

# Lowest Cost Frontier

Transparent pricing for every type of customer

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# Background

- Advanced ICT increasingly resembles a highly interconnected ecosystem
- Effective regulation in part has to adapt to changes in industry performance
- Meaningful yet simple tools are needed to cope with heterogeneity of services, prices
- Low Cost Frontier was developed to overcome some of these challenges

# Problem of heterogeneity

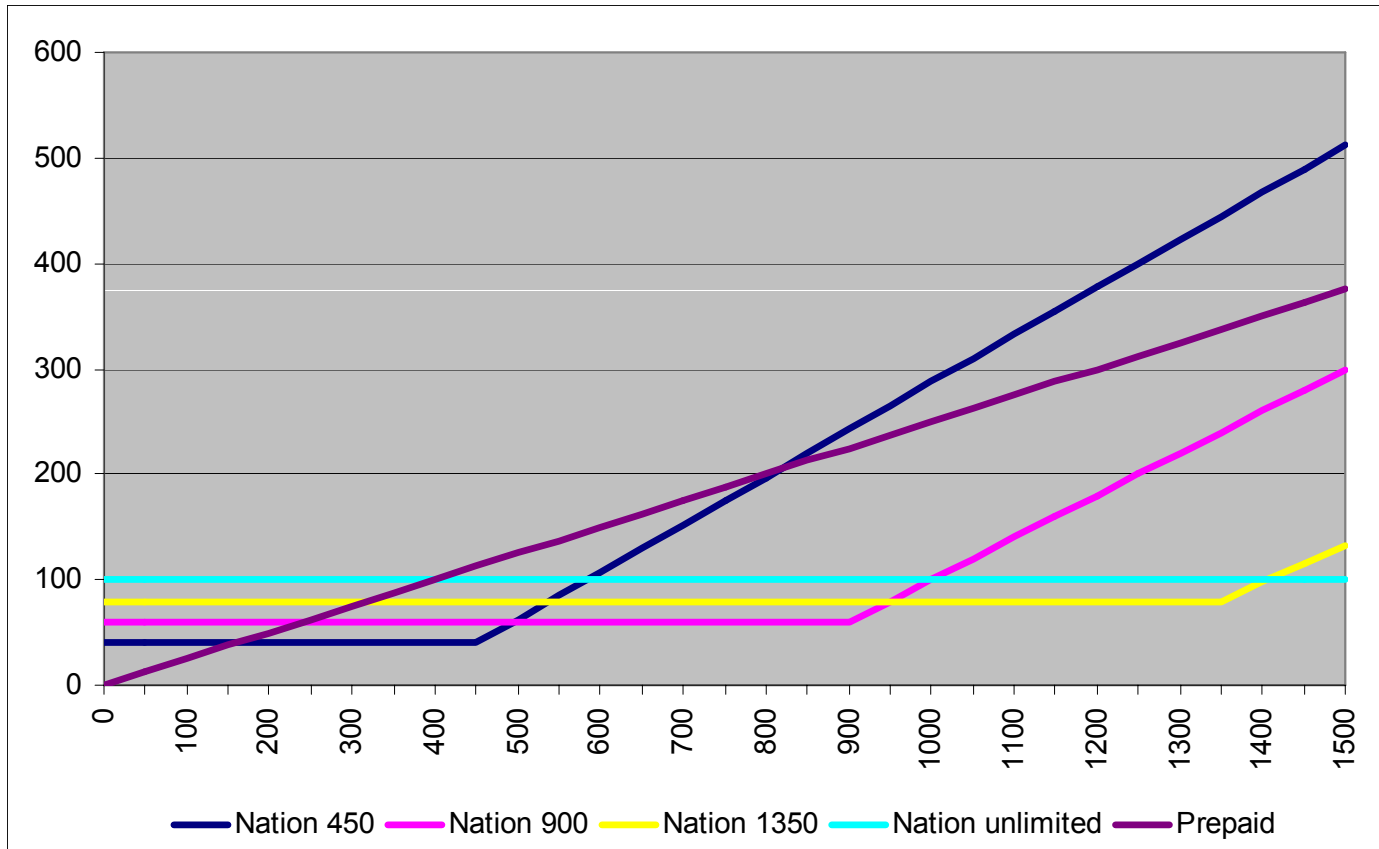
- Differentiation of networks and services
  - Technology
  - Capacity, speed, reliability
  - Adoption rates
- Differentiation of business practices
  - Pricing (prepaid, multi-part, ...)
  - Bundling of services
- Differences in economic, political, socio-cultural conditions across nations
- Differences in patterns and paths of sector evolution

# Low Cost Frontier (LCF)

- Basic assumptions and objective
  - Overall rational users that respond to options
  - Flexibility to choose between plans
  - Only limited flexibility to shift times of calls
- Metric design
  - Minimal expenditure for varying usage levels
  - $LCF = \min E(U)$ , for  $0 < U \leq 2000$ 
    - $E$  ... expenditure
    - $U$  ... minutes of use
  - Conventions re complementary and ancillary services
- Flexibility (pre-, post paid, calling patterns, ...)

