Lecture 3: **Intermediate macroeconomics, autumn 2009**

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Topics

- Causes of unemployment
- Unemployment and labour market flows
- The relationship between unemployment insurance and unemployment
- Active Labour market Policy (ALMP)
- Real wage rigidity
- Minimum wages
- Efficiency wages
- Collective agreements and trade unions
- The current economic crisis and structural unemployment

Literature: Mankiw and Taylor Chapter 6; OECD Economic Outlook Chapter 4, pp 239-243, Swedish Fiscal Policy Chapter 5.

Determinants of growth

- Long run (20-30 years)
  - Total factor productivity growth
  - Capital stock growth
- Short run (year to year)
  - aggregate demand and degree of resource utilisation
- Medium term (10 years)
  - Functioning of the labour market and equilibrium (structural) employment

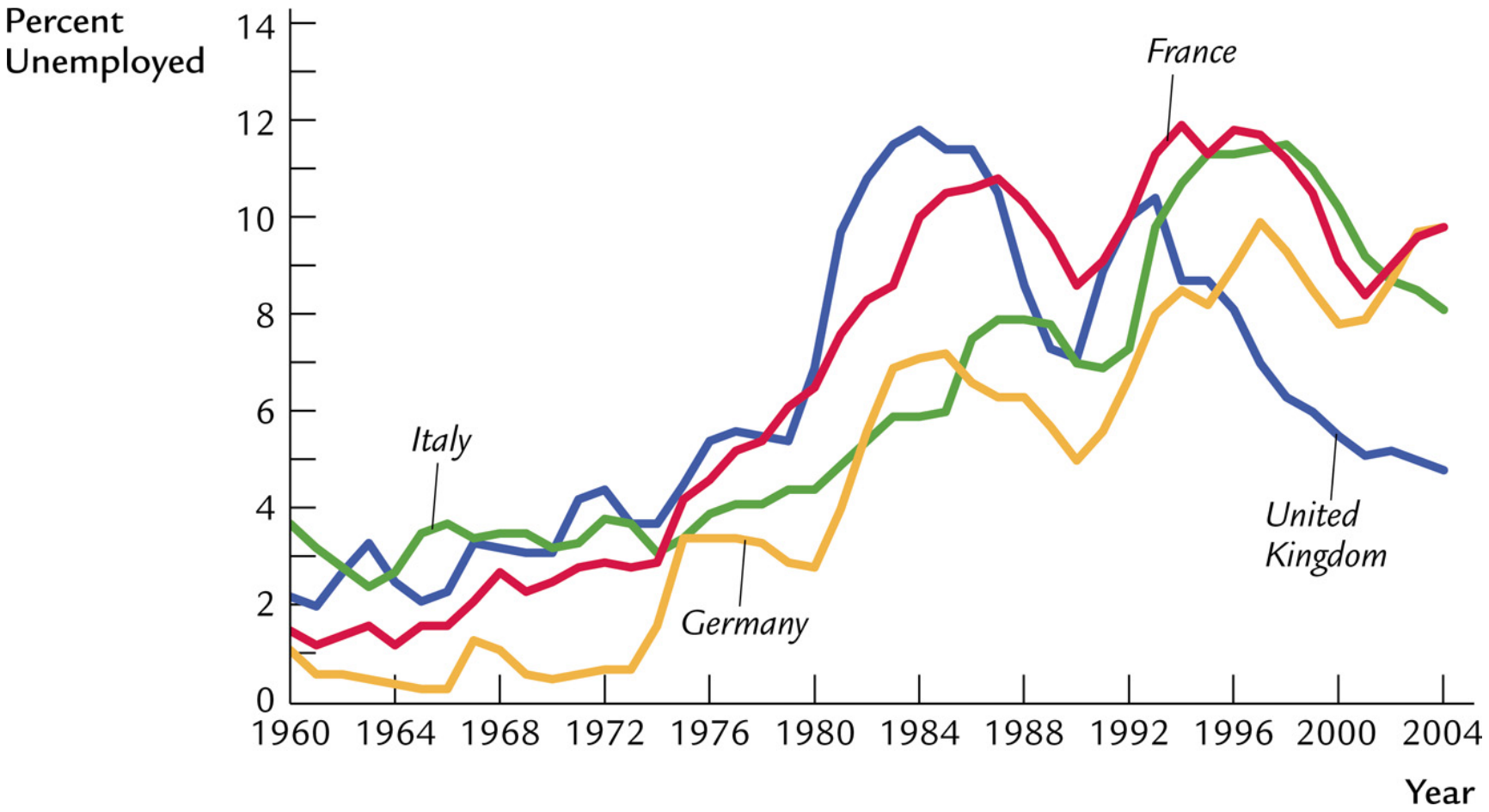
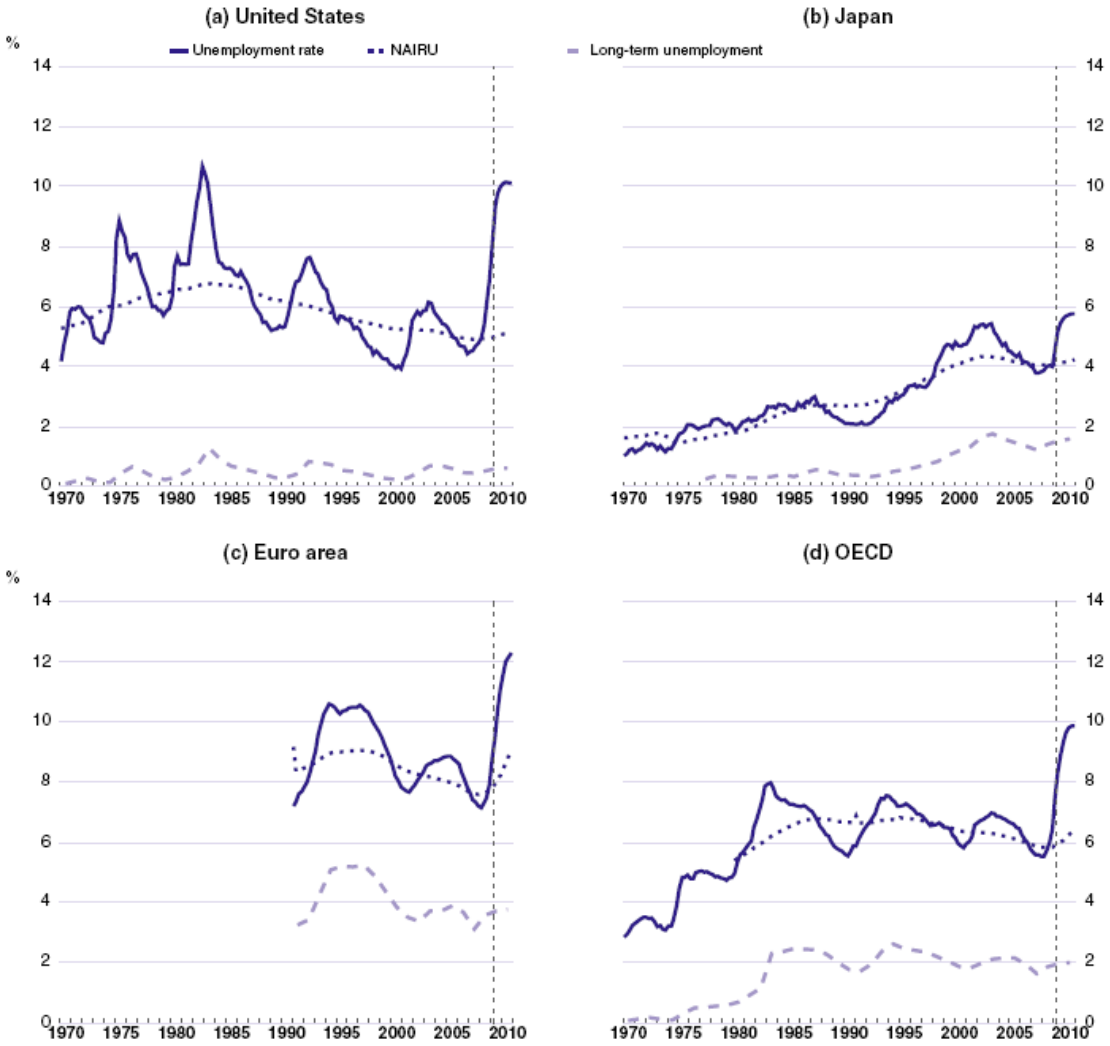


