(VII) Unemployment Benefits

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Outline

- Definitions and measures
- Theory
  - Competitive Labor Market
  - Imperfect Labor Market (*job search theory*)
- Empirical evidence
  - Macro studies
  - Micro studies
- Policy issues
  - Should Unemployment Benefits (UBs) be publicly provided?

Definitions

- UBs offer replacement income to workers experiencing unemployment spells. In principle should protect *jobseekers* rather than *jobholders* (as EPL)

- The first UB system was introduced in the UK in 1911. Beneficiaries considered "on the dole"

- Complex design to discourage opportunistic behavior (workfare or welfare-to-work)

Multidimensional institution

- Different features characterize UB system:
  - level of the income transfer w.r.t. to the wage (*replacement rate*)
  - *eligibility* conditions (conditions for access)
  - *entitlement* (rules for duration including sanctions after assessment of search intensity)
- Unemployment insurance vs. unemployment assistance

Measures of the generosity of UB

- *Replacement rates:* subsidies as a fraction of the previous (backward looking) or potential (forward looking) earnings
- Replacement rate can be computed
  - *net* or *gross* of taxes
  - at different unemployment durations
  - for different household characteristics

Table 11.1 Replacement rates at different income levels

	67% of APW		100% of APW		150% of APW	
	first month	60th month	first month	60th month	first month	60th month
	(1)	(2)	(1)	(2)	(1)	(2)
Australia	46	46	32	32	24	24
Austria	55	64	55	51	55	51
Belgium	87	72	66	55	49	40
Canada	63	31	64	22	44	15
Czech Republic	50	45	50	31	50	21
Denmark	84	71	59	50	45	37
Finland	78	69	64	51	50	37
France	80	56	71	41	70	29
Germany	63	82	61	61	62	54
Greece	64	0	46	0	33	0
Hungary	61	33	44	24	34	18
Iceland	66	66	49	49	35	35
Ireland	40	71	29	51	22	38
Italy	50	0	52	0	46	0
Japan	73	50	63	34	62	23
Korea	53	25	54	17	42	12
Luxembourg	84	70	85	50	87	37
Netherlands	79	79	71	58	61	39
New Zealand	54	54	37	37	26	26
Norway	66	60	66	42	53	31
Poland	65	45	44	30	30	21
Portugal	85	34	78	24	83	17
Slovak Republic	69	62	62	42	44	29
Spain	76	37	70	27	48	19
Sweden	82	74	81	51	58	37
Switzerland	79	73	72	51	72	36
United Kingdom	63	63	45	45	31	31
United States	60	10	56	7	40	5

Note: 1) Following and waiting period:

Many numbers, one single indicator?

"Summary measure of benefit generosity" (OECD): average of replacement rates in the first two years of unemployment for Average Production Worker (APW) with seniority sufficiently long to yield maximum duration of UB

Table 11.2. Adjusting the OECD generosity measure to UB coverage

Country	Unadjusted OECD generosity measure (a)	Coverage of UBs (b)	Adjusted (a)*(b)
Austria	0.8	31.5	25.8
Belgium	0.8	38.5	31.5
Denmark	0.9	50.9	43.3
Finland	0.8	34.8	28.5
France	0.7	43.5	32.0
Germany	0.8	29.6	24.7
Greece	0.4	13.0	4.9
Ireland	0.6	25.8	22.8
Italy	0.2	34.1	6.1
Netherlands	0.5	52.9	28.6
Portugal	0.4	41.2	16.2
Spain	0.5	36.5	17.3

TABLE 11.1. Source: OECD, 2004, Benefits and Wages: OECD Indicators for data on replacement rates; coverage is based on our estimates ffrom ECHP data

Unemployment Insurance component of UB system

Unemployment Insurance (UI) component:

– Benefit depends on payments during past work experience

– Benefits proportional to past earnings

– The length of the entitlement period is dependent on the length of the contribution period

– Some "experience-rating" (e.g., in the US) with employers paying more if they use it more (to discourage opportunistic temporary layoffs)
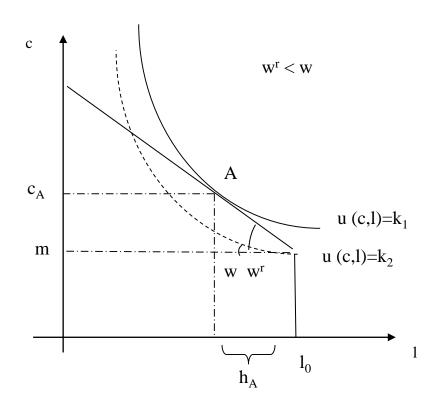
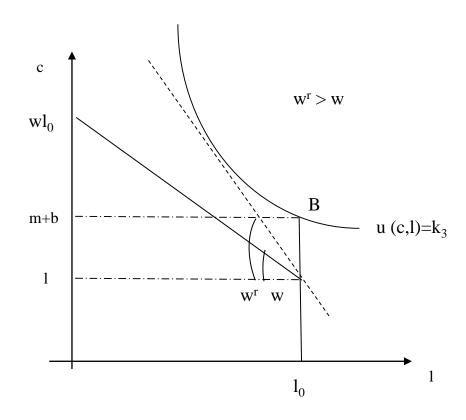# Unemployment Assistance component of UB system

