

Economics of Networks, Sunk Costs, Rates, Interoperability and Access

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Five Prisms and Networks

- Networks Present Common Dilemmas
 - High fixed, low marginal cost
 - Positive Network Externalities
 - Powerful returns to scale and scope
- Horizontal
 - Interconnection, its pricing and monopoly problems
- Vertical
 - Solve holdout, pricing and complementary good problems
 - Presents discrimination and access concerns

Five Prisms and Networks

“The best of all monopoly profits is a quiet life”

--JR Hicks

“To me, they are all just marginal costs with wings.”

--Alfred Kahn

Economics of Networks

- High fixed/low marginal costs
 - Tend toward monopoly or oligopoly
 - High fixed costs create entry barriers
 - Pricing must be above marginal cost
- Tend to exhibit positive externalities
 - The more subscribers on the network, the more valuable the network becomes
 - Creates interconnection, interoperability, access pricing issues
- Large returns to scale and scope

Rate Structure

- Price Discrimination
 - Necessary for recovery of fixed costs
 - Seek ways so consumer elicit demand preferences
- Ramsey Pricing
 - Second-best efficient outcome
 - Price to consumers based on the demand elasticity
 - Rate classes vestigial evidence of Ramsey
- Value of Service Pricing
 - Strong norm against in public utility ratemaking

Rate-making 101

- **Cost-of-service norm**
 - Indifferent to demand preferences of customers
 - Averch-Johnson Effects – overinvest in capital
 - Poor innovation/efficiency effects
- **Price/Revenue Caps**
 - “fixed price” regulatory contract
 - Stronger innovation, cost containment incentives
 - Must be accompanied by strong QoS

Interoperability

- Trade-off between Schumpeterian competition *for* the standard and *within* the standard
- In a stable, slow-changing market, there is a strong case for interconnection/interoperability mandates
- Competitive markets reach different balances between interoperability and closed standards
- Interconnection/interoperability mandates create regulatory issues

Pricing Access

- **Interconnection pricing**
 - Someone must set price in case of monopoly
 - Creates terminating access monopoly problems (*Otter Tail, Boston Edison, Madison River*)
- **Pricing creates dynamic incentives that direct market outcomes (UNE-P, OATT)**
 - ICC v. FERC – postage stamp rates lost
- **Winners' curse, losers' plaint (iPod access, PayPal antitrust suit)**
- **Competition policy should direct degree of interest in intervening**