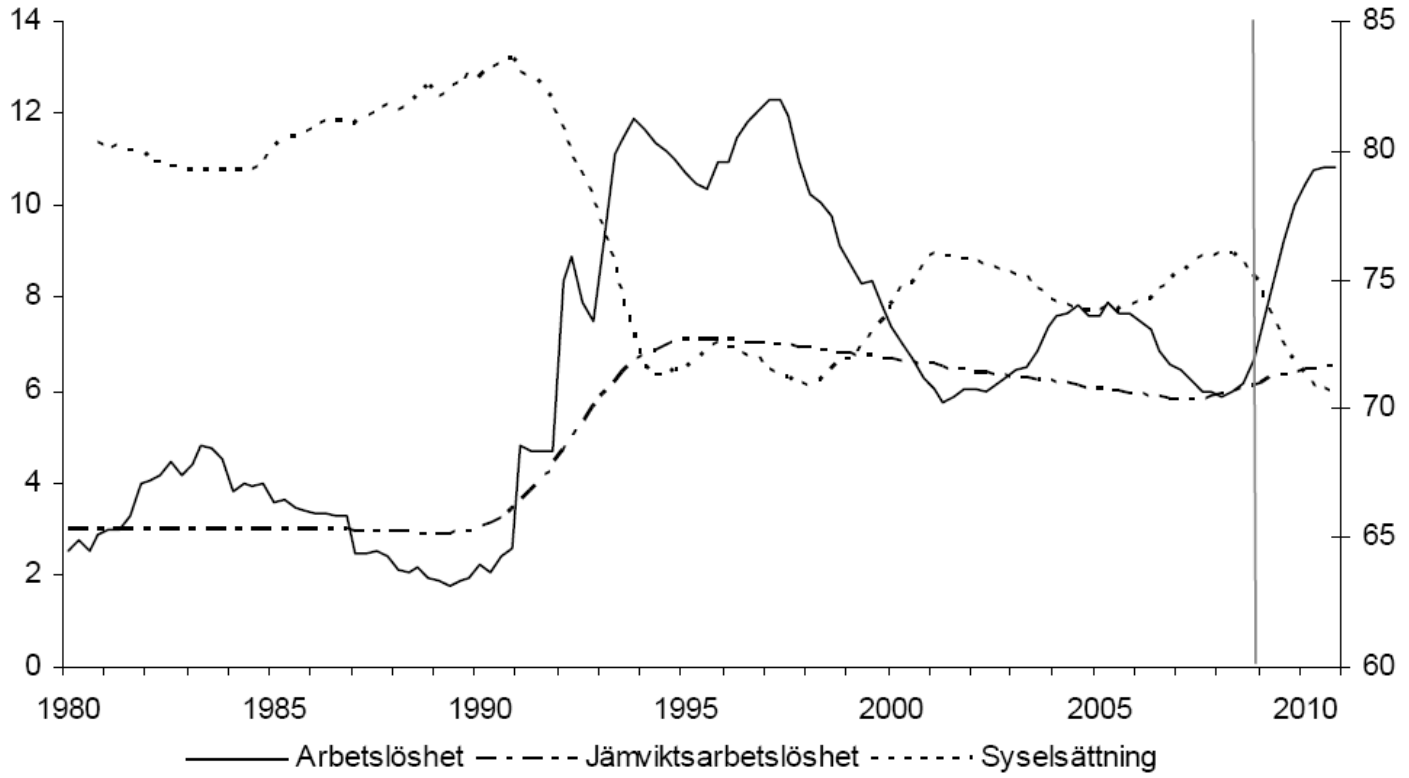
Figure 6-1: Unemployment in Europe

Figure 4.4. **Unemployment, long-term unemployment and NAIRUs, 1970-2010**



Source: OECD Economic Outlook 85 database; OECD calculations.

Figur 5.1 Arbetslöshet, jämviktsarbetslöshet och sysselsättning, procent



Anm: Arbetslöshet i procent av arbetskraften enligt den s k ILO-definitionen, som inkluderar arbetssökande studenter (vänster skala). Sysselsättning i procent av befolkningen i åldrarna 16-64 år (höger skala). Jämviktsarbetslösheten är Konjunkturinstitutets bedömning (vänster skala). 2009-2010 är Konjunkturinstitutets prognoser från Konjunkturläget, mars 2009.
Källa: Konjunkturinstitutet.

Causes of unemployment

1. **Insufficient demand – the Keynesian view**

- **Cyclical unemployment**

2. **A badly functioning labour market – the neoclassical view**

- **equilibrium rate of unemployment: rate of unemployment around which the economy fluctuates**
- **natural rate of unemployment**
- **NAIRU (non-accelerating inflation rate of unemployment), i.e. the unemployment rate consistent with stable inflation**
- **NAWRU (non-accelerating wage rate of unemployment), i.e. the unemployment rate consistent with stable nominal wage growth**
- **structural unemployment**
- **frictional unemployment (caused by the time it takes for workers to find a new job)**

Models of the labour market

1. Search models: labour market flows.
2. Models of structural unemployment and real wage rigidity. Causes of real wage rigidity:
   - Minimum-wage laws
   - Labour unions
   - Efficiency wages

Search models of the labour market

- Labour-force dynamics
- Workers who are separated from their job search for a new position
- Job search typically takes time and causes frictional unemployment
- Unemployment may be voluntary

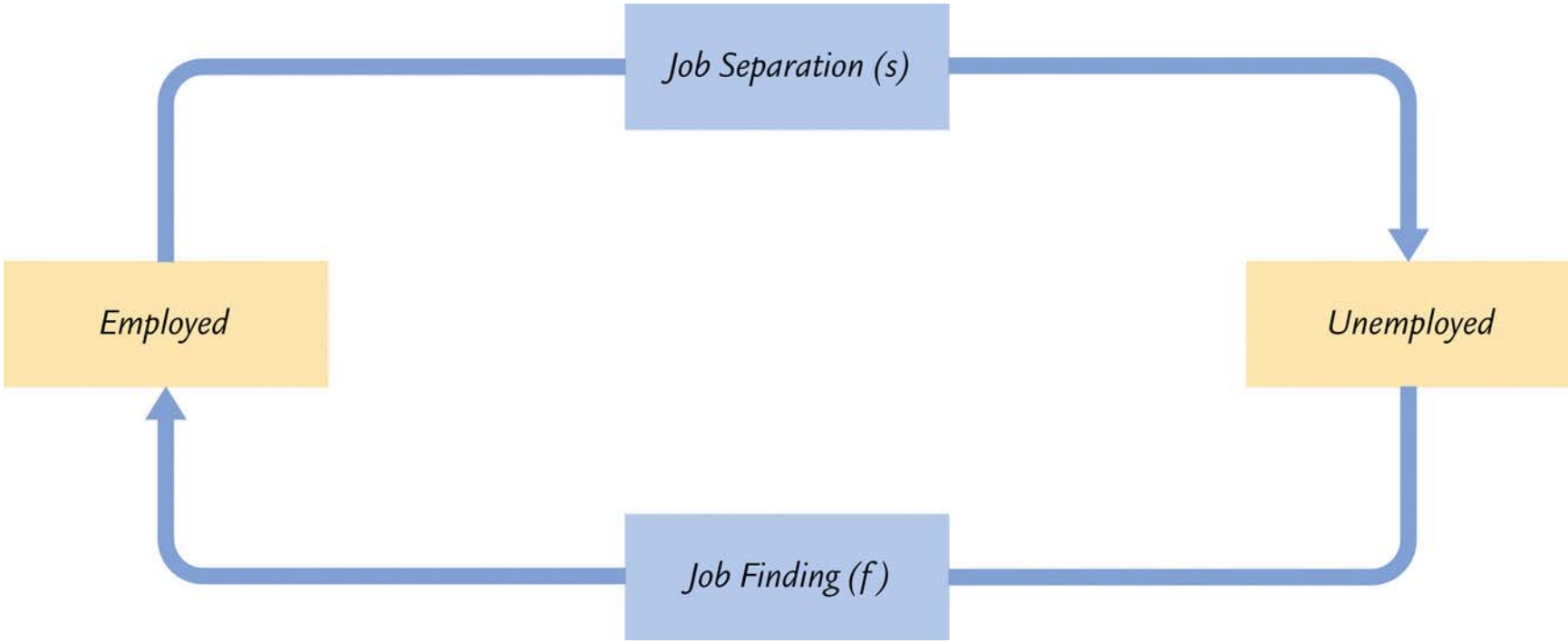


Figure 6-2: The Transitions Between Employment and Unemployment

Unemployment and labour market flows

***U* = the number of unemployed**

***E* = the number of employed**

***L* = labour force**

***s* = probability of separation (the fraction of the employed separated from their jobs)**

***f* = probability of job finding (the fraction of the unemployed who find a job)**

Steady state

- **Constant employment and constant unemployment from period to period**

Inflow into employment = Outflow from employment

Outflow from unemployment = Inflow into unemployment

$$fU = sE$$

$$f \cdot U = s \cdot (L - U)$$

$$f \cdot U/L = s \cdot (1 - U/L)$$

$$U/L = s/(s + f)$$

Unemployment rate = probability of separation/ (probability of separation + probability of job finding)

$U/L = s/(s + f)$

$s = 0{,}01,\ f = 0{,}20 \Rightarrow U/L = 0{,}01/0{,}21 \approx 0{,}05$

Unemployment rises if the outlow from employment (*s*) increases or the outflow from unemployment (*f*) decreases

$s = 0{,}02,\ f = 0{,}20 \Rightarrow U/L = 0{,}02/0{,}22 \approx 0{,}09$

$s = 0{,}01,\ f = 0{,}10 \Rightarrow U/L = 0{,}01/0{,}11 \approx 0{,}09$

***f* could fall because the fraction of long-term unemployed increases and because their job finding probability is lower than that of short-term unemployed**

– persistence (hysteresis)

