Mobile Paradigm in Developing Countries

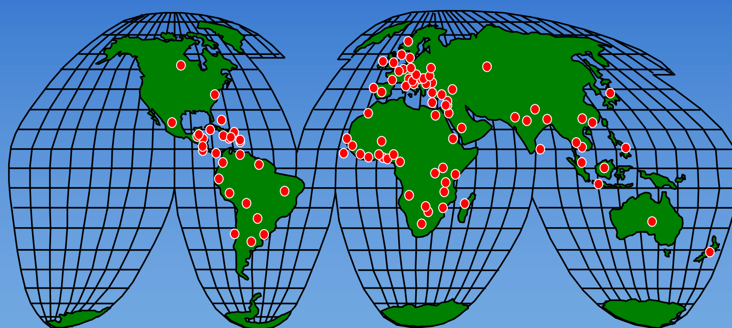
Mark A. Jamison
Public Utility Research Center
University of Florida

Outline

- General trends in mobile communications
  - » Sector growth and innovations
- Case studies
  - » Guatemala, Uganda, Morocco

International Training

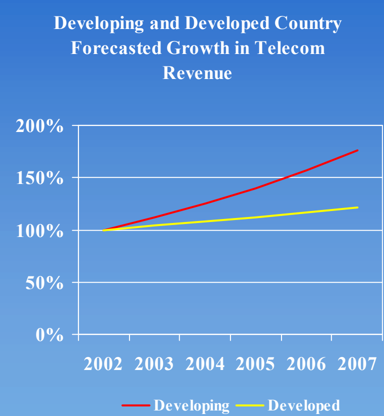
Countries Represented, 1997 - 2002

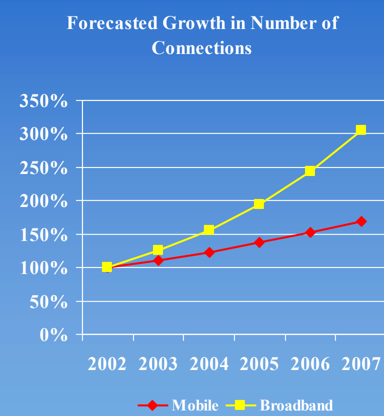


Telecom Sector

- Worldwide penetration in teledensity is growing
  - » 1 billion lines in 2000
  - » Disparities persist…
    - 375 million lines in Asia, but only 18 million in Africa
  - » Developing country growth
    - Developing country CAGR for telecom revenue from 2002 to 2007 is 12%, compared to 4% for developed countries