Unemployment Assistance (UA):

– Accessible independently of payments (if any) during the past working experience

– Flat subsidy: provisions independent of past earnings

– Entitlement not conditional on the length of the contribution period

Theory: Effects on labor supply

- Labor/leisure choice affected by non-work income

- Budget constraint with *spike* in correspondence to 0 earnings

- Negative net wage at low hours

- Increase in the reservation wage of unemployed benefit *recipients*

- Negative shift of aggregate labor supply

Reservation wage without (Left Panel) and with (Right Panel) unemployment benefits

Imperfect Labor Markets

- Three effects in *Job Search Theory*:
  - **Job search effect** (on dynamic reservation wage)
  - **Wage effect** (on the bargaining outcome or via an increase of efficiency wages)
  - **Entitlement effect** (increase in participation of those not receiving UBs)
- Also tax effect related to funding of UB system

Job search effect

- Jobseekers become more choosy. Longer duration of unemployment among UB recipients
- They only accept job offers involving a higher wage
- This higher (dynamic) reservation wage discriminates between unemployment and inactivity (unlike the static reservation wage separating employment and non-employment)
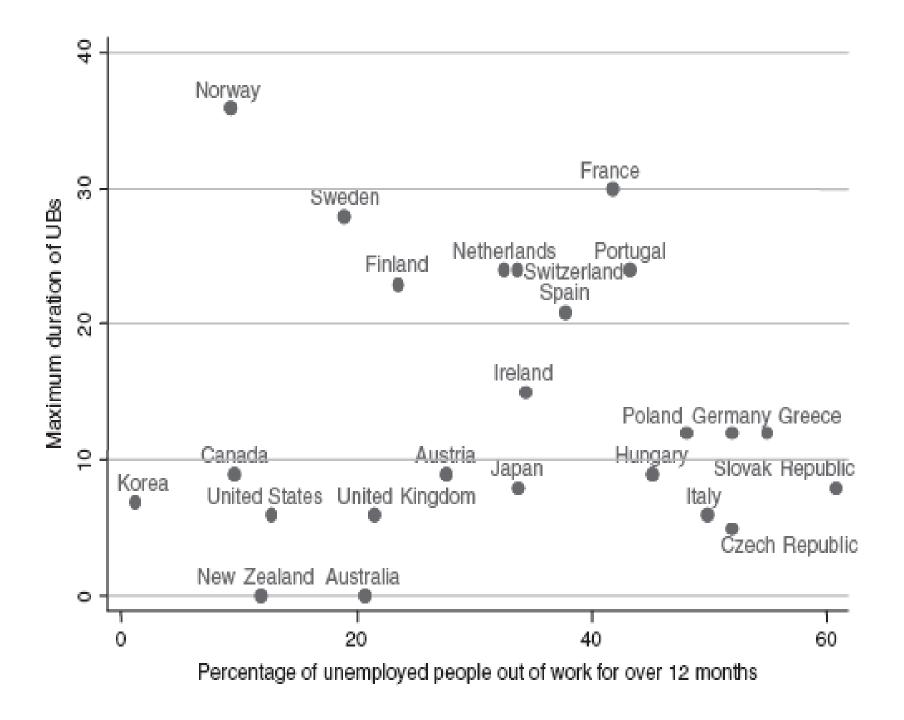
Wage effect

- Higher outside option of workers at the bargaining table (pure bargaining effect)
- Higher wage is required to deter shirking (efficiency wage effect)

Entitlement effect

- UBs increase the value of employment
- More participation in the labor market (shifts across participation margins)
- Lower reservation wage of jobseekers not receiving UBs. Higher job finding rates of unemployed not eligible to UBs

Empirical evidence: UB and unemployment duration

- Level of benefits – elasticity w.r.t. duration
  - Layard et al. (1991) Cross-country: 0.2-0.9
  - Carling et al. (2001) Sweden: 1.7
  - Roed and Zhang (2003) Norway: 0.35-0.95
  - Van Ours and Vodopivec (2004): 1.4
- Potential benefit duration 1 week longer
  - Katz and Meyer (1990) US: 0.16-0.20 weeks more unemployment
  - Ham et al. (1998) Czech-Slovak Republics: 0.30-0.93 weeks more unemployment
  - Van Ours and Vodopivec (2004): 0.86 weeks more

Maximum duration of UBs (y-axis) versus Percentage of unemployed people out of work for over 12 months (x-axis). Data points: Norway, France, Sweden, Netherlands, Portugal, Switzerland, Finland, Spain, Ireland, Poland, Germany, Greece, Canada, Austria, Hungary, Korea, Japan, Slovak Republic, United States, United Kingdom, Italy, Czech Republic, New Zealand, Australia.