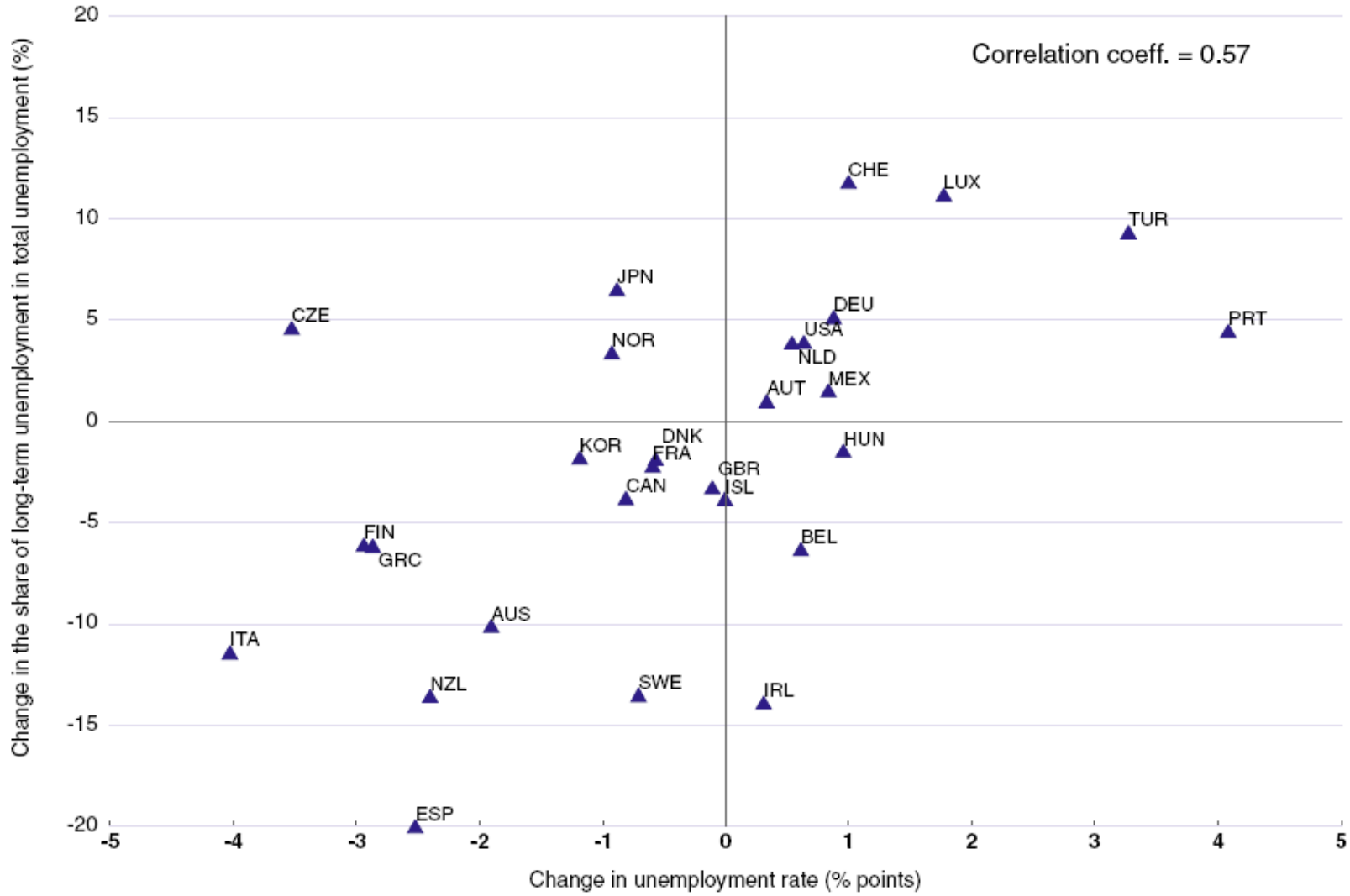
Why are job-finding rates lower for the long-term unemployed

- **Discouraged worker effect**
- **Lower productivity because of cumulative loss of human capital during period of unemployment**
- **Statistical discrimination on the part of employers (on average the long-term unemployed are less productive)**

Current worry

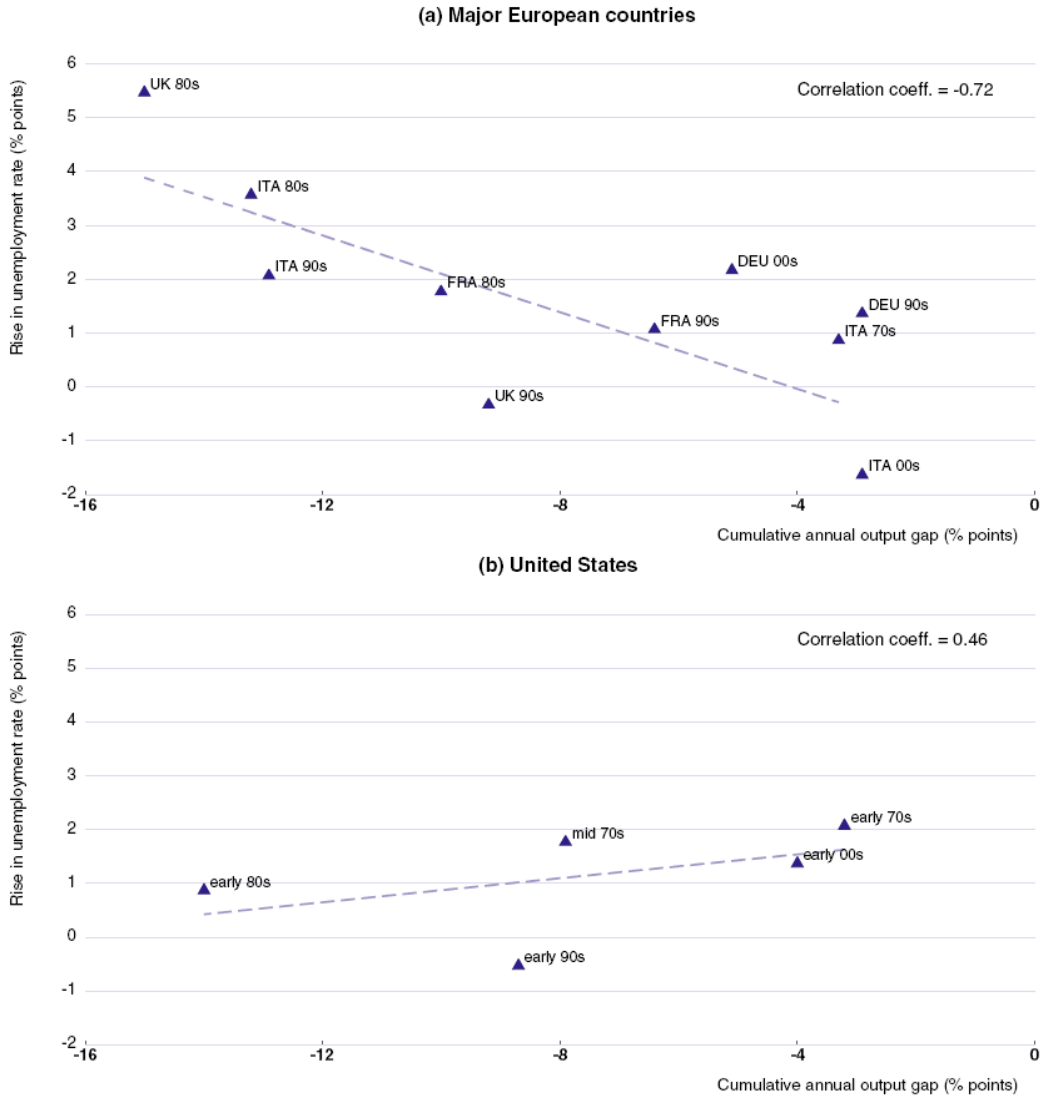
- **The recession increases the incidence of long-term unemployment**
- **Increased long-term unemployment raises the equilibrium rate of unemployment**

Figure 4.3. **Changes in the incidence of long-term unemployment and aggregate unemployment, 2000-07**



Source: OECD Economic Outlook 85 database; OECD calculations.

Figure 4.2. **European unemployment ratchets up following severe recessions**



Note: The scatter plot shows the increase in the unemployment rate from the quarter when the output gap was closest to zero prior to a severe downturn to the quarter when the output gap was again closest to zero following it. Only downturns where the cumulative annual output gap exceeds 2 percentage points are considered.

Source: OECD Economic Outlook 85 database, OECD calculations.

Unemployment insurance and unemployment

- **Increase in welfare from generous unemployment insurance because incomes are smoothed over time**
- **But generous unemployment insurance also raises equilibrium unemployment**
  - **weaker job search incentives**
  - **higher *reservation wages* on the part of the unemployed**
    productivity and thus also the wage may be low on a new job: this may result in a very high *effective replacement rate* (benefit relative to the wage on a new job)
- **Ample empirical evidence that a more generous unemployment insurance causes longer duration of unemployment**
  - elasticity of 0.5
- **But the requirements on the unemployed are important**
  - **when must an unemployed be ready to change profession?**
  - **geographical search area?**
  - **sanctions if job offers are not accepted**

Unemployment insurance in Sweden

- **Voluntary participation in unemployment insurance funds ("a-kassorna") affiliated to trade unions gives income-related unemployment benefit**
- **Otherwise only fixed basic allowance ("grundbelopp")**

Benefit levels for members in unemployment insurance funds

- **80 per cent replacement rate for 200 days**
- **70 per cent replacement rate for another 100 days (250 days for parents)**
- **After that 65 per cent replacement rate for ever in the job and development guarantee ("jobb- och utvecklingsgarantin").**
- **Benefit ceiling: 680 SEK per day (15 000 SEK per month) – higher income than 18 700 SEK per month gives less than 80 per cent.**

Basic allowance ("grundbelopp"): 320 SEK per day

Financing (reforms by the current government):

