Examining the Opportunities and Challenges for ISPs in Developing Countries

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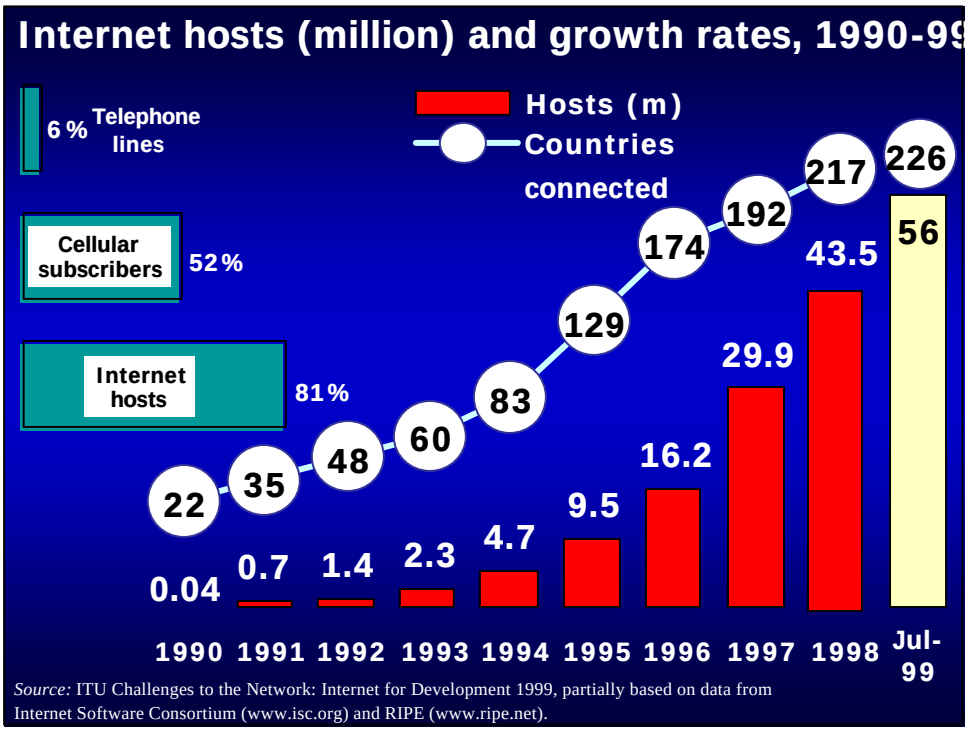
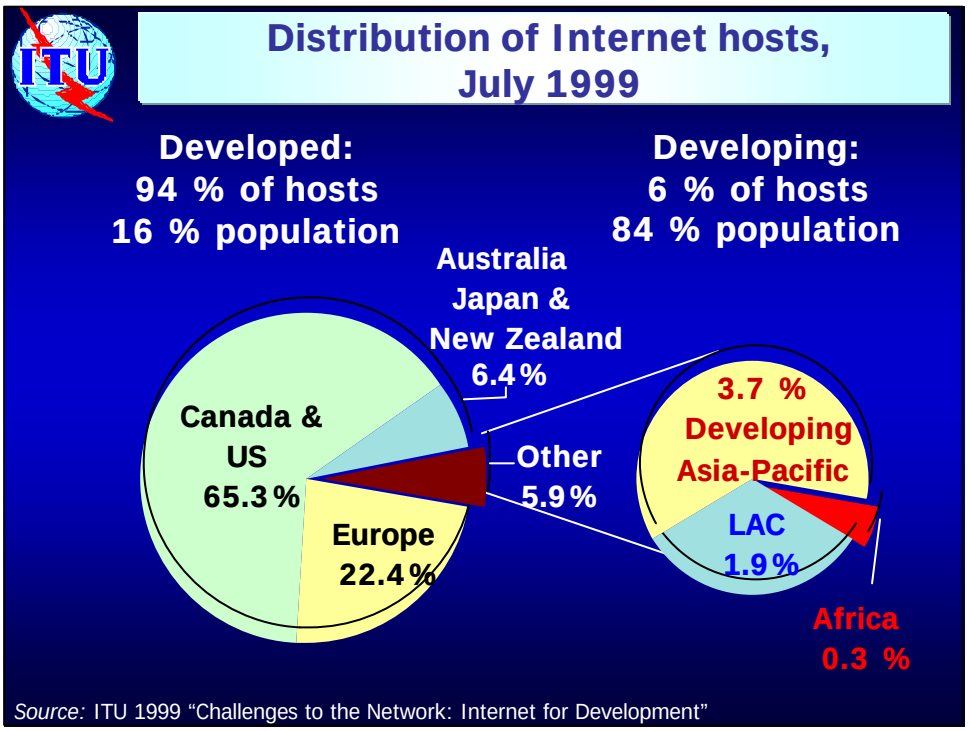
Note: The views expressed in this paper are those of the author and may not necessarily reflect the opinions of the ITU or its membership. The author can be contacted at Laura.Mannisto@itu.int.

