Lecture 3. Labor market institutions, sclerosis, and shocks [*]

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This third lecture looks at the role of labor market institutions.

Start from the "welfare state", "the Eurosclerosis", or "the labor market rigidities" view":

- Too generous unemployment insurance has led to chronic unemployment. ("La preference pour le chomage").

- Costs associated with employment protection have killed job creation, and leads to high unemployment.

- The tax wedge between the cost of labor for firms and take-home pay has led to high labor costs, resulting in unemployment:

Go through four steps

- A simple model.

- Evidence on the evolution of institutions.

- Evidence on the nature of unemployment.

- Interactions with shocks. Examine two hypotheses:

  - Turbulence and unemployment benefits

  - Long term unemployment, and hysteresis.

A SIMPLE MODEL

Much progress has been made here (Diamond, Pissarides, Mortensen; articulation with collective bargaining remains to be done):

- **Flows and matching**

  At the center: job creation/destruction. Flows of workers in the labor market (separations/hires).

  – Flow of hires x. x reflects degree of reallocation.
  – Matching process:
    Unemployment u (normalize labor force to 1 so also the unemployment rate). Vacancies v. The matching function is given by:

    $$x = m(u, v) \qquad m_u > 0 \qquad m_v > 0$$

    Shall use a convenient special case, with constant returns and equal weights:

    $$x = \sqrt{muv}$$

    m reflects ease of matching, and search intensity.
  – Exit rate from unemployment is given by x/u; Exit rate from vacancies is given by x/v. Reorganizing:

    $$(x/u)\,(x/v) = m$$

The easier it is for workers to find a job, the harder it is for jobs to find a worker.

- The **wage setting relation.**

  Cost of losing a job depends for worker on x/u, cost of losing a worker depends on x/v. So write:

  $$\frac{w}{a} = z \; h\left(\frac{x/u}{x/v}\right) \qquad h'(.) > 0,$$

  Labor market conditions: $(x/u)/(x/v)$ rather than u. z reflects any factor/institution which affects reservation values, other costs of separation, bargaining power.

- The **labor demand relation**

  On the production side, same assumptions as in Lecture 1. In the long run, the wage must be such as to generate zero net profit (Ignore short run demand curve, and dynamics here)

  $$c = \pi = g(w/a)$$

  $g(.)$ likely to depend not only on production but also on labor market institutions (firing costs for example)

Equilibrium unemployment rate and composition

- Determination of the **equilibrium exit rate** (x/u):

  - Using the matching relation, rewrite the wage setting relation as:

    $$\frac{w}{a} = z\, h(\,(x/u)^2/m\,)$$

    Drawn as upward sloping SS in Figure. (Note x/u, not $1-u$, on horizontal axis.

  - Labor demand relation, drawn as flat LL

  - Equilibrium exit rate: $(x/u)^*$. Such that the wage set in bargaining is consistent with zero net profit. Equilibrium average individual **duration** of unemployment: $(1/(x/u)^*)$

- Determination of the **equilibrium unemployment rate**

  Unemployment rate = flow times duration:

  $$u = x \text{ times } (1/(x/u))^*$$

  Note: The same unemployment rate may reflect: High flow/low duration. Low flow/high duration.

BACK TO LABOR MARKET INSTITU-TIONS

Using the model to think about the effects of labor market institutions. Will take two:

Unemployment insurance

An increase in the generosity of unemployment benefits has two distinct effects on equilibrium unemployment:

- Reduces search intensity. Focus of most of micro-labor research. In terms of the model, lower m, leading in turn to a higher wage for given (x/u).

- Increases the reservation wage, and thus increases the wage for given (x/u). (There, even if first effect is not)

Both effects shift SS up, decrease the equilibrium exit rate, increase equilibrium duration.

No obvious effect on x, so increase in the unemployment rate. Longer duration, same flows.

Employment protection

Administrative/time costs or transfers (severance payments)? Scope for bonding?

If costs, or/and limited bonding, three distinct effects on the equilibrium:

- By increasing the cost of separation for firms, increases the bargaining power of workers, and the bargained wage. Shifts SS up.

- By increasing the cost of operating (either keeping low productivity workers, or paying firing costs), decreases the wage consistent with zero net profit. Shifts DD down

- By increasing the cost of layoffs, decreases the flow of separations, and by implication the flow of hires, x.

The first two effects lead to a lower equilibrium exit rate, higher unemployment duration. The last leads to lower flows

The net effect on the unemployment rate is ambiguous. The effect on the nature of unemployment is not. Nor is the effect on efficiency. Leads to a more **sclerotic labor market**, with lower flows, and longer duration.

Other institutions? (Tax wedge? Each component must be treated differently. Partly offset by benefits in the future (health benefits). Affects the reservation wage (taxation of unemployment benefits?).)

EVIDENCE ON LABOR MARKET INSTITU-TIONS

Did the welfare state come into being in the 1970s? No: It came mostly earlier.

Time series for quantitative measures of institutions hard to construct (institutions are multi dimensional). But some evidence:

- **Social insurance and assistance**

  Replacement rates, by category of worker, family status, duration of unemployment. (Pre-tax). Constructed by the OECD, back to 1961, for each country, every two years.

  The OECD measure. (simple average; does not make much sense). Increase in Spain in the 1960s, in France in the 1970s. Germany flat.

  Maximum replacement rates (over all categories, and duration). Worse in the 1980s. Improvement since (Spain).

  Warning: These measures may just be too rough. (the RMI in France, and evidence from the Beveridge curve)

- **Employment protection**

  Many dimensions: Advance notice, severance pay-
  ments, administrative and time costs, temporary con-
  tracts. OECD for the 1980s and the 1990s. Lazear
  pre 1985 (much more limited).