- **2/3 are government grants**
- **1/3 is membership fees**

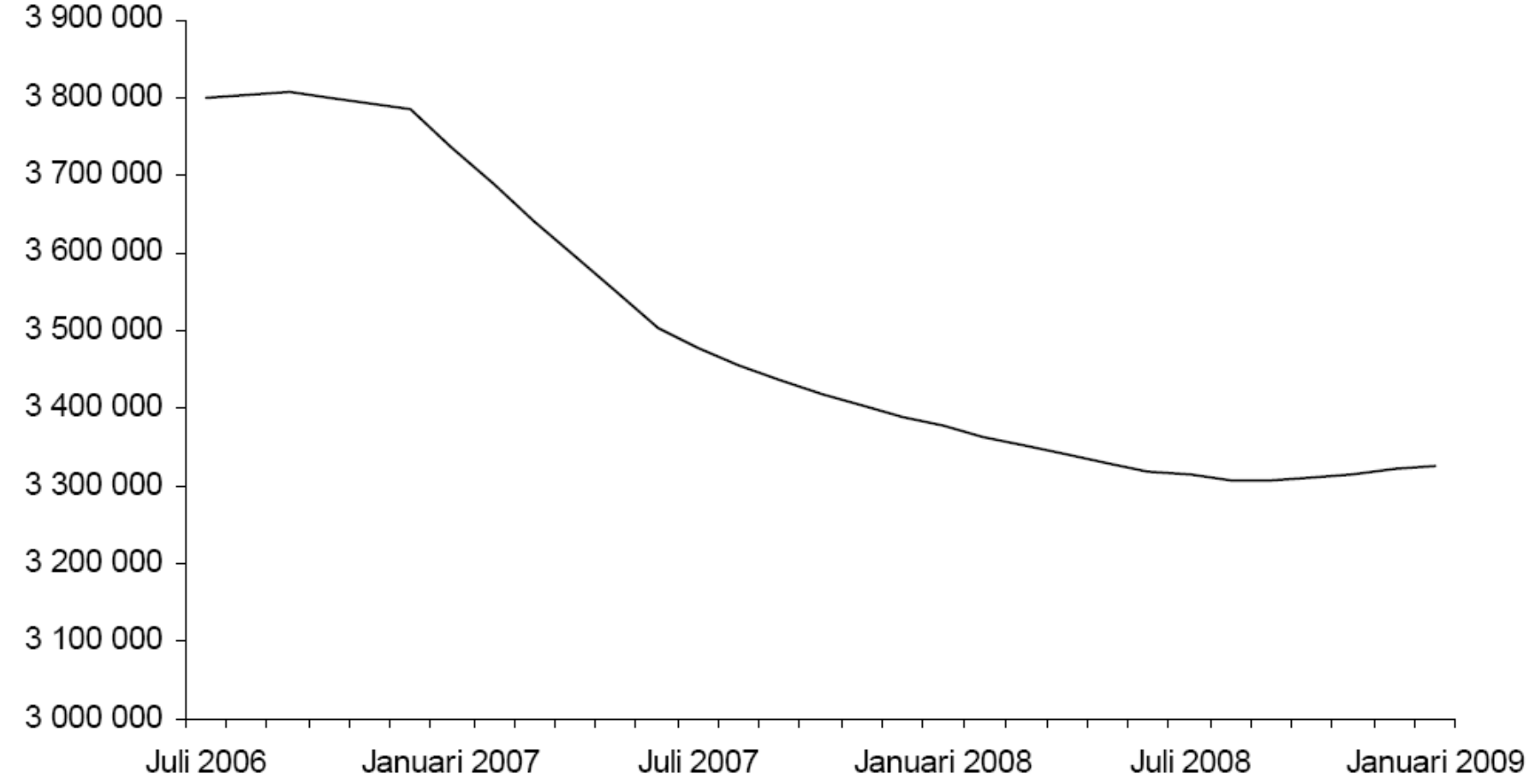
Cyclically dependent unemployment insurance

- **Proposal from the Swedish Fiscal Policy Council**
- **Higher benefit levels in recessions than in booms**
  - **insurance need higher in recession**
  - **adverse moral-hazard effects on incentives for job search matter less for employment in recessions when jobs are few**
- **Such rules in the US and Canada**
- **Negative response from government**
  - **fear that benefit levels cannot be lowered again.**

Financing reforms

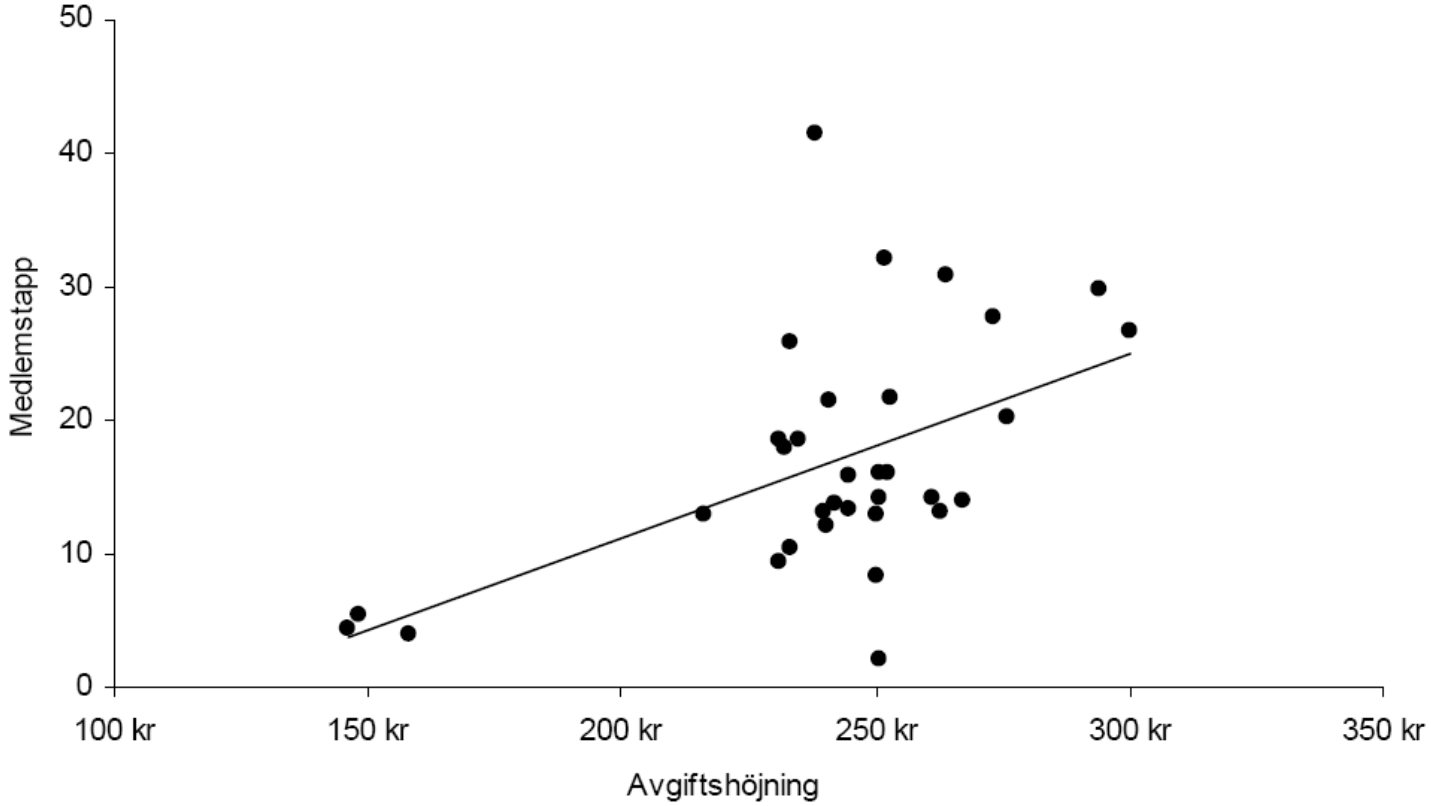
- **Higher membership fees in unemployment insurance funds have caused a large fall in membership**
  - **those who feel they cannot afford the fees**
  - **those with low unemployment risk**
- **Two problems**
  - **more people with inadequate income protection**
  - **fewer people contribute to the financing**
- **A mandatory state unemployment insurance would solve the problem**
  - **most countries have such a mandatory scheme**
  - **resistance from trade unions who believe they would lose members**

Figur 5.8 Antal medlemmar i a-kassorna



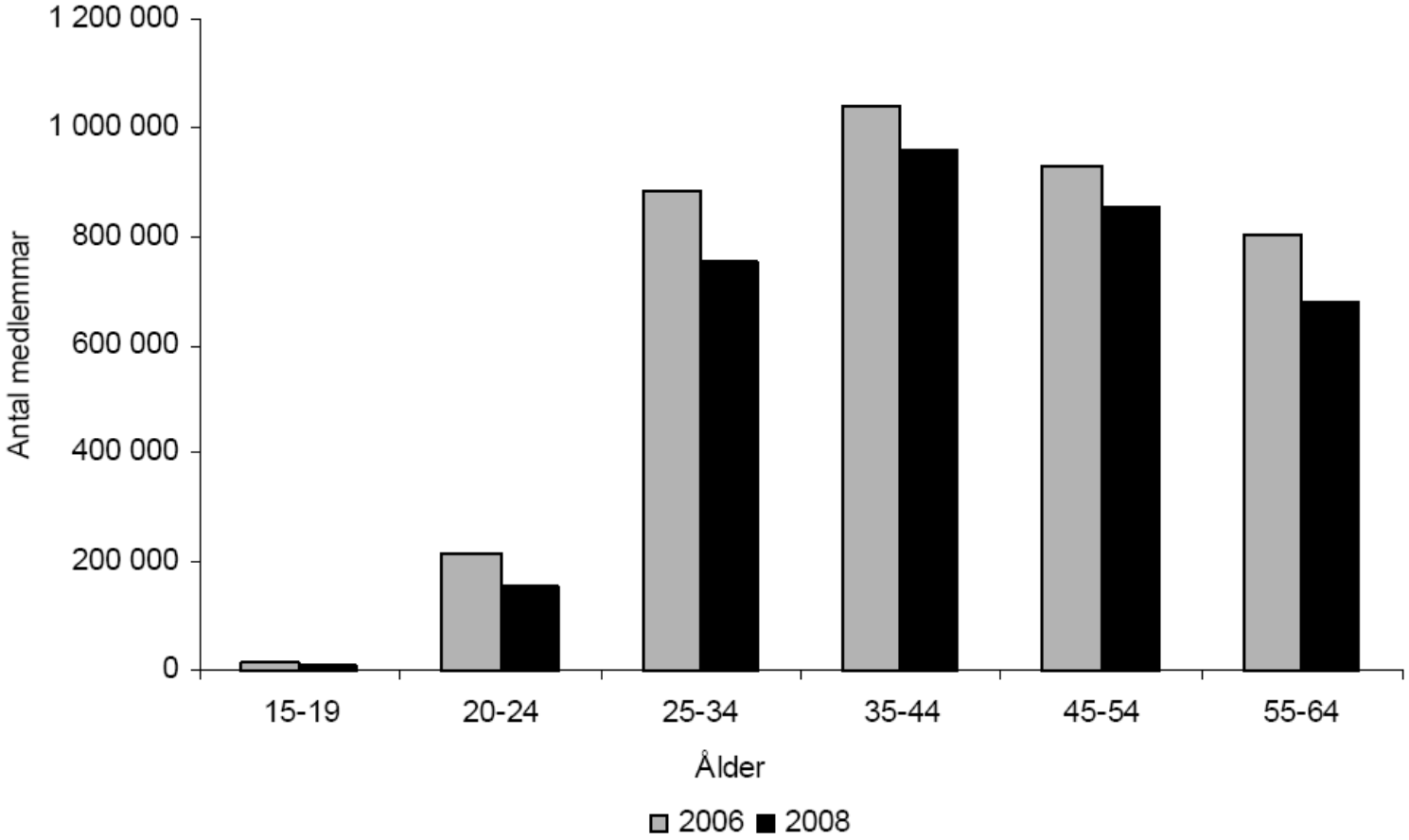
Källa: IAF.

