# ON THE MACROECONOMIC IMPACT OF ACTIVE LABOR MARKET POLICIES

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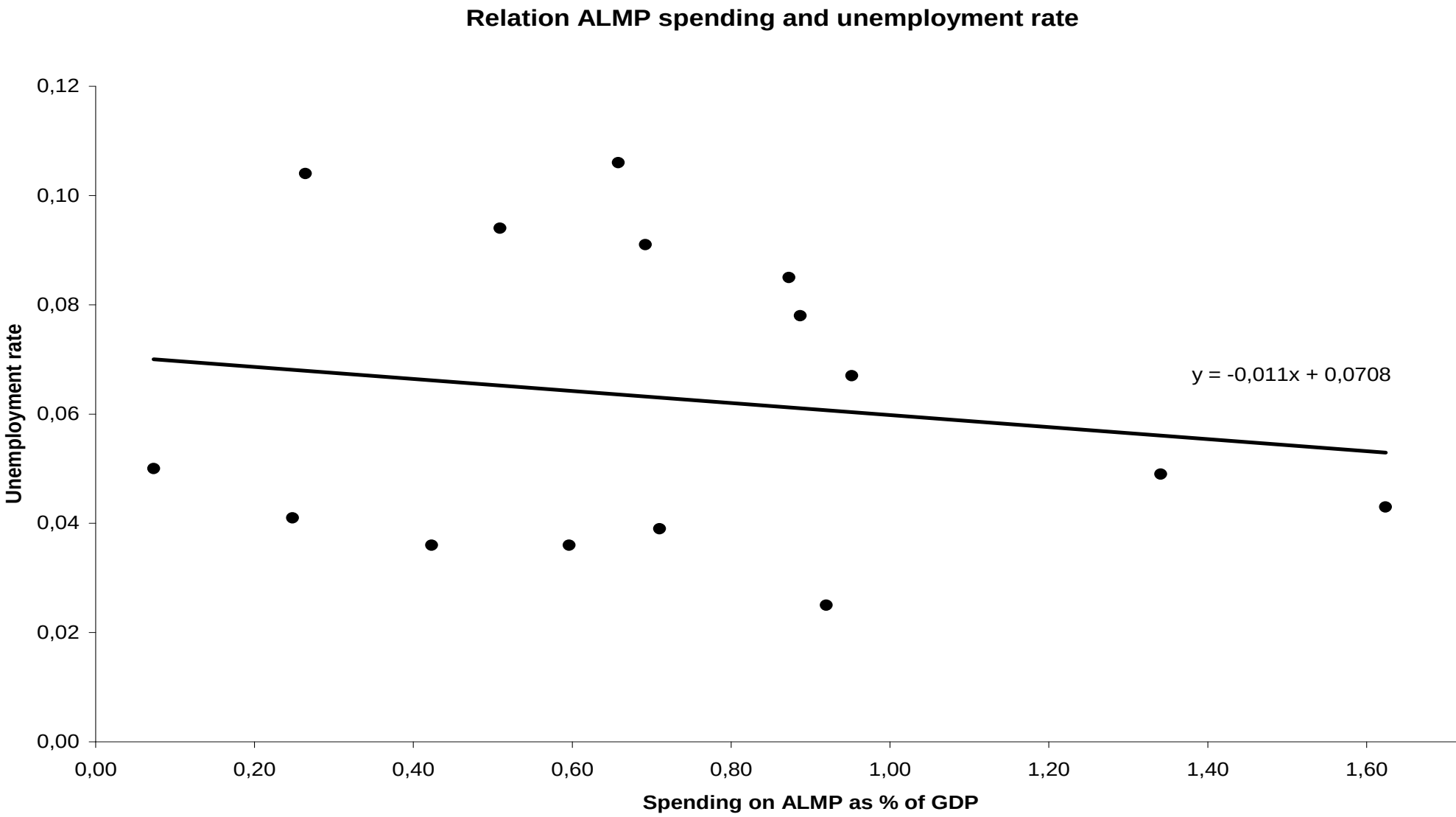
Outline of the presentation

- what are active labor market policies?
- some numbers and simple correlations
- different methods to determine the impact
- example of CGE approach
- comparison with other studies
- what have we learned?