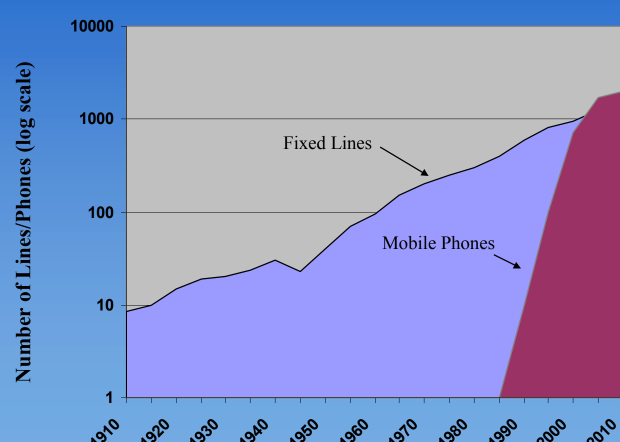
Telecom Forecasts, 2002-2007





Source: Pyramid Research (November 2002.) and WB

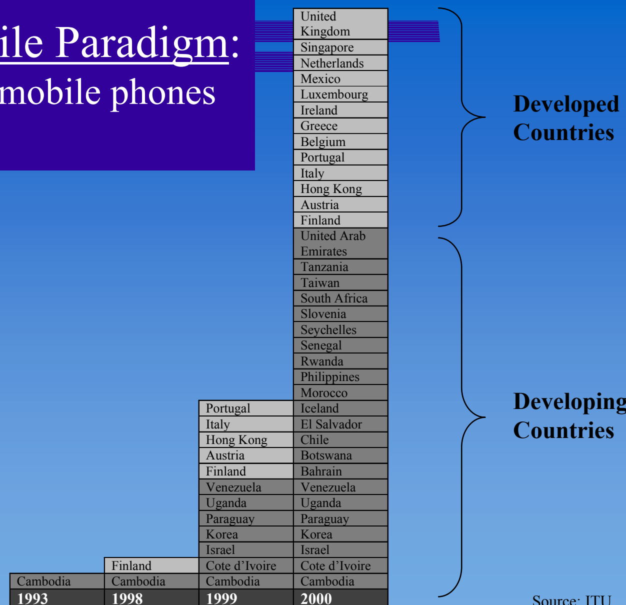
Mobile Overtaking Fixed Lines Worldwide



Source: ITU

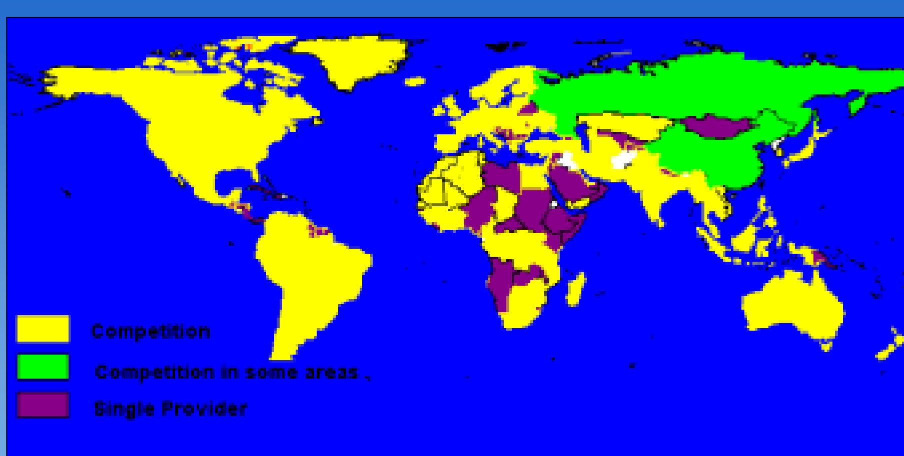
Emerging Mobile Paradigm:

Economies where mobile phones exceed fixed lines



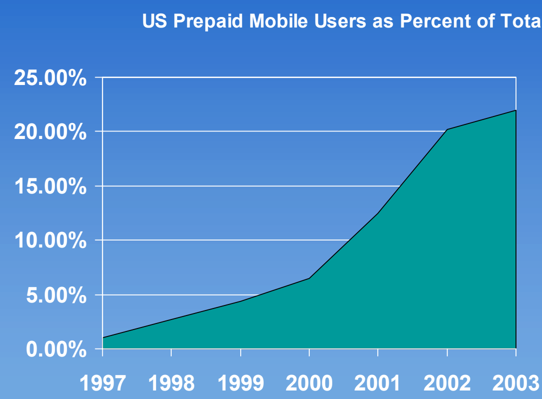
Source: ITU

Competition Paradigm in Mobile



Source: WB

Competition in developing countries stimulates new services, such as pre-paid, that spill over to developed countries



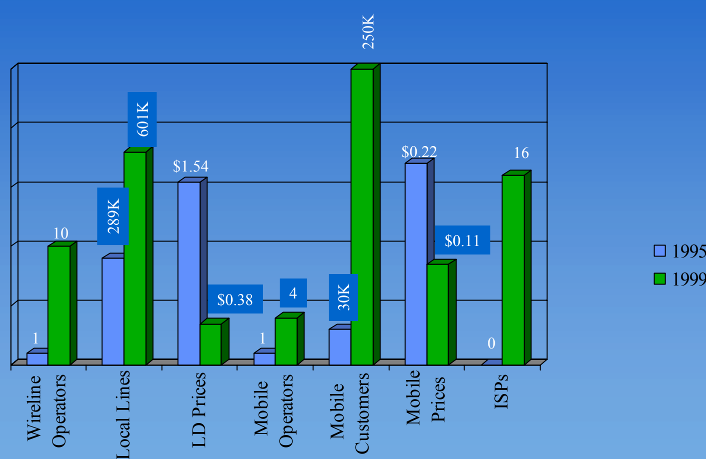
Pre-paid subscribers represent over 75% of cellular subscribers, in Morocco, Egypt, Ivory Coast, Ghana, Estonia, Lebanon….

Source: WB

Deregulation

- Guatemala and El Salvador
  - » Deregulated entry for wireline and wireless
  - » Regulator resolves interconnection disputes
  - » Radio spectrum is private property
    - may be sold, leased, and mortgaged
    - Given to any person that requests it
      - » If others also want, then auction
    - Titles are for 15 years and renewable
    - All transactions registered with Regulator

Guatemala



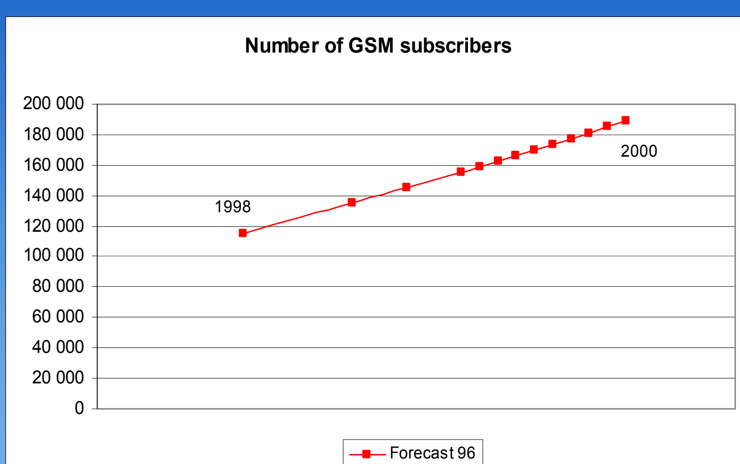
Competition with wireline

- Uganda
  - » Only three operators allowed
    - Incumbent wireline
    - One cellular operator licensed in 1995
    - Second Network Operator (SNO) can provide both cellular and fixed line services
      - » Chose to offer no fixed line service
  - » Bushnet offers radio and wireless data

