Unit 6
The Firm:
Owners, Managers, and Employees

Hui-Jun Chen

The Ohio State University

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Introduction

Introduction

How does the firm interacts internally and externally?

- Firms are legal entity, yet still are composed by human
  - internal: Owner(s) v.s. Managers
  - external: Employees (labor market), consumer (goods market)
- Internal conflict: asymmetric information (e.g. Akerlof (1970))
- External conflict: hidden action (Principal-Agent Problem)
- As before, wage is determined by $MRS = MRT$
- Further reading: Unit 6

Internal Structure of the Firm

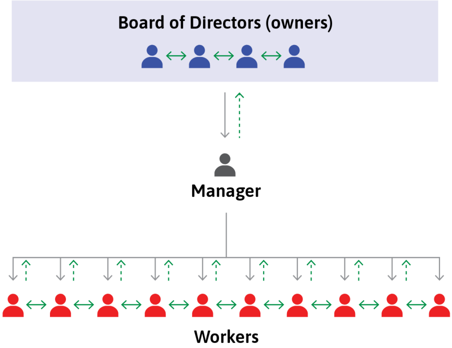
Firm's Internal Structure

Definition

Firm is a business organization which (1) hires ppl, (2) buy inputs to produce good/services, and (3) set prices $\geq$ cost.

Black arrow downward:

- Owners: set long-term goal
- Managers: implement owners' goal by assigning tasks
- Workers: doing tasks



Firm's Internal Structure

Definition

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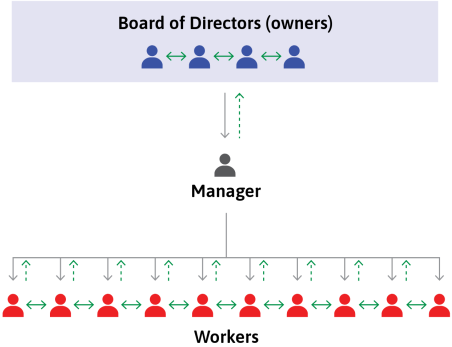
Green arrow upward:

- Owners: Receive profit as a result of management
- Managers: payment not directly related to effort $\Rightarrow$ other's \$, riskier investment / lowering effort
- Workers: salary not increasing with effort



Align the Interests

- Contracts are incomplete: outcome depends on future/unknown events, and hard to measure effort
- Incomplete contracts are inevitable, since modern job are mostly **not able to measure output** and **works as a team**
- Ways to alleviate incomplete contract:
  1. pay with company shares: company profit ↑, share price ↑
  2. piece rate pay: $5 to assembly one toy (low-end job)
  3. monitoring

Labor Discipline Model

Why do workers work hard?

Workers work hard while firms' cannot directly measure effort because

1. work ethic
2. feelings of responsibility
3. reciprocate a feeling of gratitude for good working conditions
4. benefits for measurable output
5. promotions
6. fear of being fired

. . . Rational thinking sometimes means negative thinking 😐

Fear of being Fired

- Rent in Economics: payment to the owner greater than the costs
- If workers being unemployed, they get unemployment benefits ⇒ **reservation wage**
- Employment rent: benefit from employment − disutility from work − reservation wage, includes
  - lost income when searching
  - cost to start a new job, e.g. relocation
  - Loss of non-wage benefits
  - Social costs (scarring effects, lost of company connections/skill)
- Larger employment rent (higher wage) ⇒ larger cost of job loss ⇒ workers work hard to reduce chance of getting fired

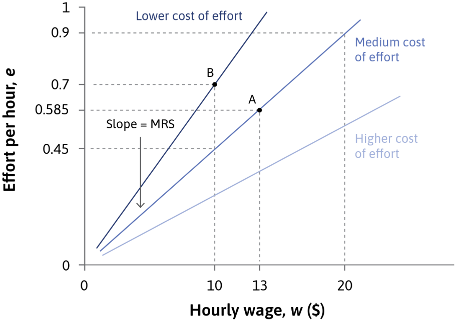
Employment Game

1. Employer: choose maximum wage to keep worker work hard enough
   - payoff: output − wage
2. Worker: choose minimum effort to keep him/herself from firing
   - payoff: employment rent
3. Workers are the **supply side** in labor market: trade off are **MRT**
4. Employers are the **demand side** in labor market: trade off are **MRS**
5. Best response curve:
   - for workers: optimal amount of effort workers will exert for each wage offered
   - for employers: optimal level of wage employers will offer for each targeted level of effort.