Relation ALMP spending and unemployment rate
Unemployment rate
0,12
0,10
0,08
0,06
0,04
0,02
0,00
y = -0,011x + 0,0708
0,00
0,20
0,40
0,60
0,80
1,00
1,20
1,40
1,60
Spending on ALMP as % of GDP

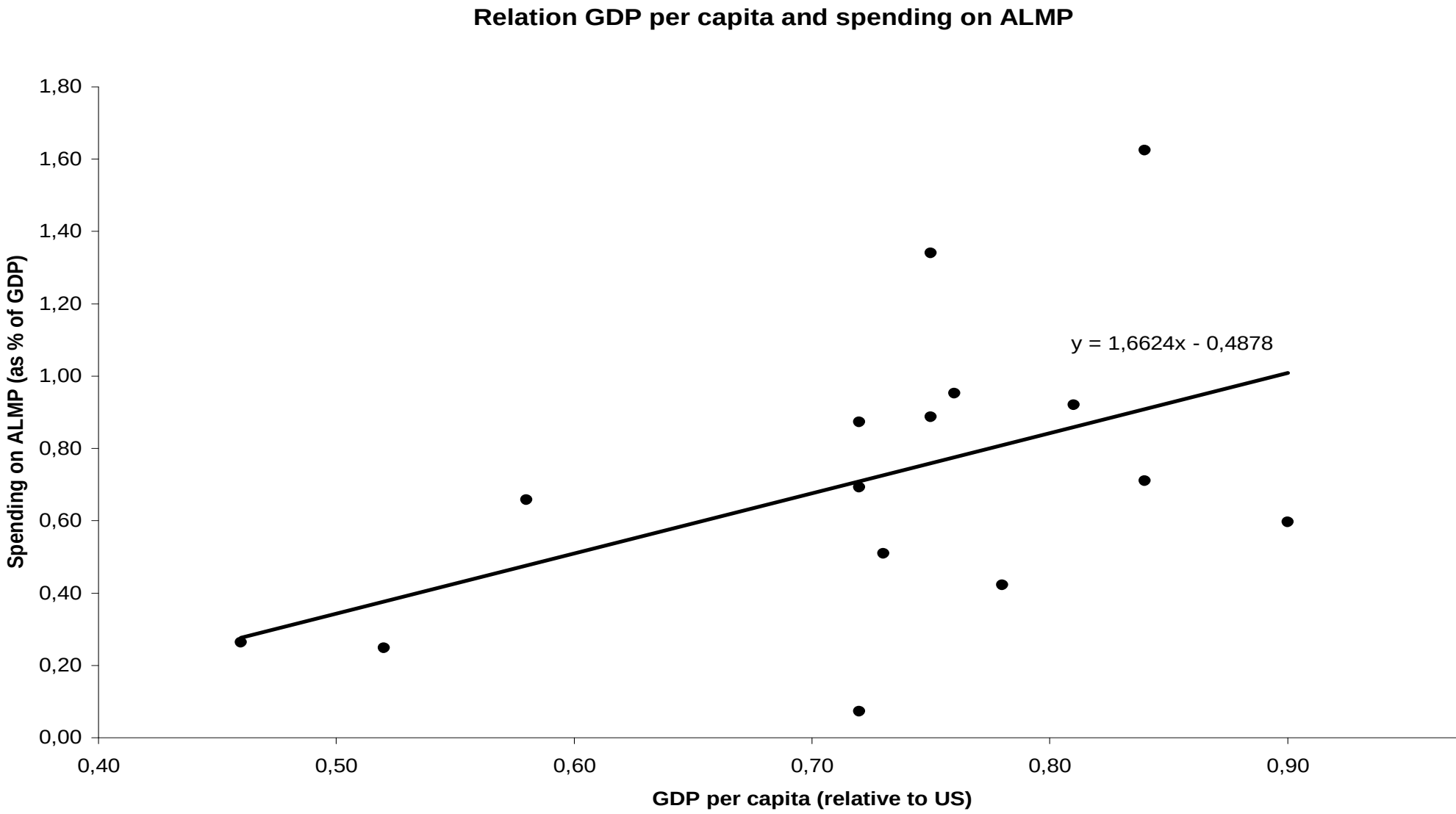
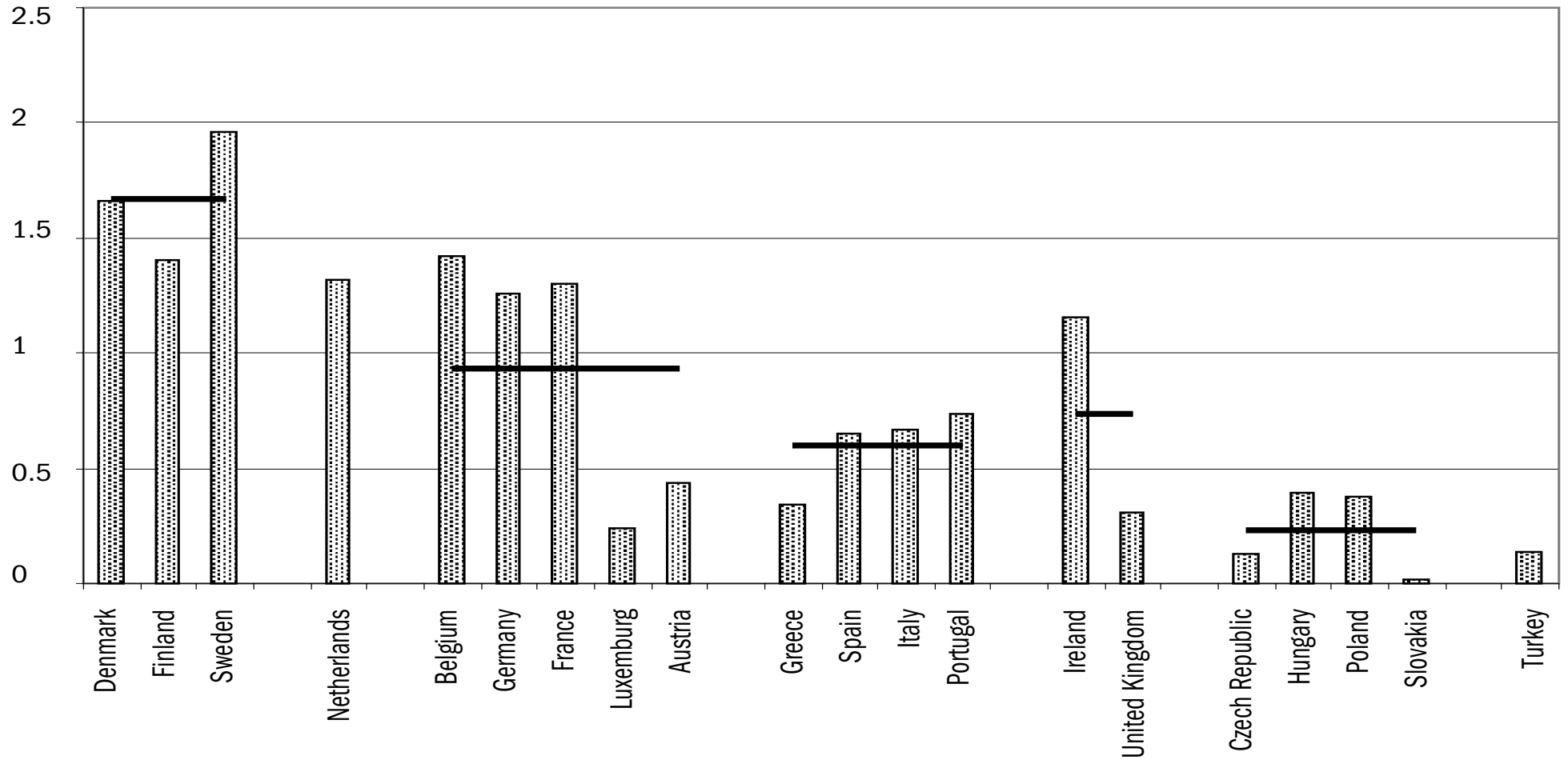

