involuntary unemployment

“a situation where an unemployed worker is willing to work for less than the wage received by an equally skilled employed, yet no job offers are forthcoming”

[ibidem, p. 433]

- involuntary unemployment is a persistent feature of the labour market
- why don’t wages fall to clear the market?

Shapiro and Stiglitz (1984)

- equilibrium involuntary unemployment can be explained by the information structure of employer/employee relationship
- in particular, by the inability of the employer to costlessly observe workers’ on-the-job effort
Intuition

Conventional competitive paradigm:

- All workers receive the market wage.
- No unemployment.
- A worker caught shirking is immediately fired.
- But is also immediately rehired by another employer for the same wage.
- The worker pays no penalty for her misdemeanor.
- With full employment and imperfect monitoring, all workers shirk.
Shapiro and Stiglitz (1984)

- to induce the worker to ‘behave’ the firm offers an higher wage
- a worker caught shirking now pays a penalty
- if a firm is better off raising the wage, then all firms follow
- but then with no wage differential the penalty disappears
- however raising wages decreases labour demand
- unemployment results
- if a worker is fired, she will not be rehired immediately
- in equilibrium, unemployment is large enough that it pays workers to work, rather than taking the risk of being caught shirking
- “equilibrium unemployment as a worker discipline device”
Welfare analysis

Source: Shapiro and Stiglitz (1984, p. 440, fig. 4)
Welfare analysis (cont’d)

- with constant returns to scale the equilibrium is Pareto optimal
  - \( F'(L) \cdot L = F(L) \quad \rightarrow \quad A = E \)
- but in general the equilibrium is not Pareto optimal
- natural rate of unemployment is too high
- a profit tax \( \tau \) that subsidises wages is a strict Pareto improvement

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- this is true when \( \text{workers} = \text{owners} \)
- if \( \text{workers} \neq \text{owners} \), profit tax \( \tau \) is not a Pareto improvement
- in this case equilibrium is Pareto optimal
- although it does not maximise national product
- Pareto optimality depends on distribution of wealth
- the standard equity/efficiency separation doesn’t hold
endogenous monitoring

- employees can select monitoring intensity $q$
- trade-off between (costly) stricter monitoring and higher wages $\frac{\partial \hat{w}}{\partial q} < 0$
- in general it is impossible to fully characterise the equilibrium
- with C.R.S. equilibrium entails too much monitoring and employment
  - firms believe only instrument for reducing shirking is monitoring
  - but also reducing employment induces workers not to shirk
  - this enables society to save resources spent on monitoring
  - these gains more than offset loss from reduced employment
  - taxing monitoring with lump-sum transfers increases welfare
  - and it leaves no-shirking and resource constraints unaffected
Extensions (cont’d)

- under risk neutrality optimal unemployment benefit $\bar{w} = 0$
- this cannot be optimal if workers are enough risk averse
- social optimum involves $\bar{w} > 0$
- but market equilibrium supports $\bar{w} = 0$ regardless of risk attitude
  - (see ibidem, p. 440, footnote 16)
  - $\bar{w} > 0$ merely reduces penalty of being fired
  - market provides no incentives for unemployment benefits
- justification for mandatory minimum benefit levels
endogenous turnover

- turnover rate $b$ affects the rate of hiring out of unemployment pool $a$
- through $V_u$ it also affect other firms’ individual $NSC$
- this externality makes firms’ choice of employment non-optimal
- policies discouraging labour turnover are attractive
- they make unemployment more costly to shirkers
with imperfect monitoring, equilibrium entails unemployment

unemployment (job rationing) act as a discipline device

unemployment benefits increase equilibrium unemployment rate
  - not only because of lack of incentives to search for jobs
  - they reduce the penalty associated with being fired

high labour turnover, monitoring costs, discount rates, all increase natural rate of unemployment

wages adjust slowly to aggregate shocks
  - labour demand ↓, wage ↓, unemployment ↑ (sluggish process)

market equilibrium in general is not Pareto optimal
  - there is too much unemployment
  - e.g. wage subsidies might bring a strict Pareto improvement

focus of the analysis is on labour market

but can be easily generalised to any market equilibrium framework with *agency problems* and *quantity rationing*
see you on
Monday, 1st April
h. 18:00 – Aula 6