Figur 5.9 Avgiftshöjningen (i kronor) och medlemstappet (i procent) i de olika a-kassorna



Anm: Avgiftshöjningen 1 januari 2007 och det procentuella medlemstappet mellan den 31 december 2006 och den 30 juni 2008.
Källa: IAF.

Figur 5.10 Åldersfördelning av a-kassornas medlemmar 2004, 2006 och 2008

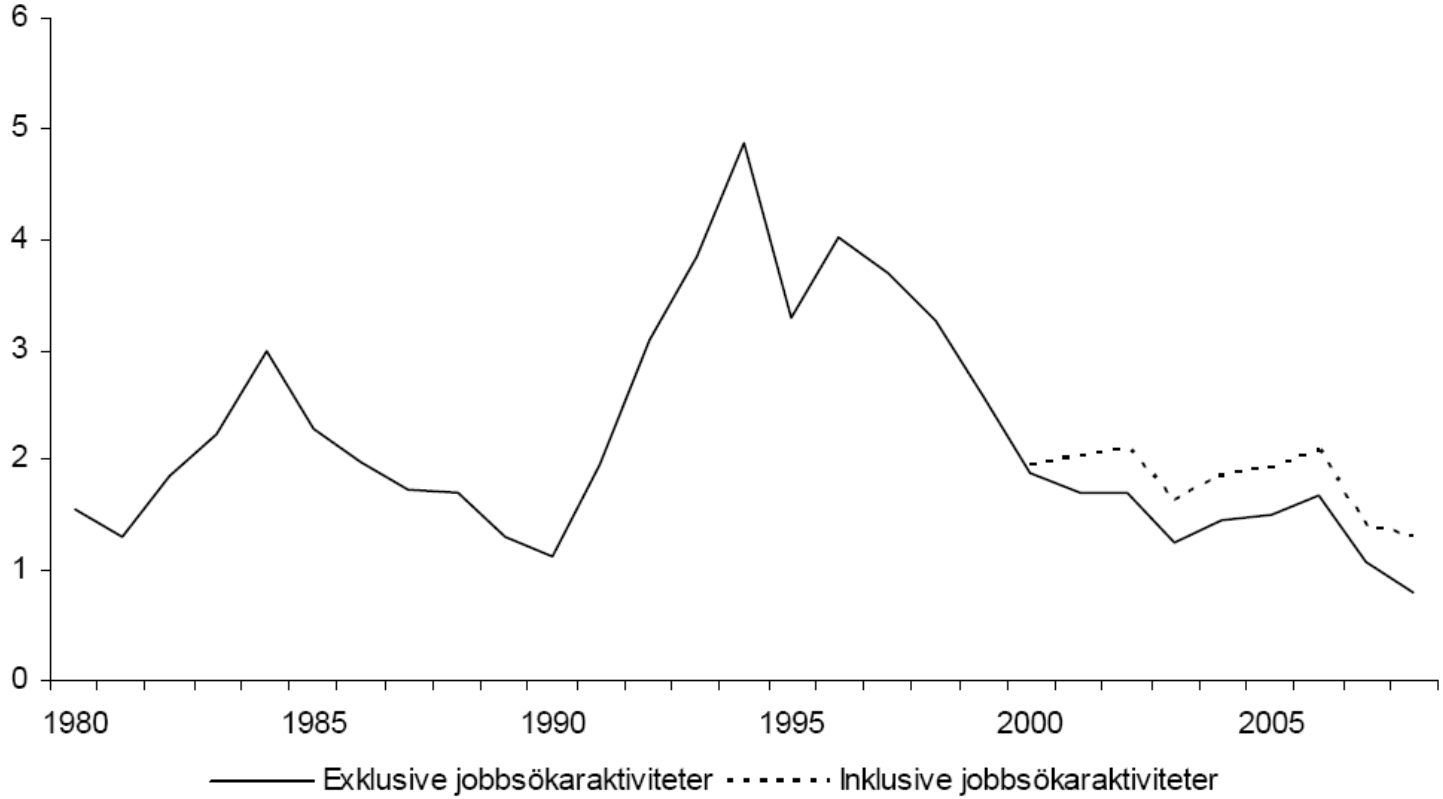


Källa: A-kassornas samorganisation.

Active labour market policy (ALMP) in Sweden

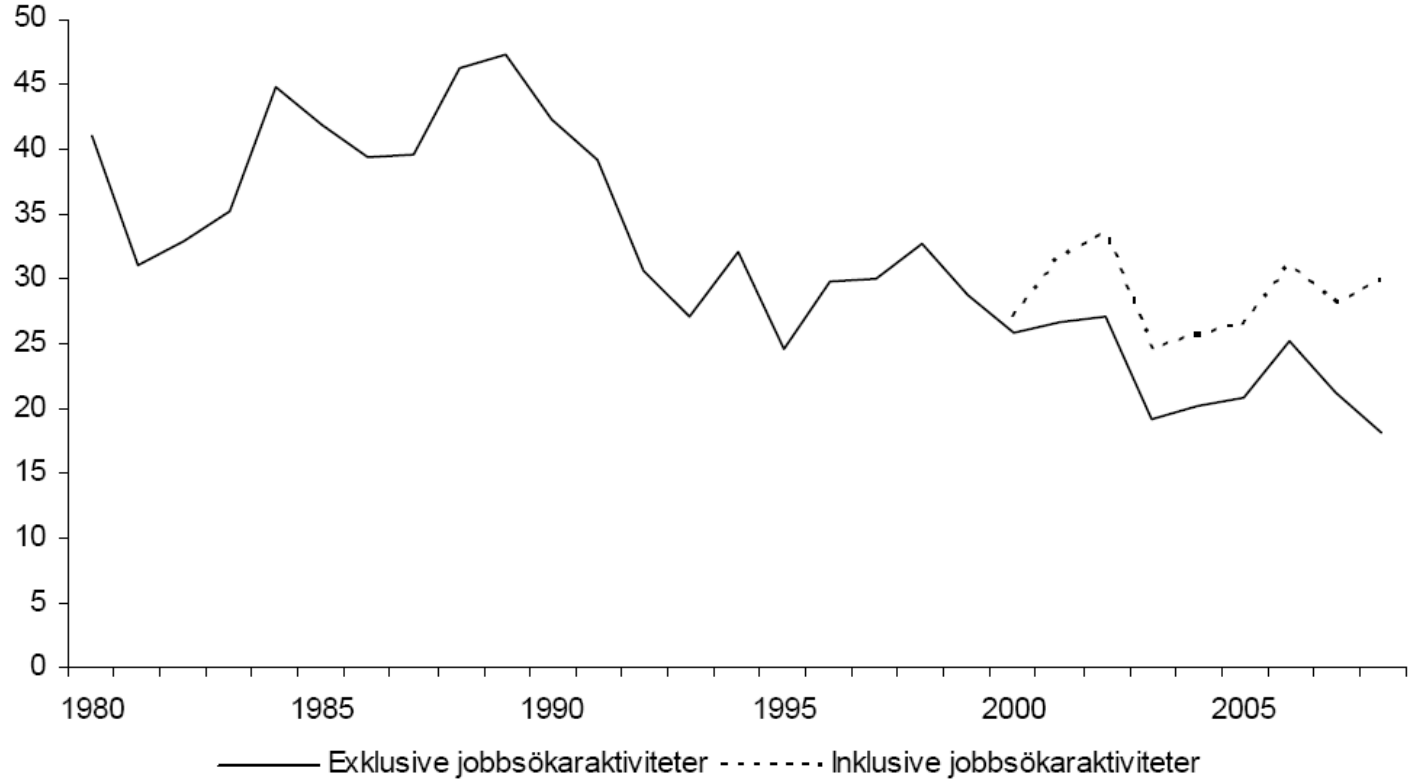
- Job brokering and job search assistance
- Labour market training
- Subsidised employment

Figur 5.2 Antal deltagare i konjunkturberoende arbetsmarknads-politiska program, årsgenomsnitt i procent av arbetskraften



Anm: Programvolym exklusive funktionshindrade. I programmen ingår utbildning, praktik, subventionerade jobb och jobbsökaraktiviteter (endast maximimåttet).
Källa: Arbetsförmedlingen.

