OVS452 Intermediate Economics II
VSE NF, Spring 2008
Lecture Notes #6
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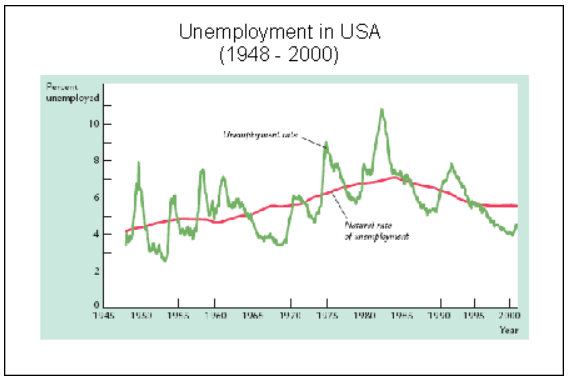
7 Unemployment

7.1 Introduction

- **Unemployment** = existence of people who are not working but who say they would want to work in jobs like those held by individuals similar to them at the same wages
- macro issue that affects people most directly and severely
- target of many economic policies (activation programs, unemployment benefits, minimum wage)



- Question that an economist should ask:
  Is the existence of nonzero average unemployment over time a market failure? What are its causes and consequences? - 2 positions:
  - unemployment as natural implication of frictions (obstacles, imperfections) in the process of matching workers and jobs - no problem
  - unemployment as result of non-Walrasian features of the economy (labor market is not clearing at prevailing wage) - waste of resources
- in competitive (Walrasian) markets, higher supply of labor (unemployed workers) would drive the wages down until balance is restored

- possible departure mechanisms:

  1. heterogeneity among jobs and workers implies that job search and matching takes time
     => ***frictional unemployment***
  2. real wage fails to adjust and balance labor demand and supply
     => ***structural unemployment***

7.2 Natural rate of unemployment

Why there exists a certain natural level of unemployment - simple model:

- notation: L - labor force, E - number of employed workers, U - number of unemployed workers, u - unemployment rate

$$L = E + U, \quad u = \frac{U}{L}$$

- let's denote rate of **job separation** (layoff, firing, quitting) s and rate of **job finding** f
- in the steady state (fixed labor force, constant unemployment rate)

$$sE = fU \quad => \quad s(L-U) = fU \quad => \quad s\frac{(L-U)}{L} = f\frac{U}{L}$$

- natural rate of unemployment thus depends on the rates of job finding and job separation

$$u = \frac{s}{s+f}; \quad \nearrow f \Rightarrow \searrow u; \nearrow s \Rightarrow \nearrow u$$

- if a person can always find a job quickly, then for given small s is $u \sim 0$

7.3 Job search => Frictional unemployment

Main idea: it takes time to match workers and jobs - existence of frictions on the market

- heterogeneity among workers (e.g. skills) and jobs (job content, wages)
- asymmetry of information
- low geographical mobility (mainly Europe), limited possibilities for retraining

Outcome = Frictional unemployment:

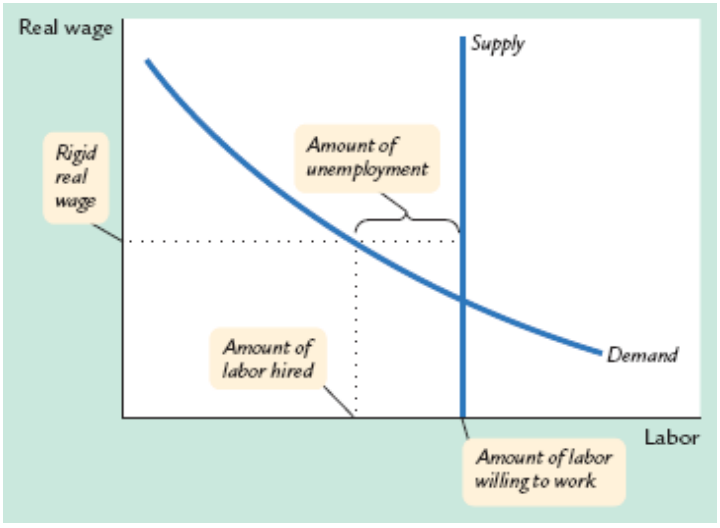
- inevitable due to sectoral shifts - changing labor supply and demand among firms

7.3.1 Public policies

- **labor offices with retraining programmes:**
  - Czech Republic (2008): 43 732 people in retraining - 65% women; average age 38 years; 16% - primary, 35% with vocational education, 26% completed secondary, average length of unemployment - 16 months (60% under 6 months)
- **unemployment benefits**
  - alleviate the economic impact of unemployment - positive
  - decreases the time pressure of finding new job => longer time of search => higher frictional unemployment
  - Czech republic:
    * eligibility - employed min 12 months during previous 3 years, actively searching for job;
    * amount - 50% of net average wage in the previous job for the first 3 months, 45% of net average wage in the previous job for the next 3 months, but not more than 2.5 times minimum living standard (i.e. no more than 7 815 CZK)

7.4 Real wage rigidity => Structural unemployment

Main idea: failure of wages to adjust and balance labor demand and supply => real wage is above the market clearing level



Causes:

1. **Minimum wage laws:** law prevents firm to cut wage under certain level
   - affects labor decisions of unskilled and inexperienced workers
     - very sensitive subgroup of population
   - negative = decreases demand for unskilled work
   - positive = guarantees minimal income - important criterium in the "work x take social support" decision
2. **Unions and collective bargaining:** agreement with workers prevents firm from cutting wages
   - increased bargaining power of workers => higher wages => lower employment + low job separation
   - different interests and strategies of insiders and outsiders
   - centralization of bargaining + role of government
3. **Efficiency wages:** there are benefits to firm to pay a higher wage
   - reduction of labor turnover and lowering the likelihood of union emergence
   - avoiding **adverse selection** = self selection based on opportunity wage
   - avoiding **moral hazard** = shirking when employer is not able to perfectly monitor my effort

7.5 Patterns of unemployment

7.5.1 Duration of unemployment

When person becomes unemployed, is the **spell of unemployment** likely to be **short** (i.e. frictional - partly unavoidable) or **long** (structural)?