Duration analysis

- Retrospective data/histories, matched records across labor force survey or administrative (social security) records

- Problems with survey data: recall bias, length-biased sampling, right-censoring

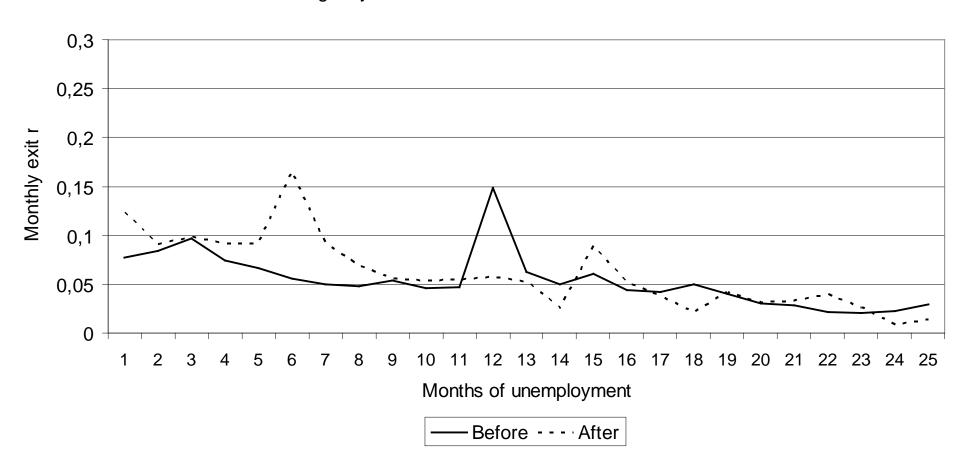- Problems with administrative records: recording affected by regulations (e.g., coverage)

Unemployment hazard rates

- The hazard rate, λ, is the conditional probability of leaving unemployment (e.g., probability that an individual leaves U in the 10th week given that she has been U for 9 weeks) after a certain period

- If constant, then the (unconditional) survival probability of being U at the 10th week is

  $f(10)=\lambda(1-\lambda)^9$ where λ is the hazard rate

- More generally, f(i) is the *hazard function*

Policy Experiment: Slovenia

- Van Ours & Vodopivec (2006). Reform in Slovenia reducing potential benefit duration
- Maximum benefit duration dependent on previous work experience (months):
  - 3 to 3, 6 to 3, 9 to 6, 12 to 6, 18 to 9
- Reform in 1998
- Positive impact on job-finding rate
- No effect on post-employment job quality

Eligibility 12 months before - 6 months after

Policy Experiment: Austria

- Lalive, Van Ours & Zweinmuller (2006)
- 1989 reform in Austria
- Different "treatment" groups:
  - Increase in max duration (from 30 to 39)
  - Increase in max duration (from 30 to 52)
  - Increase in replacement rate (6 percentage points)
  - Combination of the above changes

	Treated 16.91	Control 16.91	Effect 0.00
No treatment			
Change to one paramenter PBD 30-39 weeks	17.53	17.08	0.45
PBD 30-52 weeks	20.62	18.35	2.27
RR increase	20.97	20.60	0.38

Endogeneity problem

- Benefits often granted as policy response to crises (reverse causality)
- That's why cross-country studies tend to provide higher estimates than micro studies
- Estimates of the effect of UB duration on unemployment likely to be biased upward
- Yet it is still there

Policy issue: Public provision of UI

- Private provision of UI impossible because of **moral hazard** and **adverse selection**
  - Workers can alter the probability of losing a job
  - Private insurance would ask for premia selecting only workers with above-average risk
- **Aggregate risk** problem: risks are correlated (e.g., during recession)
- Government can solve adverse selection (pooling) and aggregate risk (intergenerational transfer), but not moral hazard

Review questions

- In a competitive labor market, UBs always increase unemployment duration. True or false?

- According to job search theory, what is the impact of UBs on unemployment?

- The presence of UB-related spikes in the job-finding rate shows that UBs increase labor supply. True or false?

- Market failures vs. government failures in the provision of UI. Discuss.