



**INTERNATIONAL TELECOMMUNICATION UNION**  
**Telecommunication Development Bureau**  
Telecommunication Statistics and Data Unit

---

**13 December 2002**  
**Original: English**

**3<sup>rd</sup> World Telecommunication/ICT Indicators Meeting**  
*Geneva, 15 - 17 January 2003*

**Document:** WICT-17E

**Source:** Phillippa Biggs  
UNCTAD

**Title:** ICT Development Indices (PowerPoint presentation)



# ICT Development Indices

World Telecommunication/ICT  
Indicators Meeting, Geneva

15-17 January 2003

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

# ICT Development Indices

- *WHY?*  
Input & benchmarking for policy analysis:  
comparisons using standard indicators;  
monitoring progress and outcomes.
- Cross-country benchmarking: 160 countries
- Reviews existing work: framework for  
*Connectivity, Access, Usage and Policy*  
--> Indices and relative country rankings.

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

## ICT Development Indices

- **Connectivity Index:**
  - Internet hosts; PCs; Mobiles; Telephone mainlines.
- **Access Index:**
  - Internet users; GDP per capita; Local call cost; Literacy
- **Policy Index (info only):**
  - Domestic Internet exchange; Competition in local loop, long distance and ISP markets.

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

## Results



- High positive correlations between indices;
- Rankings stable over time;
- Correlation with *income*: High>Mid>Low;
- *Region*: OECD > CIS > LAC > E.Asia > Arab > S.Asia > SSA
- But significant variation in E.Asia, Arab;
- Arab states and ‘island’ states have connectivity in excess of expectations based on policy index.

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

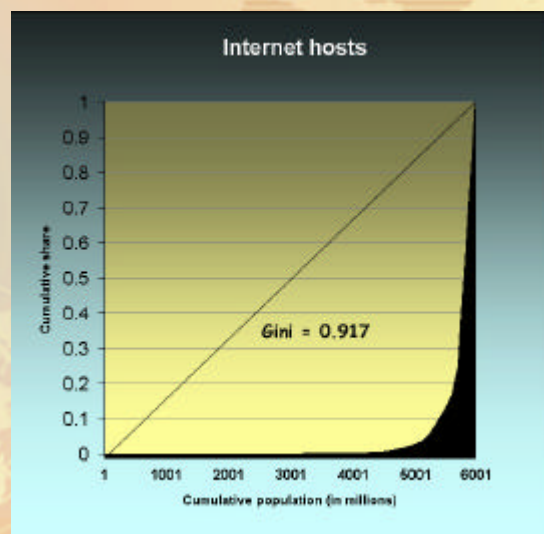
# The Digital Divide



- We measure the *international* digital divide in: Internet users, Internet hosts, PCs, mobiles, telephone mainlines for 1995-2001.
- Through Gini coefficients of inequality;
- Findings: very high levels of inequality; more unequal for recent ICTs (e.g. Internet hosts cf. telephone mainlines); little change over time.
- Exception: Mobiles and evidence of leapfrogging.

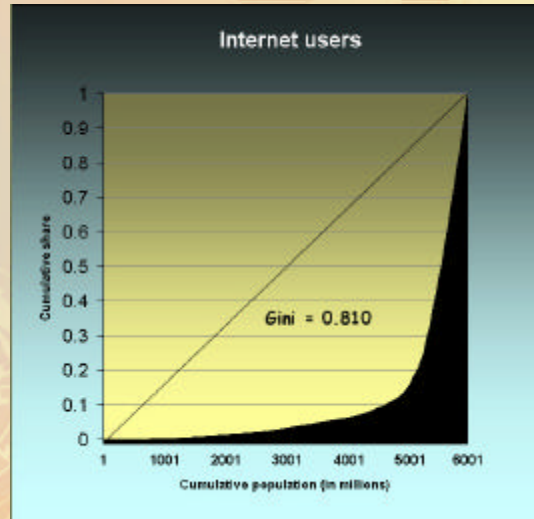
UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