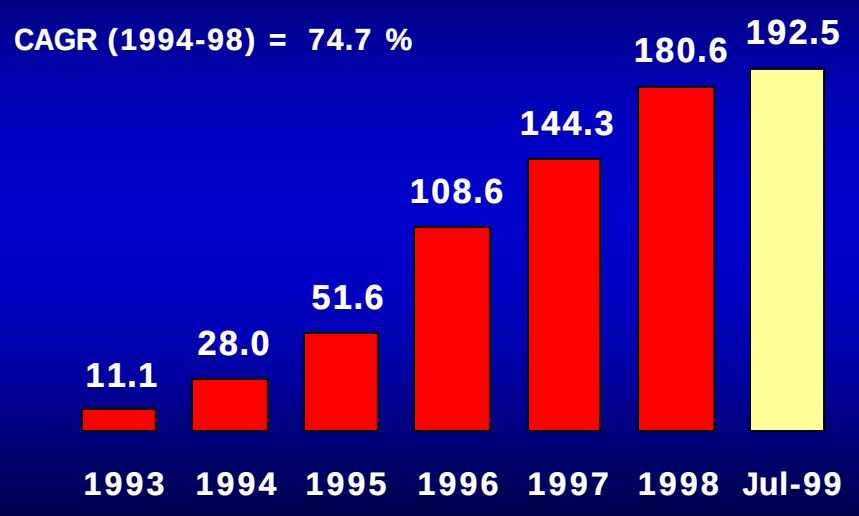
Agenda

- The Status of Internet in developing countries
- Issues of Internet regulation
- Challenges to e-commerce


Internet hosts (million) and growth rates, 1990-99
6 % Telephone lines
Cellular subscribers
52 %
Internet hosts
81 %
Hosts (m)
Countries connected
22
35
48
60
83
129
174
192
217
226
0.04
0.7
1.4
2.3
4.7
9.5
16.2
29.9
43.5
56
1990 1991 1992 1993 1994 1995 1996 1997 1998 Jul-99
Source: ITU Challenges to the Network: Internet for Development 1999, partially based on data from Internet Software Consortium (www.isc.org) and RIPE (www.ripe.net).


ITU
Distribution of Internet hosts, July 1999
Developed:
94 % of hosts
16 % population
Developing:
6 % of hosts
84 % population
Australia Japan & New Zealand 6.4%
Canada & US 65.3 %
Europe 22.4 %
Other 5.9 %
3.7 % Developing Asia-Pacific
LAC 1.9 %
Africa 0.3 %
Source: ITU 1999 "Challenges to the Network: Internet for Development"

Internet hosts, Africa, In thousands



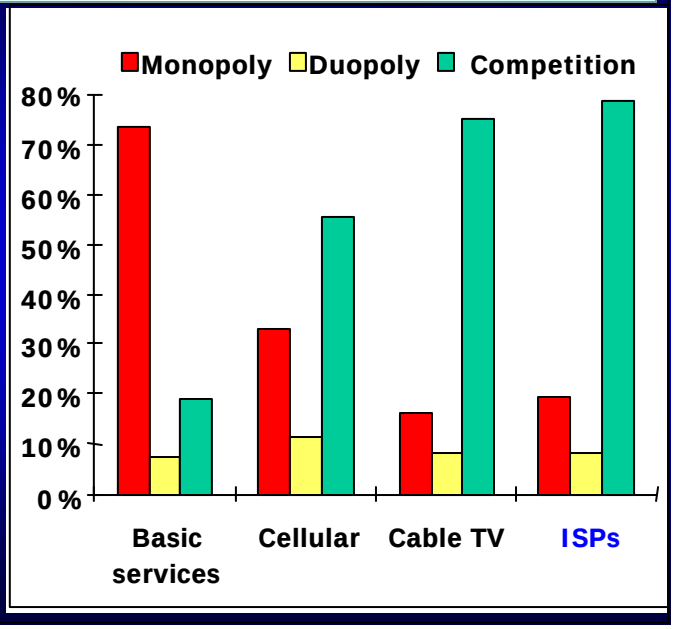
Source: ITU Challenges to the Network: Internet for Development 1999.

