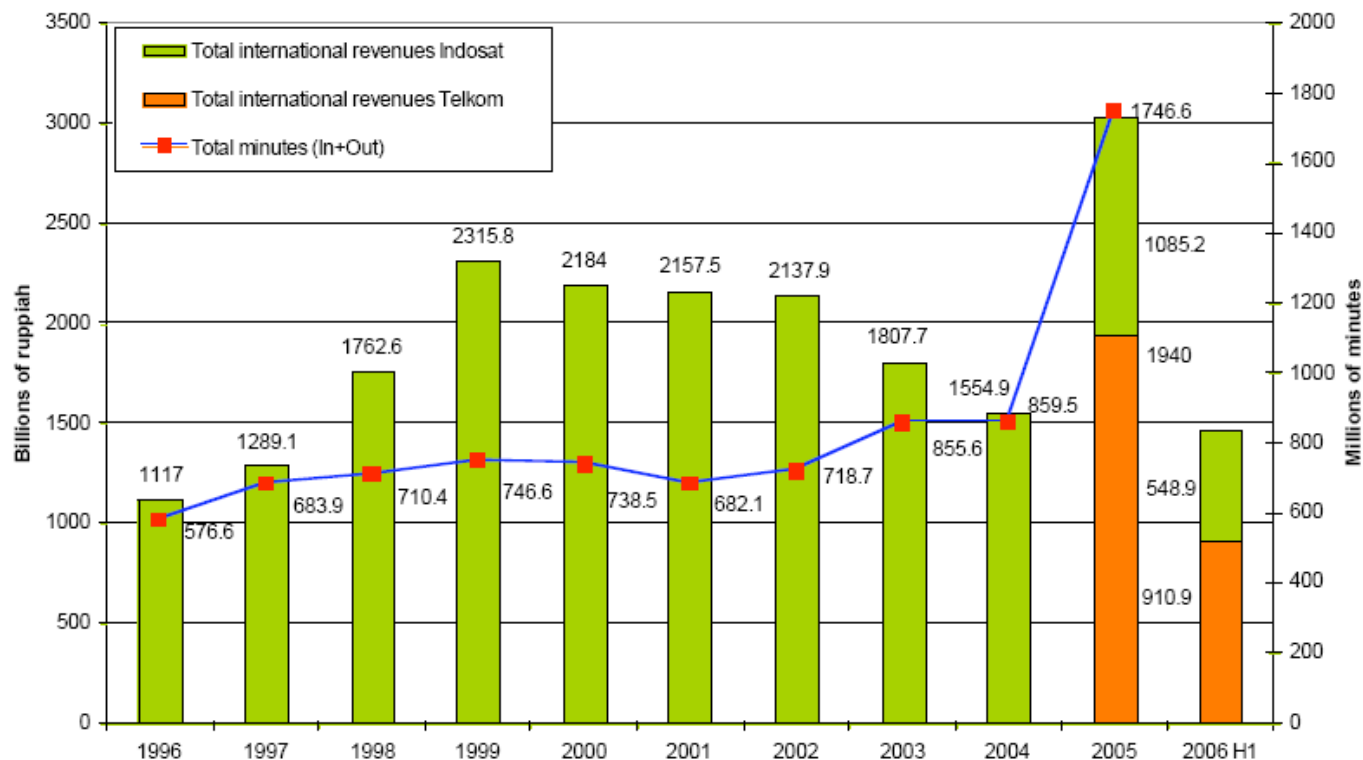
- 26 licensed ISPs in 2007.
- Internet access is very limited:
 - Half of all households have access to electricity;
 - Personal computers costs about USD 1,000;
 - Bandwidth costs are between USD 5,000-8,000 per month for 1 Mbit.
- The number of Internet users in the country is about 80'000 with an average bandwidth of 17 bits/s per capita or 375 bits/s per user.

International Internet bandwidth, Mbit/s, 2007



Experience : Indonesia

- Liberalization of IGW in 2004
- Increase of the traffic (minutes in and out) by 200%.
- Increase of the total revenue by 94%.
- Decrease of the price of services.



Some other:

Kenya:

- Liberalization of IGW in 2005;
- Increase of total bandwidth available to the country by almost 700% in 2006;
- Decrease the price of international telephone calls (around 70%) and Internet connection and charges.

Morocco:

- Liberalization of IGW in 2002;
- Increase of bandwidth;
- Decrease of the price of services (Internet connection and roaming charges);
- 99% of Internet connection in 2007 are broadband;
- Broadband prices are the cheapest in Africa, at USD 18 per month for a 256 kbps package;
- Offers highest broadband speeds in Africa (20Mbit/s).

Liberalization of International gateways

- It is evident from the experience throughout the world that liberalization of international gateways has brought many benefits to the sector including the decrease of tariffs and boosting sector growth:
 - All analyzed countries to a certain extent experienced some or all expected benefits.
- Liberalization of IGW alone could not address all challenges. Important challenges remain:
 - Dominance control;
 - Interconnection issues;
 - Cost of access to international bandwidth;
 - Security issues.

Liberalization of International gateways

- Monopoly of IGW, however, may cause additional challenges:
 - IGW monopoly cannot entirely prevent bypass or arbitrage market practices (call back, illegal VoIP);
 - Costs and energy to control illegal bypass and grey markets;
 - Demand for international bandwidth is rapidly growing – is a single operator able to provide all required demand?
- Monopoly of IGW is barely sustainable in the world of convergence, rapid technological development and globalization. Even if liberalization of the IGW is just one piece of larger system, it may significantly influence market development.

More Information



- GSR 2008 Discussion paper on *International Gateway Liberalization: the Singapore experience*
<http://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR08/papers.html>
- Trends in Telecommunication Reform 2008 (*forthcoming*)

Thank you!

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Telecommunication
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