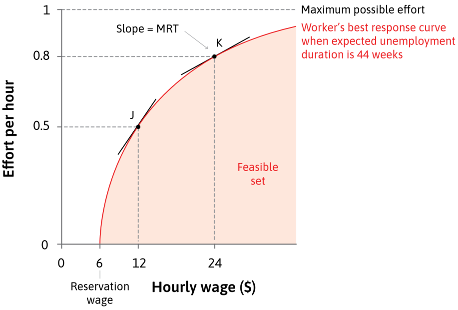
Best response curves

Employers: assume revenue doesn't change, firms minimize cost to max profit

$\Rightarrow$ find a **isocost** line that minimize wage spending

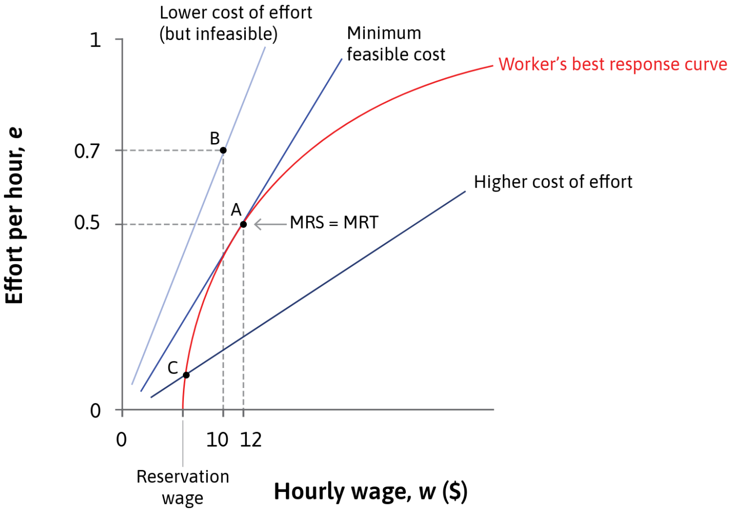


Workers: Feasible frontier for wage & effort



Determining Wages

Equilibrium is at MRS $=$ MRT, efficiency wage $= 12 >$ reservation wage

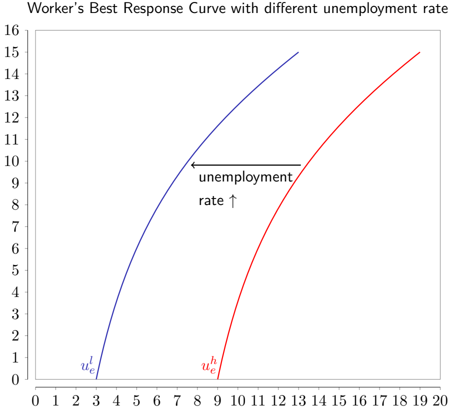


Involuntary Unemployment

Definition

Involuntary unemployment is being out of work, but preferring to have a job at the wages/working conditions as other workers.

- Must have involuntary unemployment in the labor discipline model!
  - $\because$ ensure employment rent is high enough for workers to put in effort.
- Foreshadowing: How is unemployment rate ↑ affects the best response curve?



Introduction for Principal-Agent Models

Incomplete Contracts in General

- Incomplete contracts do not only occur in employment relationships.
- Incomplete contracts arise when:
  - information is not verifiable
  - the relationship covers periods of time
  - there is uncertainty
  - there are difficulties with measurement
  - judiciary is absent
  - preferences for omitting some information

Principal-Agent models

- Principal-agent models capture interactions under incomplete contracts
  - e.g. the firm is the principal and the worker is the agent
- Agent takes action that is hidden from the principal, which is why the principal cannot verify it.
  - there is a conflict of interest between the principal and the agent
  - over some action that may be taken by the agent
  - and this action cannot be subjected to a complete contract.
- The information about the action may be either asymmetric or unverifiable.

Appendix

References I

Akerlof, George A. (1970) "The Market for "Lemons": Quality Uncertainty and the Market Mechanism," *The Quarterly Journal of Economics*, 84 (3), 488, 10.2307/1879431.