Status of Internet usage in developing countries

- Who is connected?
  - Wealth
  - education
  - age
  - location
  - gender
- Problems connecting
  - Prices of net access (retail and wholesale)
  - market structure
  - infrastructure
  - content and language

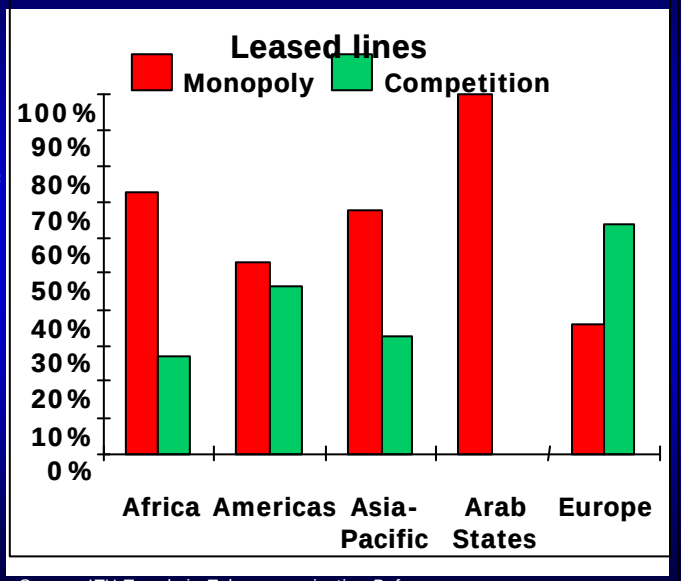
Competition in ISP markets compared to other markets, 1999

- 81 % of countries allow competition in Internet markets in 1999
- In more than 73 % of cases there are three or more ISPs



Competition in leased lines, by region, 1999

- Despite the competition in ISP markets, prices remain high because of the lack of competition in leased line supply.
- 60 % of the leased line markets remain under monopoly control