# AT&T mobile voice plans

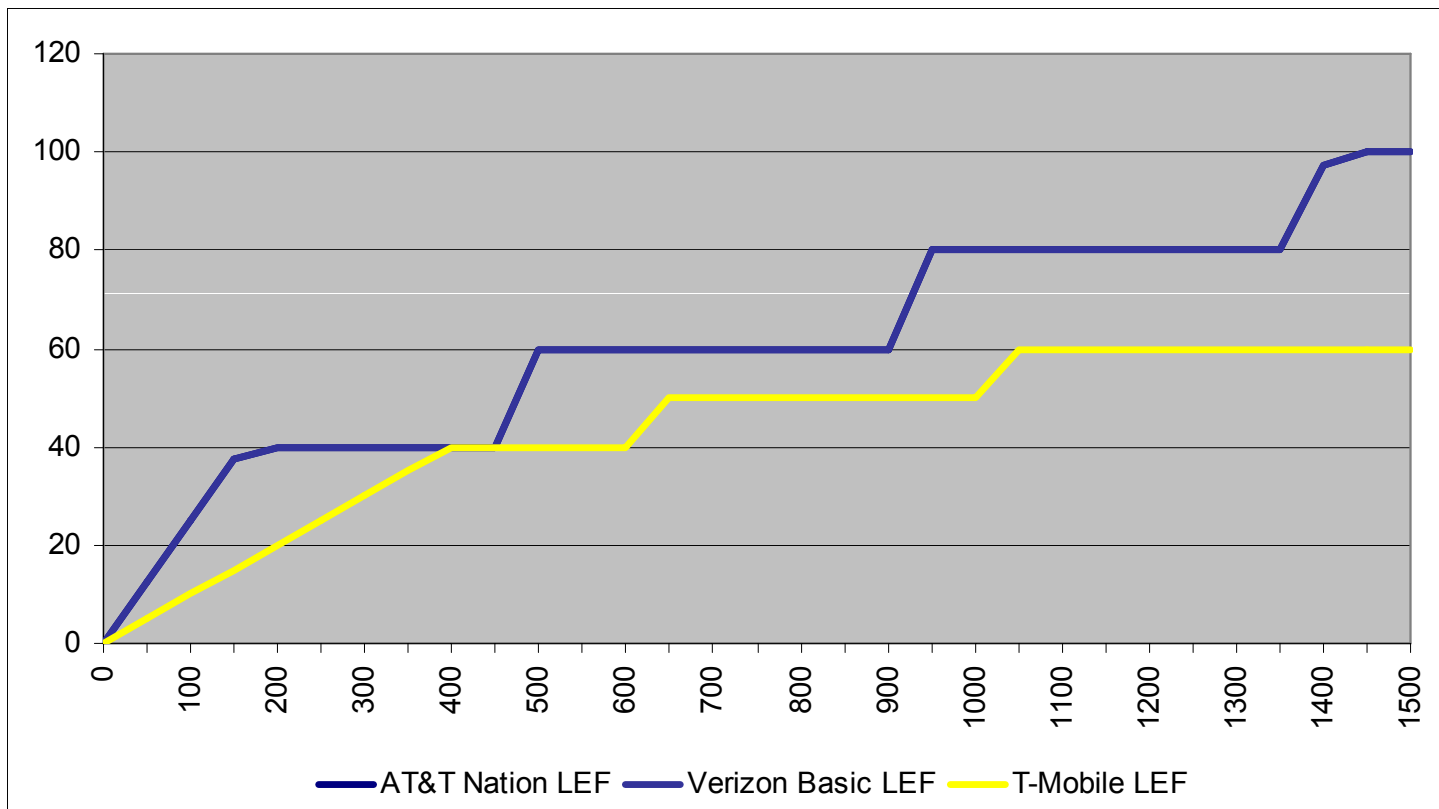
(Total expenditure in US\$ by minutes of paid use, 2009)



Source: <http://www.wireless.att.com/cell-phone-service/cell-phone-plans/individual-cell-phone-plans.jsp>, own calculations

