

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 CDMA 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 too 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