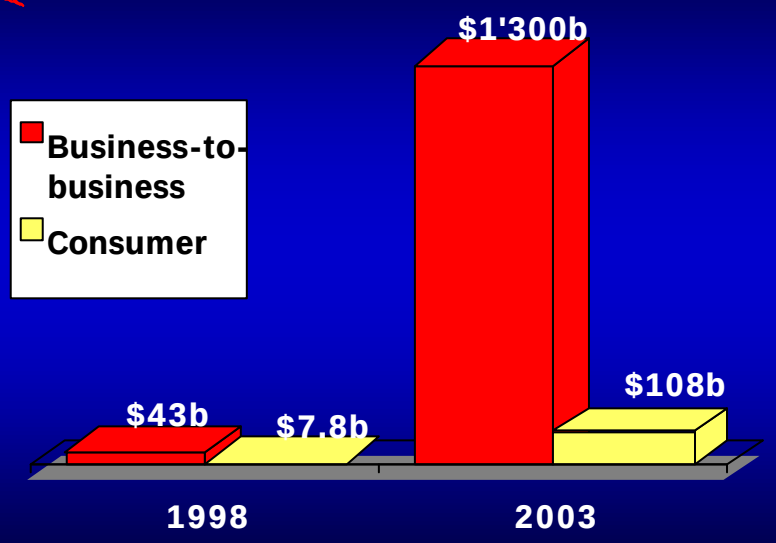


Source: ITU Trends in Telecommunication Reform: Convergence and regulation 1999

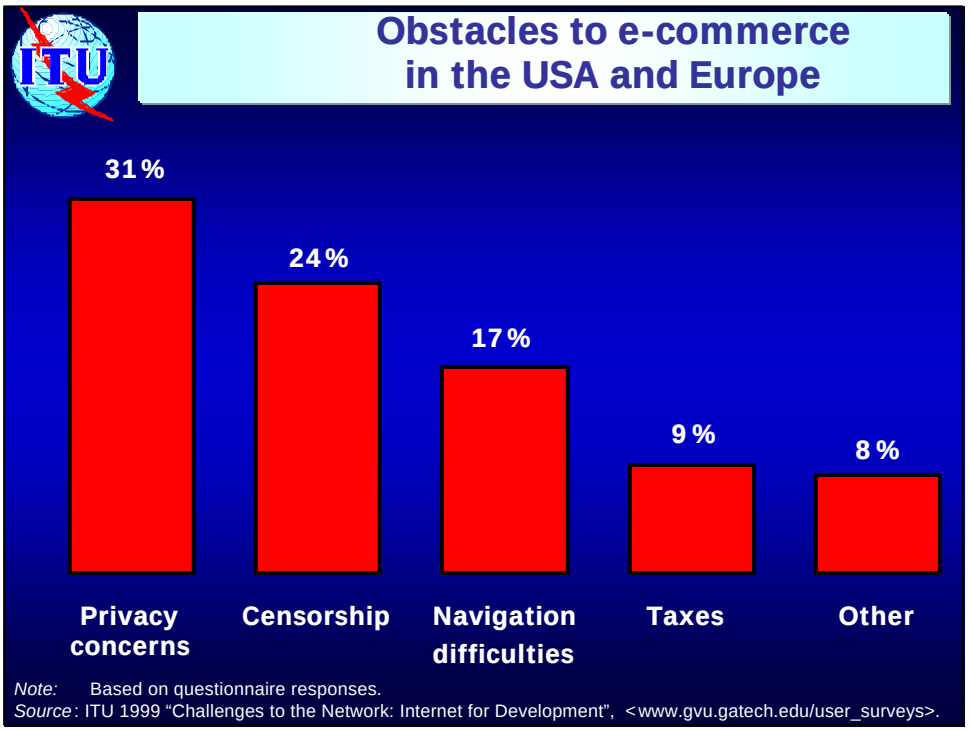
Barriers to Internet Development

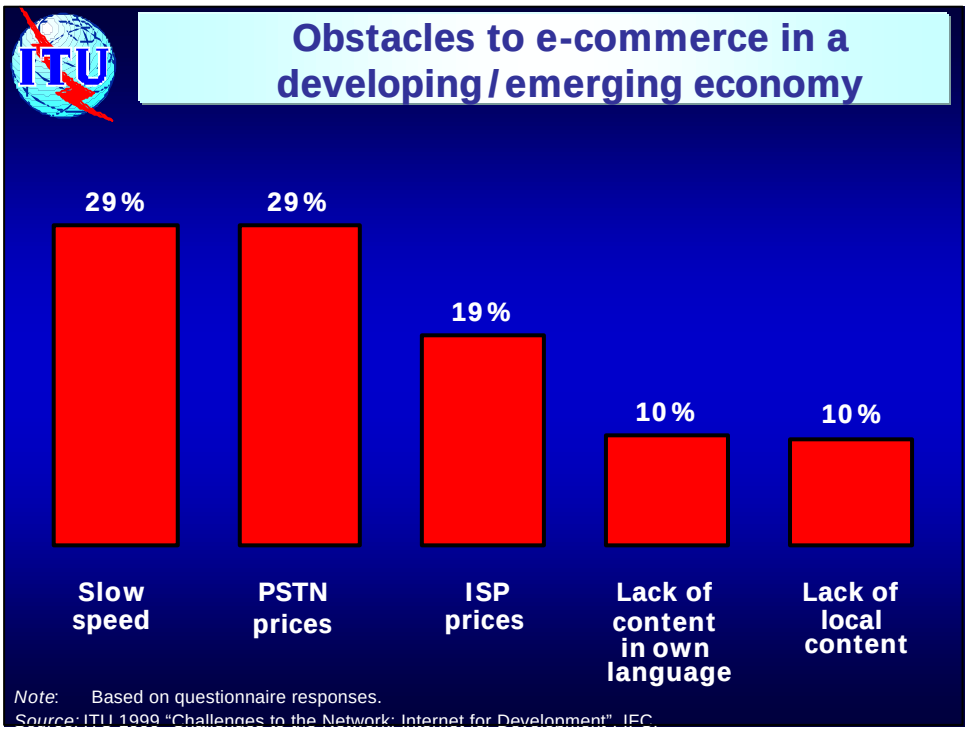
- **Transmission supply side**
  - ***National level*: Lack of competition in the leased line market**
  - ***Global level:* Due to concentration, the IP Backbone market remains much less competitive than the retail side**
- **Services restrictions: e.g. IP telephony**
  - **Almost 90 ITU Member States have banned call-back and may restrict IP telephony**

E-commerce forecast 1998-2003 In billions (US$)



Source: Forrester Research, Inc. 1999


Obstacles to e-commerce in the USA and Europe
31 %
24 %
17 %
9 %
8 %
Privacy concerns
Censorship
Navigation difficulties
Taxes
Other
Note: Based on questionnaire responses.
Source: ITU 1999 "Challenges to the Network: Internet for Development", <www.gvu.gatech.edu/user_surveys>.


Obstacles to e-commerce in a developing/emerging economy
29 %
29 %
19 %
10 %
10 %
Slow speed
PSTN prices
ISP prices
Lack of content in own language
Lack of local content
Note: Based on questionnaire responses.
Source: ITU 1999 "Challenges to the Network: Internet for Development", IFC.

Challenges to E-commerce in a developing country

- Telecom and IT Infrastructure
- E-commerce Infrastructure (e-payments, shipping etc.)
- Pricing
- Content and market size
- Awareness, education
- Human resources, know-how
- Legal System
- National and Regional Endorsement

Discussion

- What are the key opportunities and challenges for ISPs in developing countries in the areas of:
  - Policy & infrastructure
  - Electronic commerce & other value added services