Figur 5.3 Arbetsmarknadspolitikens aktiveringsgrad, årsgenomsnitt av antal deltagare i program, procent av total arbetslöshet

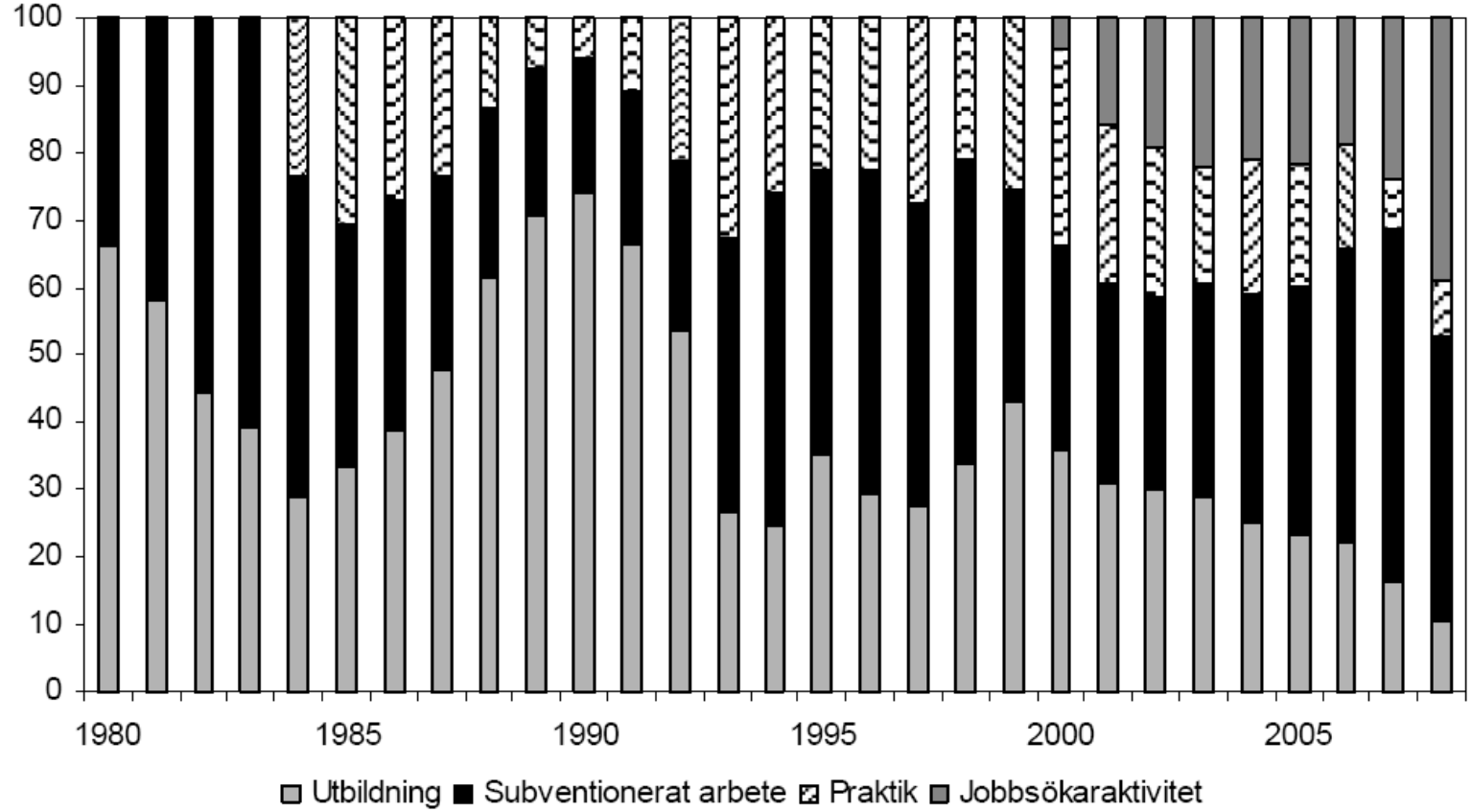


Anm.: Total arbetslöshet utgör summan av programdeltagare och öppet arbetslösa. Se Figur 5.2 angående vilka program som räknas in. Arbetslösa är de som anmält arbetslöshet till Arbetsförmedlingen.
Källa: Arbetsförmedlingen.

The efficiency of active labour market policy

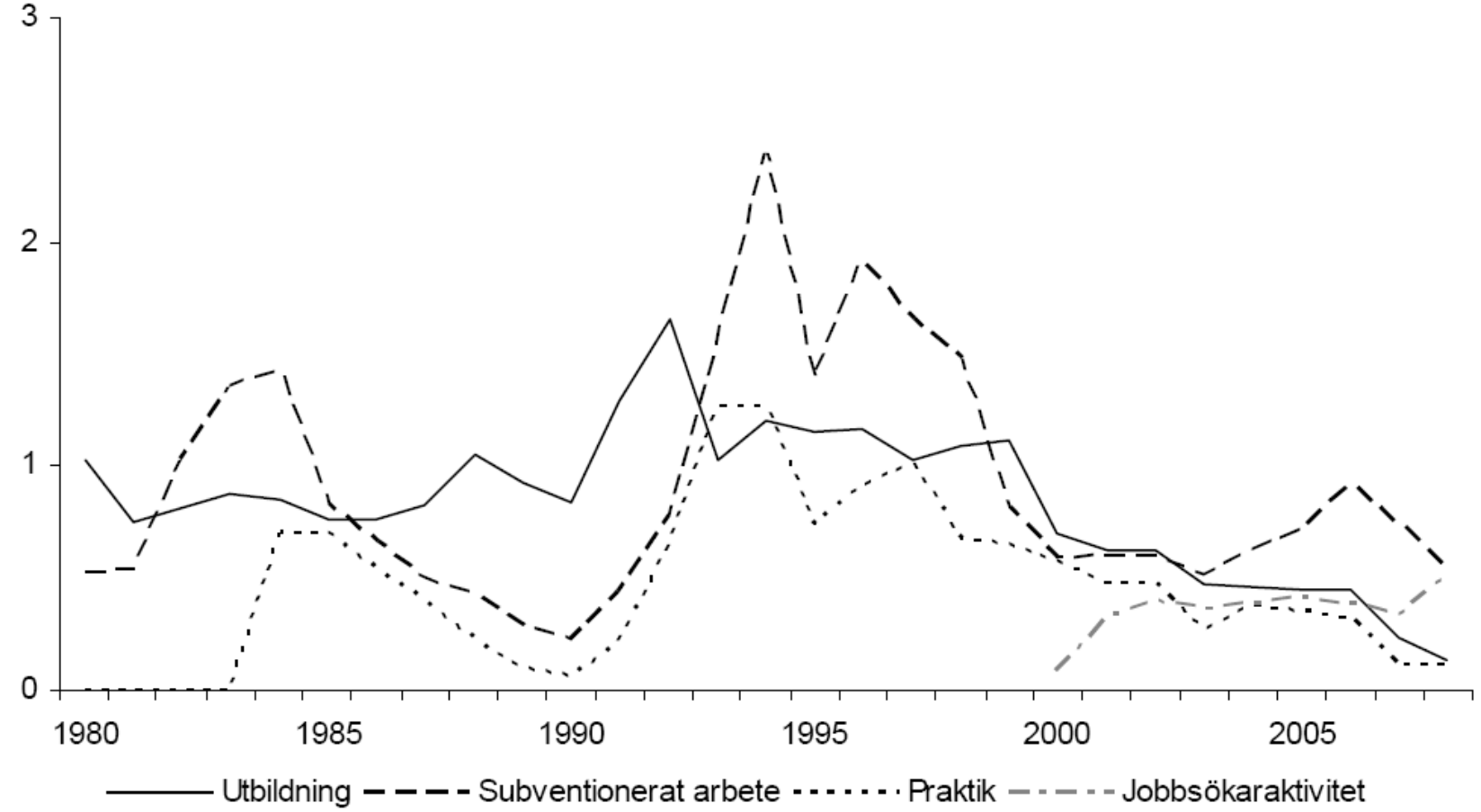
- **Labour market training did not work well in the 1990s: no higher job-finding probabilities for participants than for openly unemployed**
  - **very large volumes**
  - **requalification for unemployment benefits**
  - **no expanding sectors**
- **Better results in recent years**
  - **smaller programmes**
  - **no requalification for unemployment benefits**
- **Some – but not all – types of subsidised employment have resulted in high job-finding probabilities**
- **Large crowding-out effects on regular employment of subsidised employment: often 60-70 %**
- **Results have been particularly bad for young people**
- **Good results for job search activities**
- **Trimming down of labour market training programmes**
- **Expansion of job search activities – coaching**
  - **can it work in recession?**
  - **best effects in upswing**

Figur 5.5 Sammansättningen av de konjunkturberoende programmen, procent av totalen



Anm: Programmen inkluderar nystartsjobben.
Källa: Arbetsförmedlingen.

Figur 5.6 Deltagare i olika program, procent av arbetskraften



Källa: Arbetsförmedlingen.