# Mobile voice plan comparison

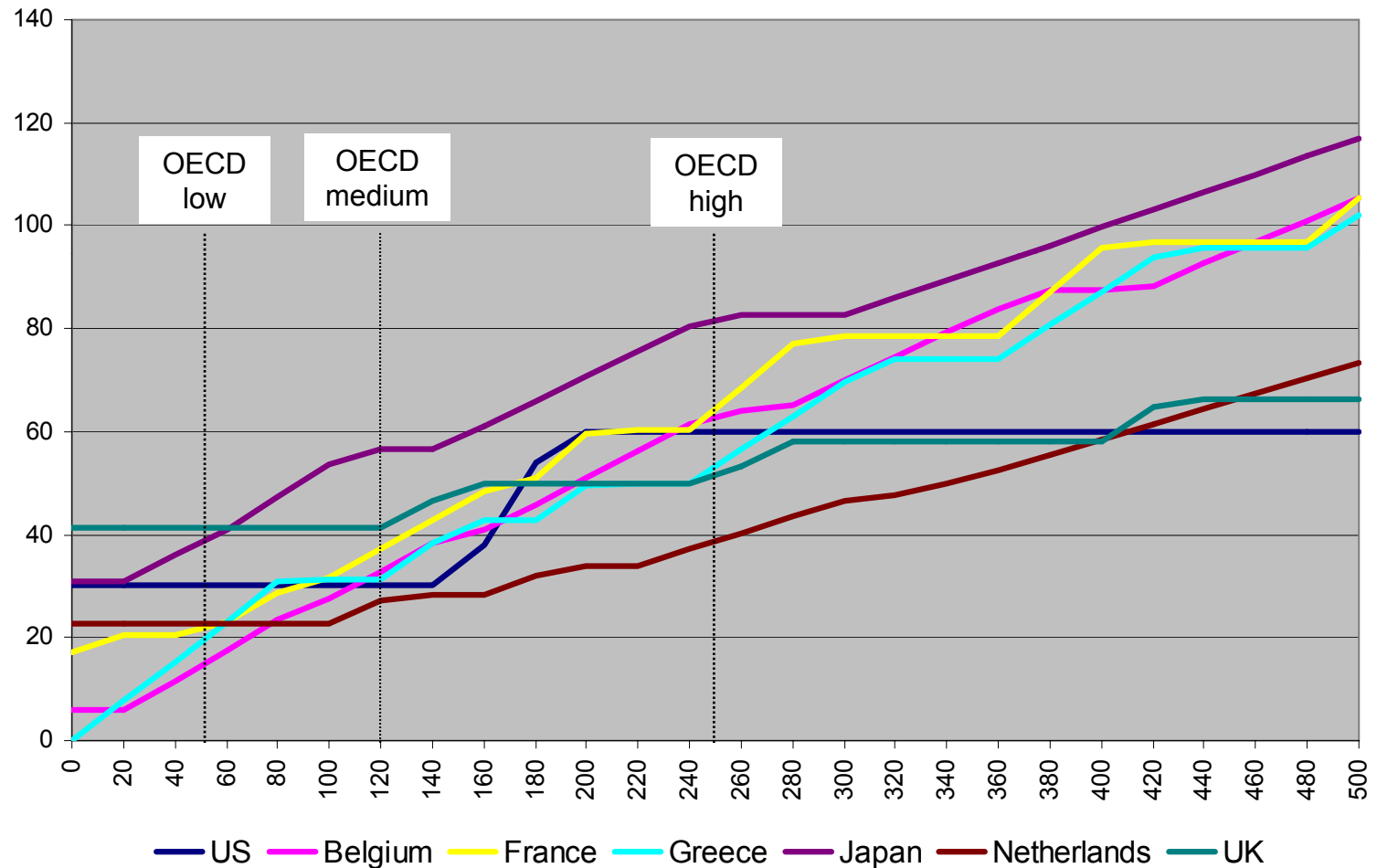
(Lowest Cost Frontier (LCF) in US\$, 2009)



Source: Bauer-Kim, 2009 for LCF methodology

# Cross-national example

( $\leq 500$  min, US\$ PPP, post-paid, 2007)



# Advantages & complications

- Advantages

- Overcomes challenges posed by differentiated pricing
- Provides broad picture of state of market
- Can be defined for many settings (mobile, broadband, ...)
- Information readily available

- Complications

- Periods of zero incremental cost (free use) difficult to accommodate
- Quality differentiation requires conventions re complementary and ancillary services
- Bundling of services creates additional complications