Uganda Results

- Before SNO:
  - » Incumbent had 54,091 subscribers
  - » Cellular operator had 12,500 subscribers
- One year after SNO, total increase 67%
  - » SNO had 36,500 mobile subscribers.
  - » Cellular operator had 20,000 subscribers.
  - » Incumbent had same number of subscribers
- Now:
  - » Incumbent is about 1/3 of the market

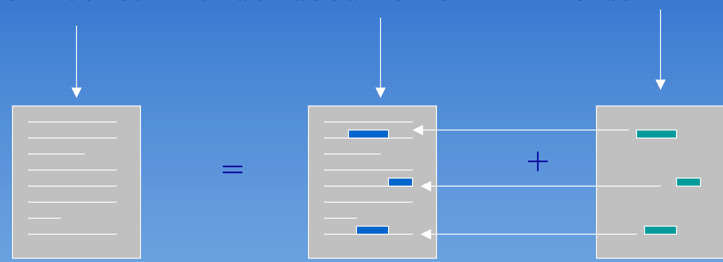
Morocco Auction of 2nd GSM license: Incumbent 's Forecast (96)



Source: ARNT and WB

Predictability of license terms

Terms of license = tender documents + bids



(coverage, fees, QoS,…)

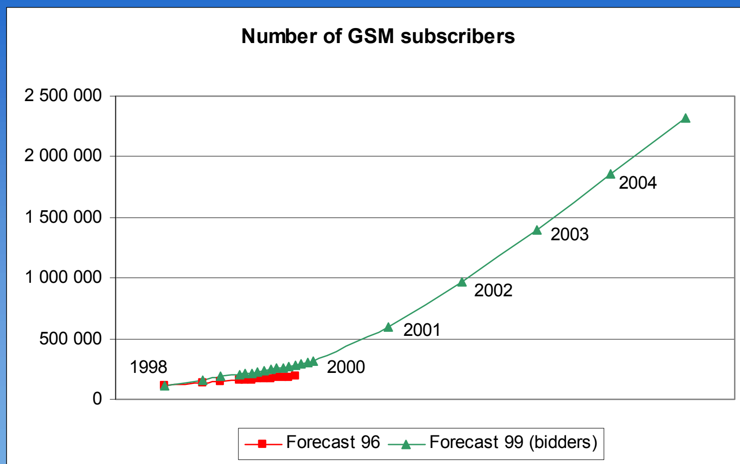
Source: ARNT and WB

Bid evaluation criteria

Criterion	Grade	Notes
License Fee	**60 points**	60 pts to the best offer (BO1) , the other offers BOi are graded according to [57 ,5xBOi / BO1]
Tariffs Structure	**15 points**	Grade according to the reference terms
Coverage and Network Quality	**20 points**	Grade according to supplement comparing to the minimum of the Tender Document
Offer's Coherence	**5 points**	Grade according to the coherence of the offers (Business Plan, employment, training, Know-how transfer…)
Total	**100 points**	

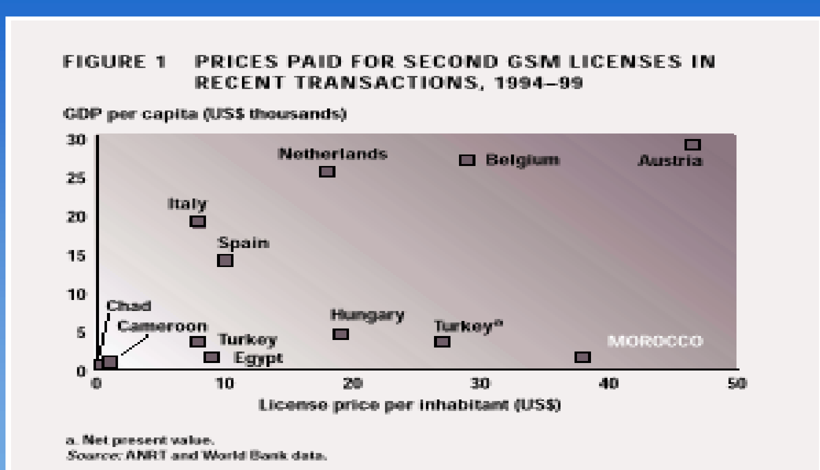
Source: ARNT and WB

Subscription Results (2001)



Source: ARNT and WB

Fee per population



Source: ARNT and WB

Conclusion

- Developing countries are setting patterns for the developed world
  - » Innovations for service to the poor
  - » Market solutions for spectrum management and other regulatory issues
  - » Competition between fixed line and wireless
  - » Importance of transparency and predictability in regulatory processes
  - » Surprising demand for services that meet customer needs