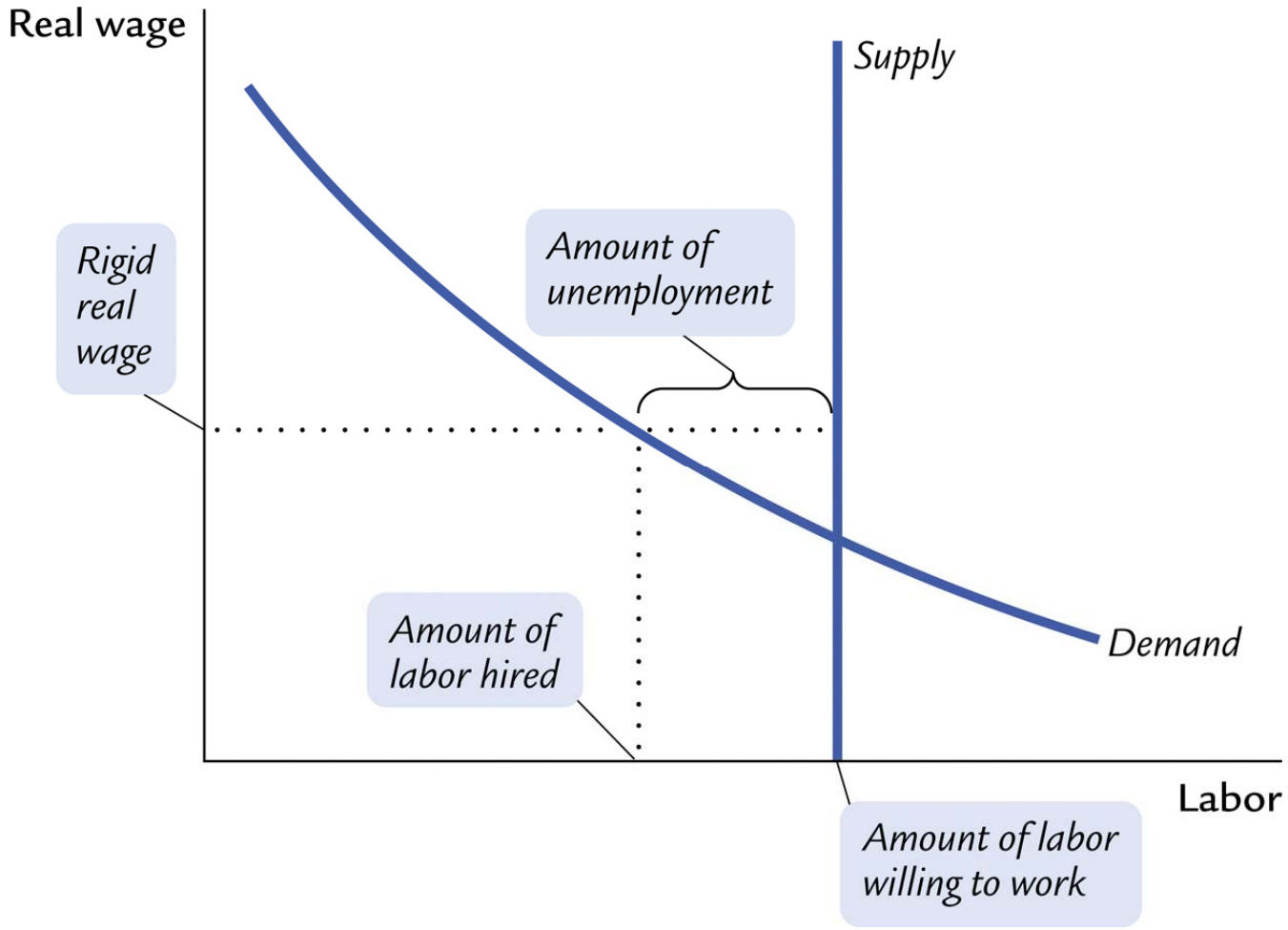


Figure 6-3: Real-Wage Rigidity Leads to Job Rationing

Causes of real-wage rigidity

1. **Legal minimum wages**
2. **Employers set high wages**
3. **Collective agreements**

Legal minimum wages

- **Not in Sweden**
- **France, the US and the UK**

Effects

- **Higher unemployment if the minimum wage exceeds the productivity of marginal groups**
- **This may affect particularly young people and immigrants (France)**
- **But a minimum wage could also raise employment (if it is held back by low supply)**

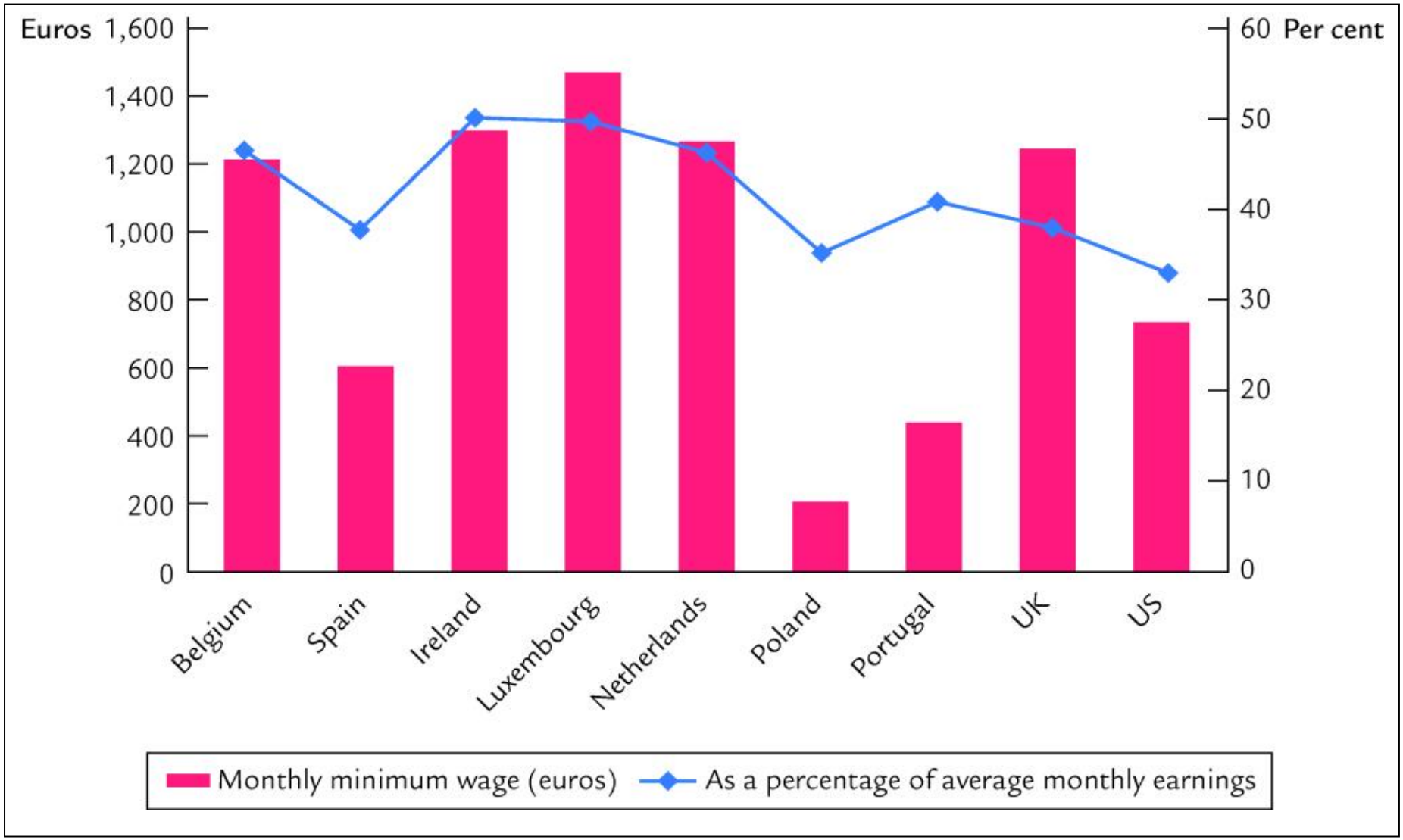


Figure 6-4: The Minimum Wage in the US and Eight European Countries 2005

Efficiency wages

It may be optimal for an employer to pay a higher wage than the market equilibrium wage

- **Higher wages increase the wage bill, which tends to reduce profits**
- **But there are also revenues from a higher wage for an employer**
  - **Reduced labour turnover and thus lower hiring costs**
  - **An incentive for the most productive labour to stay on**
  - **Higher work morale and thus productivity (the wage relative to reference wage determined by various norms is important)**

Collective agreements and trade unions

- **High union density and high coverage of collective agreements tend to raise wages and lower employment**
- **A high degree of coordination of wage negotiations promotes wage moderation and thus employment (Norway, Finland, the Netherlands, Ireland, Belgium and to some extent Sweden)**
  - total economy effects are considered
- **Decentralised wage bargaining to the level of the firm may also promote wage moderation (US, UK, New Zealand, Australia, most of the new EU members)**
  - **competitive pressures to hold back wages**
- **Industry bargaining without coordination may result in the highest real wages (Sweden in the 1980s and 1990s)**
  - **neither total economy considerations nor competitive pressures at the firm level**
  - **Calmfors-Driffill hump-shape hypothesis**
- **Sweden**
  - **industry bargaining**
  - **coordination through ”Industrins samarbetsavtal”**
  - **high minimum wages in collective agreement**

Calmfors-Driffill hump-shape hypothesis

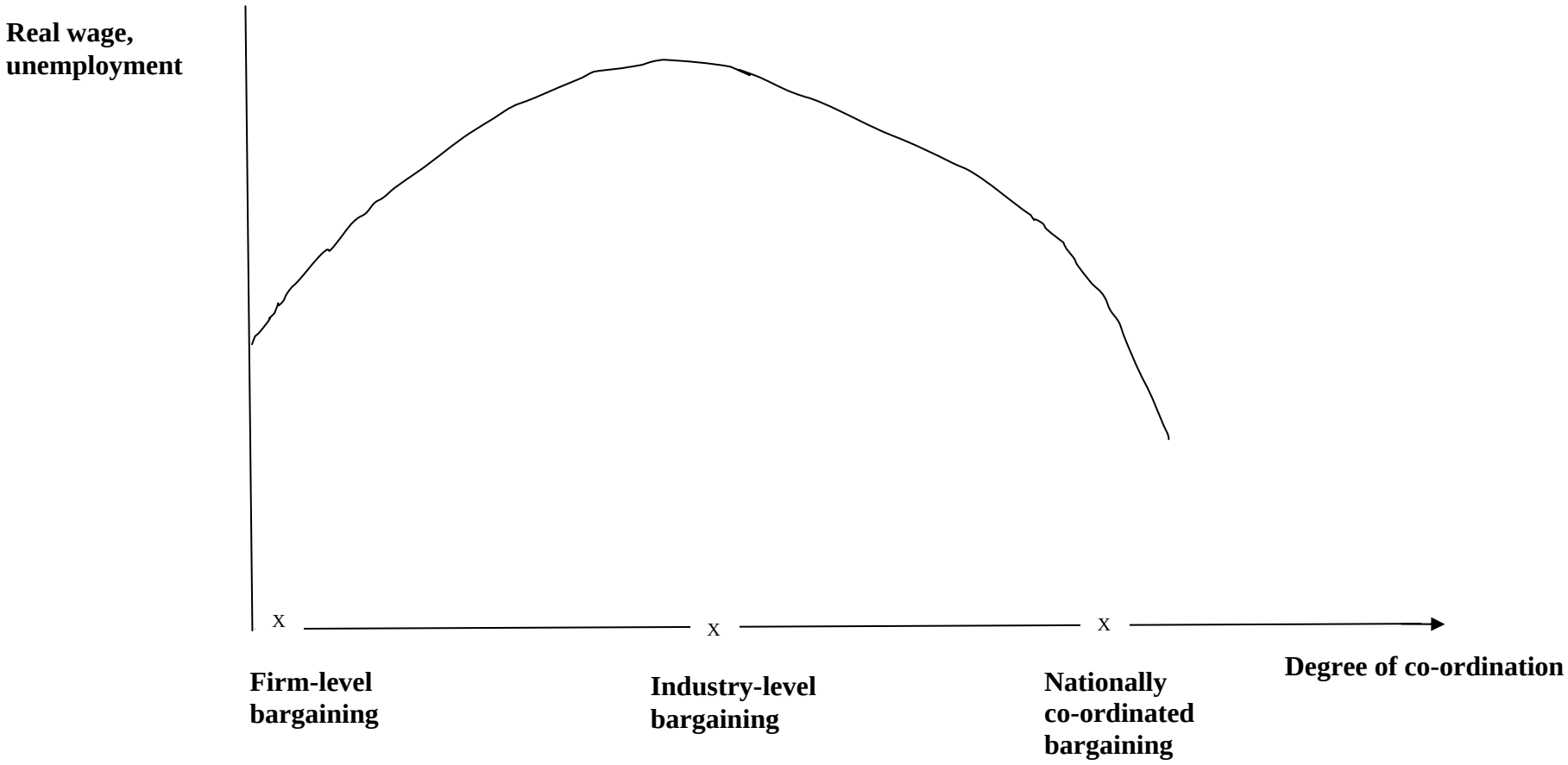


TABLE 6-1

Percentage of Workers Covered by Collective Bargaining

Country	Percentage
United States	18
Japan	23
United Kingdom	35
Canada	38
Switzerland	53
New Zealand	67
Spain	68
Netherlands	71
Norway	75
Portugal	79
Australia	80
Sweden	83
Belgium	90
Germany	90
France	92
Finland	95
Austria	98

Source: Organization for Economic Cooperation and Development (OECD) Employment Outlook 2004, as reported in Alberto Alesina, Edward Glaeser and Bruce Sacerdote, 'Work and Leisure in the US and Europe: Why So Different?' *NBER Macroeconomics Annual 2005*. The UK figure is for autumn 2005 and is from the UK Department of Trade and Industry.

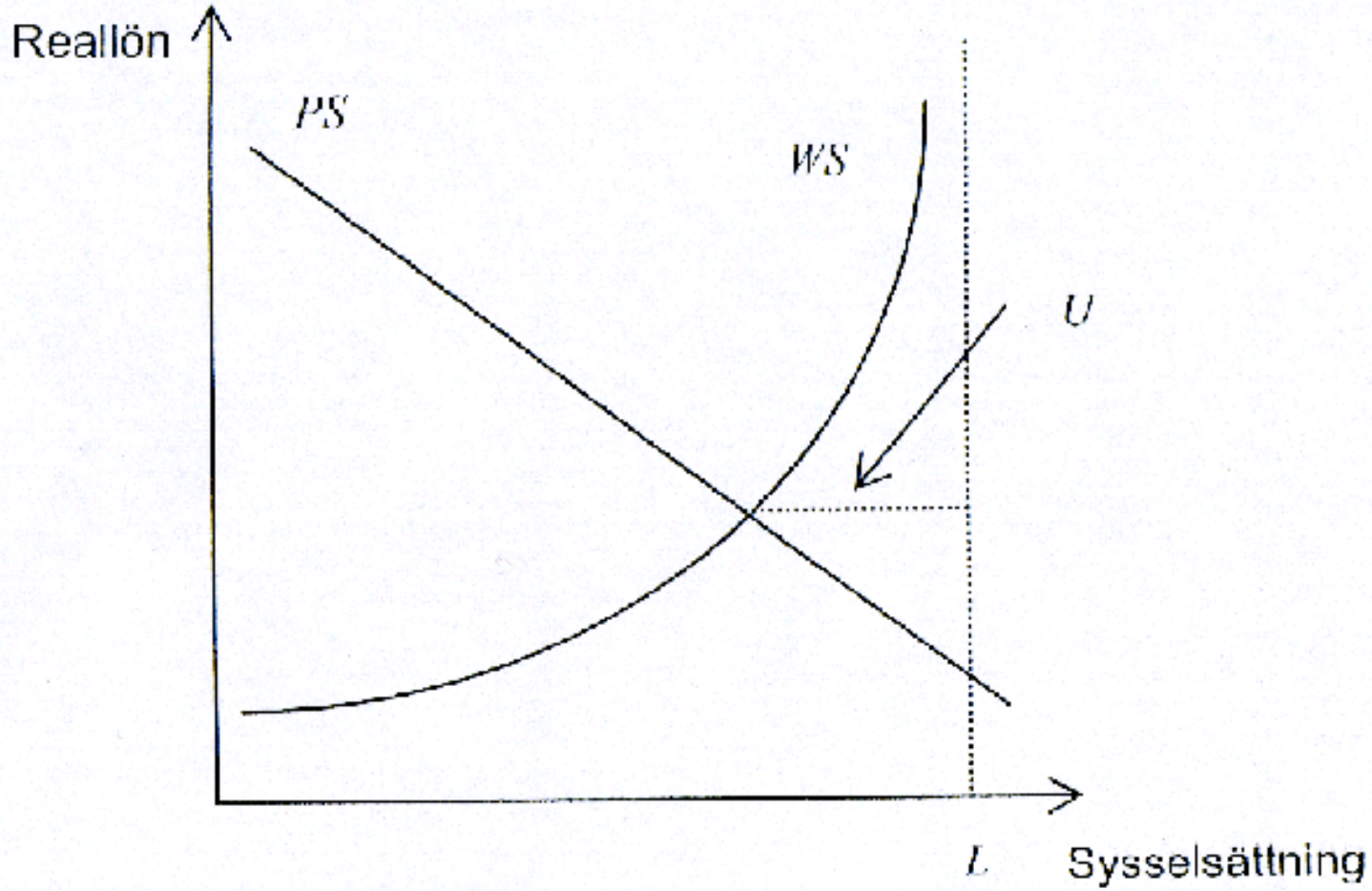
Table 3.2

Bargaining levels

Country	National guidelines	Inter-sectoral level	Sectoral level	Enterprise level
Old EU member states				
Austria	Pattern bargaining		XXX	X
Belgium	Centrally agreed guidelines for wage increases with the government 2003–04	XXX	X	X
Denmark	Pattern bargaining	XX	XX	X
Finland	Tripartite national pay agreement 2003–04	XXX	XX	X
France			X	XX
Germany	Pattern bargaining		XXX	X
Greece	National general collective agreement 2002–03	XX	XXX	X
Ireland	Tripartite national pay agreement 2003–04	XXX	X	X
Italy	Social pacts with government 1993 and 1998 setting guidelines for the wage-bargaining process		XX	X
Luxemburg			XX	XX
Netherlands	Centrally agreed ceiling for wage increases with government 2003; tripartite national wage freeze 2004–05	XX	XXX	X
Portugal			XXX	X
Spain	Centrally agreed guidelines for wage increases 2003	XX	XXX	X
Sweden	Intersectoral agreements setting guidelines for the wage-bargaining process; pattern bargaining		XXX	XX
UK			X	XXX
New EU member states				
Cyprus			XXX	X
Czech Republic	Tripartite national agreements on minimum wages		X	XXX
Estonia	Tripartite national agreements on minimum wages		X	XXX
Hungary	National guidelines for wage increases agreed with government and tripartite national agreements on minimum wages	X	XX	XXX
Latvia	Tripartite national agreements on minimum wages	X	X	XXX
Lithuania			X	XXX
Malta				XXX
Poland	National guidelines for wage increases agreed with government and tripartite national agreements on minimum wages		X	XXX
Slovakia	Tripartite national agreements on minimum wages		XX	X
Slovenia	Tripartite national pay bargains	XXX	XX	X
Other countries				
Australia	National wage awards for minimum wages	X	XX	XXX
Japan	Pattern bargaining			XXX
New Zealand			X	XXX
Norway	Pattern bargaining; tripartite agreement on guidelines for wage increases 2003	XX	XXX	X
Switzerland			X	XX
US				XXX

Notes: XXX = dominating level
XX = important, but not dominating, level
X = existing level

Sources: *Industrial Relations in the EU Member States and Candidate Countries (2002), Collective Bargaining Coverage and Extension Procedures* (2002), individual Eiroline country reports. For New Zealand: Bray and Walsh (1998).



Figur 1 Reallön och sysselsättning

Determination of equilibrium employment

- Intersection between wage-setting schedule and labour-demand (price-setting) schedule
- The wage-setting schedule shows the real wage that wage setters try to achieve in wage bargaining at various levels of employment
- The labour-demand schedule shows the employment desired by firms at various real wage levels
- Equilbrium employment rises if:
  - the wage-setting schedule is shifted downwards
  - the labour-demand schedule is shifted upwards

Determinants of equilibrium employment

- Unemployment benefit replacement rate/maximum unemployment benefit duration (WS)
- Tax wedge (income tax: WS; payroll tax: PS)
- Union density/coverage of collective agreements (WS)
- Degree of wage bargaining coordination (WS)
- ALMPs (WS, PS)
- Product market regulations (WS, PS)
- But not extent of employment protection

Recent labour market reforms in Sweden

- Cuts in unemployment benefits
  - lower ceiling
  - gradual reduction over time from 80 to 65 %
  - faster reduction for young people
  - not eligibility through university studies
- Increase and differentiation of contributions to unemployment insurance
- Tougher search requirements for the unemployed
- Reforms of ALMPs
  - lower volumes
  - start-up jobs (nystartjobb) instead of ”anställningsstöd”
  - more competition and changes in organisation
- Employment income tax credits
- Lower payroll taxes for young people and generally
- Income tax deductions for household-related services
- Reforms of sickness insurance
  - lower benefits
  - tougher requirements
  - earlier interventions

Swedish Fiscal Policy Council evaluation of the government's labour market reforms

- **Lower unemployment benefits and employment tax credit**
- **Effects come with a long lag**
- **Reduction of equilibrium unemployment by at least one percentage point**
  - **effects on both outflows from unemployment and wage levels**
  - **lower benefits: lower unemployment and lower labour supply**
  - **employment tax credit: lower unemployment and higher labour supply**
  - **net: larger effects on employment than on unemployment**
- **But effects on equilibrium unemployment cannot be read off during deep recession with high cyclical unemployment**
  - **risk that high cyclical unemployment raises the equilibrium rate of unemployment**