Economic Efficiency

Scarcity: The concern of economic theory.

How can the resources be optimally allocated?

Economic Costs:
Measures the value of resources used.

Agenda

- Economic Efficiency
- Demand
- Supply
- Regulation
- Case Studies
Economic Efficiency

Demand:
Measures the value to consumers of resources. Consumer's willingness to pay

Supply and Demand:
Determines the allocation of resources.

Exception: Market Failure for example, Monopoly.

Demand:
Measures the value of goods and services.
Demand Function of
- Price
- Income
- Price of Other Goods
- Tastes

Demand Elasticity
The Percentage Change in Quantity with respect to a Percentage Change in Price

Demand Elastic
The Percentage Change in Quantity greater than the Percentage Change in Price

Demand Inelastic
The Percentage Change in Quantity less than the Percentage Change in Price
Demand

Price

Quantity

Q

Price

Consumer’s Surplus:

Value beyond which the consumer pays for a good or service.

Supply Function

The relationship between quantity and cost (price).

Supply

Based on Cost (Incremental)

Price / Quantity of Inputs

Price of Outputs
Demand & Supply Interaction

Costs / Production Analysis

- Fixed versus Variable
- Relevant versus Irrelevant
- Marginal versus Average
- Economic versus Accounting

Costs / Production Analysis

- Irrelevant
  - Historic Costs
  - Sunk Costs
- Beware of
  - Accounting Costs
  - Allocated Costs

Costs / Production Analysis

- Relevant
  - Prospective (Future) Costs
  - Spectrum Costs
  - Joint / Common Costs

Costs / Production Analysis

- Fixed versus Variable
- Relevant versus Irrelevant
- Marginal versus Average

Economic vs. Accounting
Telecommunications Demand

- Definition of Service
- Subscribers' Access
- Demand for Usage
- Externality

Telecommunications Demand

Role of Costs in Pricing

- Marginal Cost Pricing
- Ramsey Pricing
- Other Alternatives

Economic Efficiency

Telephony Guidelines

- Prices Based on Costs
- Define Service Correctly
- Avoid Cross-Subsidies
- Competition
Economic Efficiency

Pricing Practices
- Fixed Costs, Fixed Prices
- Variable Costs, Variable Prices

Subsidies
- No Cross-Subsidies
- Targeted Subsidies, if any
- Subsidies Financed by Government

Equity Considerations
- Universal Service
- Cross-Subsidies
  Targeted Subsidies
  Service Subsidies

Theory of Monopoly
- Definition
- Pricing Practices
- Constraint of Output
- Sustainability
- De jure versus de facto
- X-inefficiency

Theory of Monopoly
- Definition
- Economics of Scale
- Economics of Scope

Pricing Practices
- Higher Prices
- Constrain Output
Theory of Monopoly

- **Sustainability**

If economies of scale and scope exist, why would a firm want or need to keep out competition?

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Economics of Regulation

- Rate of Return Regulation
- Essential Services
- Alternative Methods
- Competitive Provision

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Rate of Return

- Determining Capital
- Determining Rate
- Averch-Johnson
- Rate Structure

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Cautions and Failures

- Duopoly Fallacy
  - UK Situation
  - Cellular Phone System
- Extended Area Service

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Role of Competition

- Allocation of Resources
- Incentive for Efficiency
- Threat of Entry Discipline
Summary

- Competition Desirable
- No Entry Restrictions
- Specific Transition Period
- Prices Cost-Oriented
- Incentive Regulation
- Targeted Subsidies, if any

Summary (continue)

- Regulation in place
- Anti-Trust Required
- Interconnection determined
- Spectrum leased/sold
- Long Distance -- transition

Agenda

- Economic Efficiency
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