ICT statistics for benchmarking economic performance

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The views expressed in this paper are those of the authors and do not necessarily reflect the opinions of the ITU or its Membership. The author can contacted by e-mail at Tim.Kelly@itu.int.
Benchmarking can be a useful tool ...

FIFA/Coca Cola World Rankings

1. France 802 points
4. Colombia 728 points

....

42. Senegal 599 points
50. China PR 566 points

But rankings don’t necessarily predict who will qualify

... nor who will win!
Agenda

- Why benchmarking for ICTs?
  - Benchmarking for policy-makers
  - Benchmarking for company managers

- Benchmarking tools
  - Network growth and development
  - Price comparisons
  - Key indicators and ratios
  - Rankings

- China’s case
  - Charting an economic phenomenon
Benchmarking for policy-makers

- For policy analysis
  - Comparisons before and after policy change
  - Measuring impact of ICTs on general economic investment and performance

- For regulatory purposes
  - ICT sector policy: e.g., tariff rebalancing, including wholesale pricing arrangements among service providers
  - Competition policy: e.g., market share, growth rates and measures of market dominance

- For international comparisons
  - Aggregation of national statistics to allow comparison with other countries
  - Comparisons of change in rankings
Benchmarking Example (1): Teledensity in Chile and Argentina

- 1988: Privatisation and competition in Chile
- 1990: Privatisation with 7 year exclusivity in Argentina
- Exclusivity period extended by 3 years

Benchmarking for company managers

- Comparing expected performance against actual
  - Implementing and monitoring business plan
- Comparing performance against competitors
  - Market share, price comparisons, quality of service indicators etc
- Measuring customer satisfaction
  - Level of complaints
Benchmarking example (2): Mobile density in Hongkong and Singapore

Hongkong SAR: Mobile competition introduced in 1988 for analogue

Singapore: Mobile competition delayed until April 1997

Six additional PCS licences awarded in 1996

Additional competition introduced with digital mobile in 1993

Benchmarking tools

- **Network development and growth**
  - e.g. teledensity, mobile density, growth rates
  - e.g. Internet penetration, broadband take-up

- **Price comparisons**
  - OECD/Teligen price comparison model: Covers business and residential, fixed and mobile, voice and data services

- **Quality of service comparisons**

- **Financial measures**
  - e.g. average revenue per user (ARPU), revenue per employee, return on capital investment etc
Key ICT indicators and ratios for general economic performance

- **Penetration level (density)**
  - Network connections (fixed-line, mobile, Internet) per 100 inhabitants, 100 households, 100 businesses

- **Telecoms as a % of GDP**
  - Rising fast during the 1990s

- **Performance in leading ICT sectors**
  - Broadband, 3G mobile, digital broadcasting

- **Pricing and usage**
  - How affordable are ICTs? How widely are they being used?
Benchmarking example (3):
Telecoms as % of GDP in “broadband economies”

Source: ITU World Telecommunication Indicators Database.
### Top 10 performers, 1990-2000 by total teledensity rank

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Note: Based on total teledensity (fixed lines plus mobile subscribers, per 100 inhabitants). Shows top ten ITU Member States in terms of improvement in ranking, 1990-2000.

Source: ITU World Telecommunication Indicators Database.
China’s performance: Teledensity and GDP per capita

ITU country case studies

www.itu.int/ni

- Internet diffusion studies
  - ASEAN, Bolivia, Egypt, Hungary, Nepal, Uganda

- Broadband
  - Australia, Italy, Malaysia, South Africa, Korea (Rep.)

- 3G Mobile
  - China, Chile, Ghana, Hongkong SAR, Japan, Venezuela

- Cyber-security
  - Brazil, Canada, Korea (Rep.), Netherlands

- Effective regulation
  - Botswana, Brazil, Morocco, Peru, Singapore