Telecom Regulations in India: Recent Lessons & Way Forward

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Overview

• Propose policies on:
  I. Spectrum allocation
  II. Taxation and distortion
  III. Transparency and credibility

  – Only look at wireless phone market
Economics of telecom regulation

• Competition effects vs scale effects
• Increasing returns to scale:
  – Spectrum
    • Limited natural resource
    • Trunking efficiency: traffic per MHz increases when more MHz
    • Significant up to 2x12 MHz
    • Average 2x5 MHz.
  – Fixed costs
    • Falling average costs
  – Network
    • Number of users increases utility
I. Spectrum allocation

• Competition is too fierce?
  – 3-4 is typical vs 10-15 GSM plus CDMAs in India

• Market base approach
  – Firm incentives to utilize IRS efficiently
  – Government get the value of the resource

 1. Auction spectrum
    • Open first-price simultaneous auction
      – Initial 15 MHz blocks, open 5 MHz and 1 MHz
    • Licenses follow spectrum

2. Second hand market
  • Mergers and acquisitions
  • Spectrum resale

3. Antitrust or regulation
  • 35% market share / 25% spectrum
II. Taxation and distortion

A. Regulatory truncation
   – Prices to low? -> ex ante vs ex post
     • Purchase based on expectations for market and technology growth
     – Upside and downside that is realized ex post
     • Investments are based on ex ante expectations
   – …also expectations on future taxes
     • Ex ante expected profits and investment
     • Ex post increased taxes
     • Firms have the downside, government tax upside

=> Inefficient investments and smaller tax revenue
II. Taxation and distortion

B. Revenue sharing system
   – Inefficient in dynamic setting
   – Lowers investments
   – Credit constraints

1. Sectoral tax system to general corporate tax
   – First-best: Net profit tax
     • Revenue net of costs and capital depreciation
     • More efficient investment level
   – Second-best: use the established system of service tax
   – Reasons to tax telecom differently?
III. Transparency and credibility

• Credibility and commitment to taxation
  – Efficient investment / regulatory truncation:
    • Investments are sunk and ex post surplus extraction
      => low investments
  1. Abolish sectoral tax system
     – Lessens opportunity to change taxes
  2. Tax transfers to Ministry of Finance
     – Lessens incentives to change taxes
  3. Rules vs discretion
  4. Independent special court for telecom matters

• Transparency
  – Auctions vs beauty contest and first-pay first-served
    • Lessens opportunity for graft
Conclusion

I. Spectrum allocation and scale economics:
   – Market based approach: open spectrum auctions and abolishing restrictions on the second-hand market
   – Let market converge to fewer operators

II. Taxation and tax distortions:
   – Abolish sector tax system and revenue sharing
   – General corporate tax system

III. Transparency and credibility:
   – Auctions
   – Taxes collected by the ministry of finance
   – Rule before discretion
   – Independent appeal court