## Lorenz curve: Internet Hosts 1999



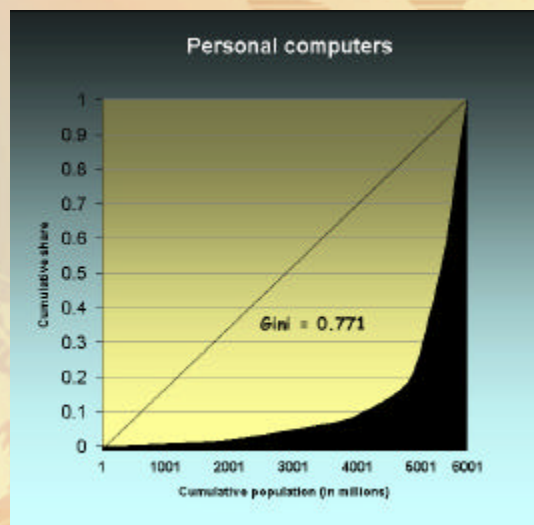
UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

### Lorenz curve: Internet Users 1999



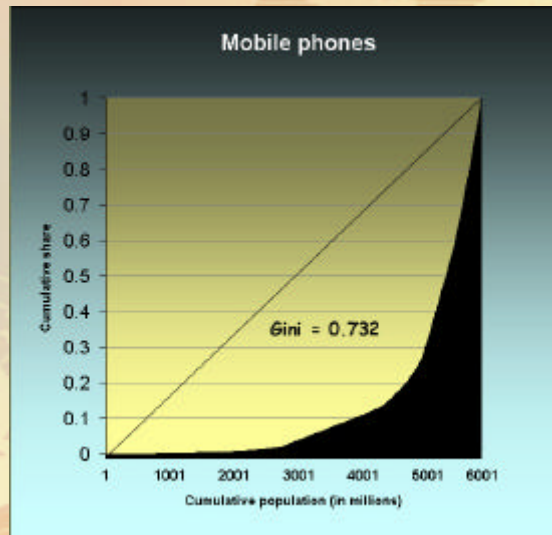
AND DEVELOPMENT

### Lorenz curve: Personal Computers 1999



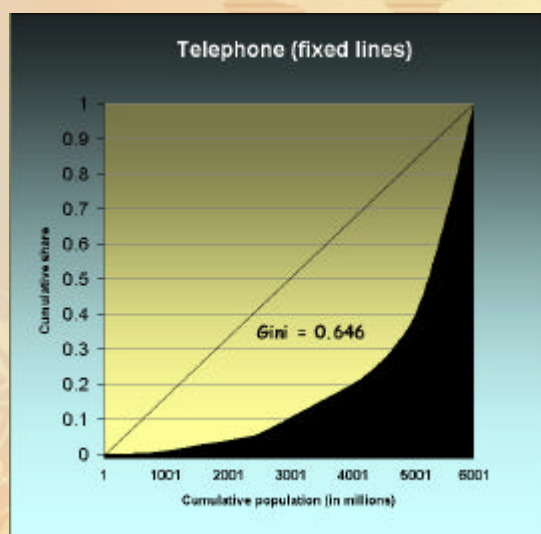
AND DEVELOPMENT

Lorenz curve: Mobile Phones 1999



AND DEVELOPMENT

Lorenz curve: Telephone mainlines 1999



AND DEVELOPMENT

## Conclusions



- Great inequality in country levels and distributions of technology across the globe;
- However, new technologies (notably mobiles) offer opportunities for bridging this digital divide;
- Benchmarking, measurement and monitoring of progress are vital inputs to future policy analysis.

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

## Thank you for your attention

Miss Phillipa Biggs, UNCTAD  
[philippa.biggs@unctad.org](mailto:philippa.biggs@unctad.org)

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT