Higher Costs of Capital for Networked Industries: The Anticipated and Unanticipated Consequences of Deregulation

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Less Than A Generation Ago, Most Networked Industries Had a Low Cost of Capital

- Government-owned enterprises or regulated monopolies
- Most businesses were countercyclical
- Bankruptcy was rare
- View that government was partner with industry and would not permit financial harm
- Dow Jones Utility Average widely reported
- Equities and Bonds used for:
  - Widows and Orphans Funds
  - Birth and wedding presents
  - Low-risk investments

Something Changed

- Today, networked industry among the most risky investments
- What has changed?
  - Consumer Demand
  - Technology
  - Competition
  - Regulation
- Caveats on focus

Regulation of Networked Industries

- Pre - 1980 (approximately)
- Deregulation from 1980 – present
  - Anticipated changes
  - Unanticipated changes

Pre - 1980

- Networked industries needed concessions from governments and vice versa
- Industry needed concessions from government
- Governments needed concessions from industry

Industry Needed Concessions from Government

- Limited liability and common carrier status
- Legal status for financing of investment
- Legal status for collection of consumer bills
- Protection from competition

Governments Needed Concessions from Industries

- Use networked industries as a means to offer consumer value to favored constituencies
- Use networked industries as a means to offer production value to favored constituencies
- Monopoly as the idealized industry structure
- Economists rationalized

Governments used networked industries as a means to offer consumer value to favored constituencies

- Universal service
- Price regulation
- Control dissemination of new technology
- But all of these distortions left some consumers better off than under competition, but many others worse off

Government used networked industries as a means to offer production value to favored constituencies

- Plum job assignments, excessive hires
- Favored investment opportunities
- Real estate transactions
- Problems
  - Rate-of-return regulation led to excessive investments, AJ effect
  - Often used as government ownership, but private monopoly ownership little better
  - Little incentive for technological innovation
- But all of these distortions left cost of service excessively high relative to competition

Economists Rationalized Monopoly As Ideal Industry Structure: Efficient Supply

- Economies of scale and decreasing average cost and marginal costs
  - Largely conjectural
  - Perhaps true in one geographical area, but why across different geographical areas
- Innovation -- Schumpeter
- Experience with competition in early days of telephony
  - Multiple telephone lines on same street
  - Lack of interconnection
- Arbitrary market structures, both horizontal and vertical

Economists Rationalized Monopoly As Ideal Industry Structure: Equitable Demand

- Quality of service control
- “Critical infrastructure" for consumers
- “Critical infrastructure” for business and industry and consequences of WWII
- Within the realm of government consequent to New Deal

What Happened After 1980?

- Networked industries needed further concessions from governments and vice versa
- Use networked industries as a means to offer consumer value to favored constituencies
- Use networked industries as a means to offer production value to favored constituencies
- Economists abandoned monopoly rationalization
- Competition from outside regulated sector
- Innovation from outside regulated sector

Post 1980: Networked industries needed further concessions from governments and vice versa

- Telecommunications
  - Legal rights to offer new services
    - New technologies such as wireless and broadband
    - Existing technologies such as local and long-distance through economies of scope
  - Legal rights to enter into competition in both existing and new markets
- Electricity
  - Stranded cost recovery, particularly for nuclear
  - Rationalization of competing legal frameworks for regulation of energy markets, consumer markets, and environment
    - Equitable treatment of generation by coal, nuclear, and renewables
    - Clarification of regulation of long-distance transmission
      - Rights of way and construction authority
      - Rate regulation
      - Wheeling obligations
- Both industries wanted less regulation

Post 1980: Governments used networked industries as a means to offer consumer value to favored constituencies

- Control of new technologies
  - Timing of availability to key constituencies
  - Implementation of new forms of rate regulation
- Use for social programs
  - Universal service
  - Targeted programs
    - Telecommunications and schools and libraries
    - Electricity and source generation

Post 1980, government used networked industries as a means to offer production value to favored constituencies

- Access to offer competitive services
- Access to new licensed technologies
- Access to auctions
- Government mandates for source generation of electricity

Post 1980, economists recognized limitations of monopoly model for networked industries

- Based particularly on new econometric studies made possible with the advent of computer technologies, economists found for regulated industries relative to unregulated industries:
  - Cost structure too high
  - Service quality too low
  - Innovation too little
- Measured losses of consumer and producer welfare

Post – 1980, Competition from outside government-owned-or-regulated sector

- Telecommunications, entry of new competitors
  - Wireline
  - Wireless
  - Internet
- Electricity, exit and entry
  - Energy crisis
    - Price distortions from regulation
    - Stranded investments
  - Large industries seek self generation
  - Development of government-encouraged competitive generation industry
    - Interconnection challenges
    - Pricing problems

Post 1980: Innovation from outside sector

- Most innovation from outside traditional service providers:
  - Equipment
  - Wireless services
  - Internet

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Reasons for lower cost of capital

- Guaranteed rates of return
  - No serious risk of losing money
  - No fear of making technological or management mistake
    - No stranded costs
    - All costs are ultimately recovered through governmental fiat
- Government-backed access to capital markets under favorable conditions
  - Lowest possible cost of debt
  - Implicit governmental backing of bonds
  - Similar to FNMA and GNMA today
- No competition
  - Near impossibility of entry
  - Near impossibility of exit
- Government as implicit ally
  - Government as ally
  - Corporate leadership close to govt.
    - Almost selected by govt.
- No antitrust risk
  - Statutory monopoly
  - No fear of competitive entry
  - Price fixing done by govt.
- No large liability risk
  - Common carrier status limits liability
  - Only vulnerable to other forms of law
    - Environmental
    - Labor
    - Securities

Anticipated effects of deregulation on cost of capital for networked industries

- No longer government-owned enterprises or regulated monopolies
- But most businesses would continue to be countercyclical
- Bankruptcy would still be rare
- View that government was still a partner with industry and would not permit financial harm
- Equities and Bonds would still be used for:
  - Widows and Orphans Funds
  - Birth and wedding presents
  - Low-risk investments

Possible reasons for higher cost of capital today

- No longer guaranteed rates of return
  - Serious risk of losing money
  - Technological or management mistakes are punished
- No longer government-backed access to capital markets under favorable conditions
- Competition
  - Entry encouraged by government
  - Exit still difficult
  - New entrants typically have regulatory preference such as interconnection and COLR
- Government no longer as implicit ally
  - Government hostile in regulatory proceedings
  - Corporate leadership not selected or close to government

Possible reasons for higher cost of capital today (continued)

- Substantial antitrust risk
  - Hostile antitrust proceedings
  - Fear of competitive entry
  - Antitrust challenges
    - Price fixing allegations
    - Merger conditions and delays much greater than for unregulated industries
- Large liability risk
  - Common carrier status diminished
  - Vulnerable to other forms of law
    - Environmental
    - Labor
    - Securities
    - Privacy
    - National security

Possible reasons for higher cost of capital today (continued)

- Substantial risk of financial failure and bankruptcy
  - Experiences of electricity industry
  - Experiences of telecommunications industry
  - In each instance, government did not take steps to prevent financial failure
- Regulatory risk – despite deregulation, regulatory policy still primary determinant of financial performance
  - New service quality regulation
  - Restrictions on market entry and structure remain
- Many investors avoid telecommunications and electricity
  - Bad prior experiences
  - Impossibility of predicting or avoiding regulatory risks
- Remaining investors require higher return for risk, particularly regulatory risk