Empirical evidence (OECD data, 2007):

- average duration of unemployment: U.S. - 3.9 months, OECD Europe - 14.8 months, Czech Republic - 22.7 months
- share of workers with unemployment spell shorter than 1 month: U.S. - 36%, OECD Europe - 8 %, Czech Republic - 6.1 %
- share of workers with unemployment spell longer than 12 months: U.S. - 10%, OECD Europe - 42%, Czech Republic - 53%
- for regional variation in the length of unemployment spell in the Czech Republic see Figure 2

7.5.2 Variation across demographic groups

Who is the most affected group, who should be addressed?

- **men x women:** Czech Republic (2008) - total = 4.4%, men = 3.5%, women = 5.7%; regional variation - see Figure 3; largest gap within EU has Greece = diff. 7.6%
- unemployment of **youth** (15 - 24): concern of EU - 15.3% in 2007 (more than twice as much as average unemployment rate), Czech Republic - 11 % (but almost 29 % among 15-19)
  - alternating between study and employment, career planning => higher rate of job separation + higher frictional unemployment - plausible explanation in U.S. (more than 45% are unemployed for less than 1 month)
  - in the CR and OECD Europe it is more serious problem - 23% and 20% of unemployed youth is registered for more than 12 months

7.5.3 Transitions into and out of the labor force

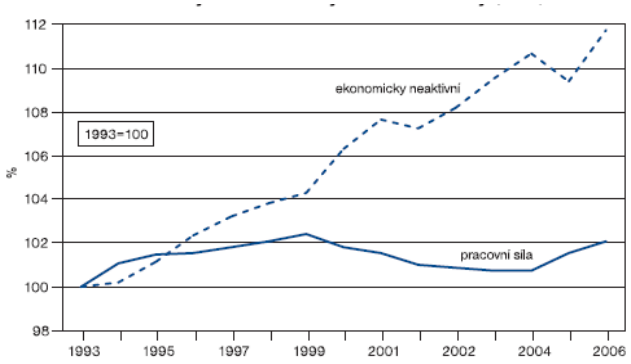
Individuals are moving into and out of the labor force:

- one third of the unemployed have only recently entered labor force (youth)
- almost half of all spells of unemployment end in the unemployed person's withdrawal from the labor market

Figure 1 describes the evolution of the labor force and economic inactivity over the period 1993 - 2006. Corrected for the growth of total population, the **rate of labor force participation** during these years has decreased by 3% (from 59% to 56%). Underlying causes:

- **demographic shift:** population is getting older - more people leave for retirement + less people enter labor force
- **discouraged workers:** individuals who after unsuccessful search have given up looking (at least officially) - OECD Europe - 0.2% of population

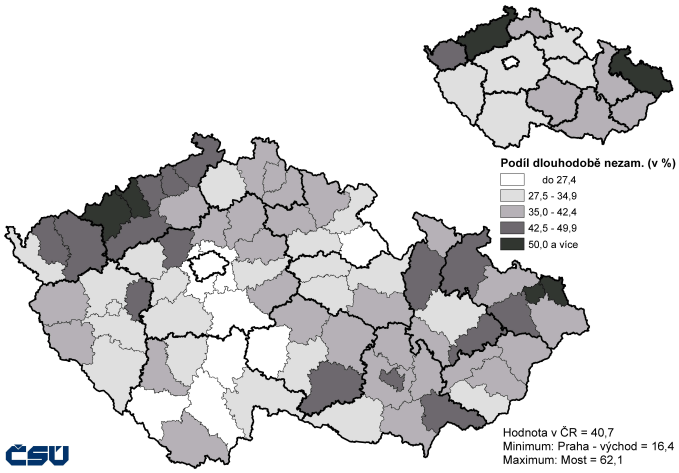
Figure 1: Growth of labor force and measure of economically inactive people, 2006.



Source: www.czso.cz

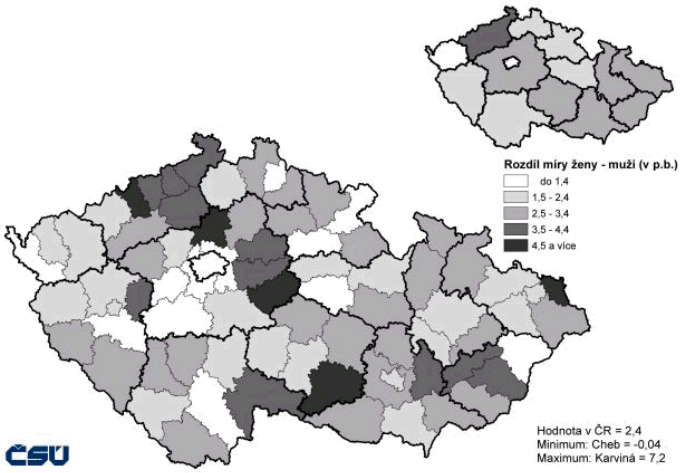
7.6 Figures

Figure 2: Share of long-term unemployed workers (registered at labor office longer than 12 months) on the total number of unemployed workers, 31.3.2006.



Source: www.czso.cz

Figure 3: Difference between unemployment rate of men and women, 31.3.2006.



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