Economics C34: Lecture 12

OSHA Regulation of Workplace Health and Safety
What is the Market Failure requiring OSHA regulations?

- Workers and firms reach voluntary bargains over wages and working conditions
  - What is the justification for OSHA intervention
- Third party effects?
  - Health care costs borne by “society?”
  - Like smokers, workers in hazardous occupations probably save the rest of us money in Social Security and Medicare costs
- Imperfect information regarding risks
  - Safety risks probably well-understood
  - Health risks may be poorly understood by workers
    - Ill affects take years to develop; often from unknown hazards
Firms’ incentives to reduce risks through economic decisions

• Reduce wage premiums
  – Most important incentive
  – $70 billion per year

• Reduce workers’ compensation premiums
  – Workers receive pay and medical expenses following “on the job” accidents
  – Firms’ premium rates are based on accident experience

• Avoid OSHA fines and penalties
Compensating wage differentials: worker choice

- Risk-dollar tradeoffs determine workers’ job choices
  - Workers have preferences over risk and wage
  - Worker chooses his most preferred point on wage schedule
- Efficient decisions require informed workers
  - More difficult for health risks than safety risks
Compensating wage differentials: firm safety decisions

- Firms face premium wages for risk in the labor market
- Firms face differing costs of reducing risks
- Firms minimize costs by trading off higher wage costs against higher safety costs
- Firms choose different points on the risk-wage schedule based on their safety costs
Compensating wage differentials: market equilibrium

- Individual workers choose points on market wage frontier based on *their* preferences
- Individual firms choose points on market wage frontier based on *their* profit functions
- What determines the position of the wage frontier?
  - Supply and Demand!
  - Shortages in high risk jobs raise wages there
  - Surplus in low risk jobs lowers wages there
OSHA sets technology-based standards

- Criteria is “affordability” rather than efficiency
- Efficient choice equates MB to MC at safety level $s^*$
- OSHA standard is $s^O$, where MC becomes “steep”
- The “no risk” level of safety, n, would be unreasonably expensive