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## Introduction:

### Demand & Supply

- Demand is simple. People buy more stuff (a) when it is cheap and (b) when they have more money. Hard to disagree with that. Add one more point: (c) when the price of similar stuff is high. [Get examples from students.]
  - Formalize in the demand curve relation. Demand shifts for income and price of substitutes.
  - Size of the market: How many consumers want the product?
- Supply: Competition v. Monopoly
  - Competition implies that price equals cost. Monopoly implies that price is higher than cost.
- Competitive Supply: relation between price per unit and number of units. As more units are produced, price per unit increases.
  - Results from scarce resources. E.g.: sports. As the number of major league baseball teams increases, fewer major league quality players per team. Price of players goes up and the price of tickets goes up. S&D equilibrium. Price of output and price of inputs determined simultaneously.
- Firms organize resources. Form the market for purchase of inputs and the sale of output.

### Theory of the Firm.

- The firm is the entity that represents producing units in the economy.
- There are two broad ways that the firm is characterized both in the popular press and in economic literature:
  - Real thing: like a person; an economic actor with good and bad intentions (i.e., socially productive and socially unproductive motivations).
    - Called the *Neoclassical Firm*.
  - Nexus of contracts: not singularly driven; awash in political maneuvering just like other institutions like government agencies, clubs, and families. Manager v. manager; division v. division; union v. union; management v. workers; management v. stock holders; stock holders v. bond holders.
    - Called the *Coasian Firm*.
- Firm's Objective: Maximize Profit
- Economic profit = Revenues minus cost of all resources.
- Three Questions: What to produce? How to produce it? How much to produce?
  - Coasian Firm → What and How
  - Neoclassical Firm → How much

### Why does the Firm Exist?

- Why doesn't communism work? — Termites Man example
- Firm solves problems of contract enforcement and incentive alignment.
  - Knight – U. of Chicago – circa '20s | Coase – Nature of the Firm – '37 | Alchian & Demsetz – '72 | Jensen & Meckling – '76

- Knight: risk management; manager/capital owner pays up front and has to monitor
- Coase:
  - Size is the issue. What are the boundaries of the firm? Why does the firm do what it does and not more or less? Chain of production. Chicken farming.
  - Equi-Marginal Principle of Profit Maximization:
 
$$\frac{w_1}{MP_1} = \frac{w_2}{MP_2} = \dots = \frac{w_n}{MP_n}$$
  - Coase focuses on numerator. Knowledge of relevant prices is the problem solved by the firm. Hard to know what relevant, relative prices are at each moment in time. Hub and spoke analogy. Central contractor required to continuously monitor prices and solve the equation.
  - Coase criticizes Knight because K. doesn't tell us what determines boundary of firm.
    - However, the same charge was leveled at Coase by Alchian & Demsetz.
    - Even so: Coase gives us an early explanation of the alleged reasons for the AOL/Time-Warner and Bell Atlantic/Nynex/GTE mergers. Relevant prices.
- Alchian & Demsetz:
  - Singular characteristic of the firm is claims to residual profits.
    - E.g.: non-profit firms are different – No one is directly claimant to the residual if revenues exceed costs.
  - Someone has to be the residual claimant — but why is it normally the manager/owner?
    - Not always true: movies, concerts, oil wells, etc.
    - But vast majority of economic activity is organized by for-profit firms.
    - Owners claim residual profits/manage or control managers.
  - Contract enforcement is the key.
    - Shirking is the main problem in economic organization.
    - The firm exists to manage resources in the face of shirking.
  - Managers must:
    - Measure | Monitor | Meter.
    - Measure productivity; monitor effort; meter rewards. ]
  - This view looks at the denominator of the Equi-Marginal Rule.
    - Hub-n-Spoke analogy still works
  - Team production makes management most difficult
    - multiple types of resources
    - synergistic effects
    - multiple resource owners
    - variance between effort and output
    - difficulty in detecting shirking
  - Meter rewards to sanction shirking. Piece-rate pay; tournament labor contracts.
  - Answer to the Big Question:
    - *Managerial shirking is monitored by claims to residual profits.*
      - Aligns incentives of manager to solve Equi-Marginal Rule, implies maximize the value of the firm.

- Size of the firm is limited by scope of managerial control.
- Jensen & Meckling:
  - Big firms reduce residual claims of managers.
  - Separation of ownership and control.
  - *Agency cost* between stock holders and managers.
  - Ownership and Control in the Modern Public Corporation
    - Specialized resource suppliers, most importantly financial capital.
      - Stocks and bonds are instruments.
    - Diversified portfolios minimize risk, implies efficiency in supply of financial capital.
    - Financial claims are limited liability because this facilitates portfolio diversification.
    - Corporate bankruptcy is contractual renegotiation among financial capital suppliers to the firm.
    - Stock option payments to corporate managers is a way to extend the scope of management and solve the agency cost problem.

### Why does the firm want to be large?

- 1) Economies of scale. Bigger is better.
  - 2) Economies of scope ???
    - Use common resources more intensively.
    - Correctly prices transfer of goods and sharing of resources.
    - Minimizes enforcement costs.
  - 3) Create monopoly / market power.
  - 4) Managerial entrenchment.
- Mergers:
    - Common way for firms to grow. Enjoy benefits of size.
    - Better use of existing resources. Resource realignment. Bust up takeovers.
    - Merger by stock swaps or cash purchase.
    - Merger by negotiation or forceful takeover.
    - Merger returns: Some evidence in support of all motives.

### References:

- Coase, Ronald. "The Nature of the Firm" in Economica. Vol 4. 1937. P386-405.
- Alchian, Arman and Demsetz, Harold. "Production, Information Costs and Economic Organization" in American Economic Review. Vol 62. 1972. P777-795.