  High in Spain and Italy in the 1960s. Increase in
  France and Germany in the 1970s. Small decrease
  from the 1980s (mostly at the fixed duration contracts
  margin: perverse?)

  Warning: Much progress at the fixed duration con-
  tract margin. Perverse?

- (Tax wedges. Show an increase. But too raw to be
  reliable. Not all components should have the same
  effect.)

  Political economy of reform: More protection/ insur-
  ance in good times (cheaper to supply), or in bad times?
  (more demand). Ambiguous evidence.

Institutions and differences in the nature of unemployment

- Employment protection, flows, and duration. Evidence across OECD countries.

  Regressions:

$$\log \text{flow} \quad = \quad 0.49 \quad -0.076 \ \text{EPL} \qquad \bar{R}^2 = 0.46$$
$$(t = -3.8)$$
$$\log \text{duration} \quad = \quad 1.64 \quad +0.073 \ \text{EPL} \qquad \bar{R}^2 = 0.21$$
$$(t = \ \ 2.2)$$
$$\log \text{u rate} \quad = \quad 2.14 \quad -0.003 \ \text{EPL} \qquad \bar{R}^2 = -0.06$$
$$(t = -0.2)$$

  Employment protection: true cause or proxy for deeper causes?

- A case study: **Portugal and the United States**. (from Blanchard/Portugal).

  Similar unemployment rates, very different compositions

  Lower worker flows. Quits and layoffs.

  Lower job flows? At what frequency?

INTERACTIONS BETWEEN SHOCKS AND INSTITUTIONS

Already looked at the interaction of collective bargaining and shocks. Here focus on interaction of institutions and shocks.

Cannot hope to learn this from the reduced form evidence. Two hypotheses at this stage:

Turbulence and unemployment insurance. (Sargent and Ljunqvist).

General story: European institutions were designed for quiet times. They function poorly in times of turbulence, when the economy requires more reallocation. One of the implications is higher unemployment.

More formally:

- Characterization of turbulence: More on–the–job job–specific learning. So steeper wage profiles: Mean wage in next job lower than wage in the previous job.

- Unemployment benefits typically related to last wage. So the steeper the wage profile, the higher the effective replacement rate. Leads to a higher reservation wage relative to the distribution of wages.

Leads to higher the equilibrium duration of unemployment.

- If unlucky, some unemployed may become unemployable.

Appealing, but evidence on increased turbulence (in the sense of an increase in x) is weak:

- Job destruction and job reallocation. US, from Davis Haltiwanger. France from Insee.

- Standard deviations of changes in employment across sectors. Layard-Johnson.

Evidence on steeper wage profiles is also very limited.

Long-term unemployment and wage pressure; hysteresis

General story (Layard-Nickell, Blanchard-Summers-Diamond): High unemployment in Europe has led to a large proportion of long term unemployed. The long term unemployed are largely irrelevant to wage setting. As a result, there has been little pressure from unemployment on wages, and a long period of high unemployment.

More formally:

- At a given unemployment rate, institutions lead to higher duration, and thus a higher proportion of long term unemployment in Europe.

- Adverse shocks have led to a large proportion of long–term unemployed in Europe.

  This in turn has had two effects of wage setting:

- To the extent that firms prefer to hire those with shorter unemployment duration (**ranking**), this leads those currently employed to have better labor market prospects, at least initially, than implied by (x/u)

  So less effect of x/u on w

  The caveat: "At least initially". If no discounting, no effect of ranking. (Who are the long–term unemployed?)

- To the extent that the long term unemployed give up on search, or are searching less efficiently, m decreases. (If, for example, the LTU do not search, then only u_s, not u in the matching function)

Empirical evidence: Not decisive. Need two components:

- A relation between LTU and unemployment. This works. Clear difference across countries. Figure.

- Evidence of duration dependence. Much harder: controlling for observable and unobservable characteristics. Separate between ranking and search intensity. Figure.

Quantitative importance?

Conclusions

Again, progress, but many open issues

- A better understanding of the effect of institutions on the nature of the labor market.

- Need to understand better the history and the evolution of institutions.

- No fully convincing story yet. (turbulence? duration dependence?)

- Probably other interactions. A tentative story, based on current work:

  Institutions and the slope of the long run labor demand curve.

  Many labor market institutions affect job creation and destruction margin. Unemployment benefits lead to a distortion at destruction margin. Employment protection can offset the first distortion. But both benefits and protection distort the job creation margin.

  If job creation is inelastic (product market regulation, poorly integrated capital markets), the distortions for job creation are unimportant. If more elastic, then, larger effects, and larger equilibrium unemployment.

  Related to story about union attitudes in Lecture 2. But institutions change more slowly.

Table 1. Job flows. US and Portugal

	Creation		Destruction		Sum		Ratio
	U.S.	P	U.S	P	U.S.	P	P/U.S
Manufacturing:							
Annual	8.9	10.6	10.2	11.6	19.2	22.2	1.16
firm size adjusted	8.9	7.5	10.2	10.1	19.2	17.6	0.92
Quarterly	5.2	3.2	5.6	3.9	10.8	7.1	0.66
All sectors:							
Quarterly	6.8	4.0	7.3	3.9	14.0	7.9	0.56

Source. BP2000†, Tables 1 to 3.

Table 2. Worker flows

	Job destruction		Worker outflows		Ratio (2)/(1)	
All sectors						
	U.S	P	U.S	P	U.S	P
Quarterly	7.9	3.0	20.4*	4.3	2.6	1.4
	Worker outflows total		Worker outflows through u		Ratio (2)/(1)	
	U.S	P	U.S	P	U.S	P
Quarterly	12.6	4.0	3.9	1.0	0.31	0.40

Source: BP2000†, Tables 4 and 5. (: Mean of the range of estimates.*