Relation GDP per capita and spending on ALMP
Spending on ALMP (as % of GDP)
1,80
1,60
1,40
1,20
1,00
0,80
0,60
0,40
0,20
0,00
y = 1,6624x - 0,4878
0,40
0,50
0,60
0,70
0,80
0,90
GDP per capita (relative to US)

**Figure 6.6 Spending on active labour market policy as % of GDP, 1998**



ALMPs - OECD definition (1996 share in spending)

- public employment services and administration (EU 19% D 17%)
- labor market training (EU 28% D 32%)
- youth measures (EU 15% D 5%)
- subsidized employment (EU 15% D 21%)
- measures for the disabled (EU 13% D 19%)

Different methods

- Interested in impact on productivity and employment
- Impact (employment) ambiguous in theory
- Micro level: experiments
- Micro level: micro-econometrics
- Macro level: time-series econometrics
- Macro level: CGE models

Micro level

- Experiments
  - Ideal, there is no substitute for random assignment
  - Easy to try different setups
  - Evaluation build in from the start, good data

- Micro-econometrics
  - Second best, deal with selectivity ex post
  - Have to life with the programs setup
  - Often no ex ante effect

Macro level

- Time-series econometrics
  - Use macro- or meso-level time series
  - Short data series
  - Endogeneity problems
  - Useful as rough check on CGE analysis

- CGE analysis
  - Ideal in principle
  - Requires knowledge of all the structural parameters
  - Takes time

Example of CGE analysis, Jongen *et al.* (2003)

- Motivation
- Tool
- Calibration
- Results
- Sensitivity analysis
- Concluding remarks on Jongen *et al.* (2003)

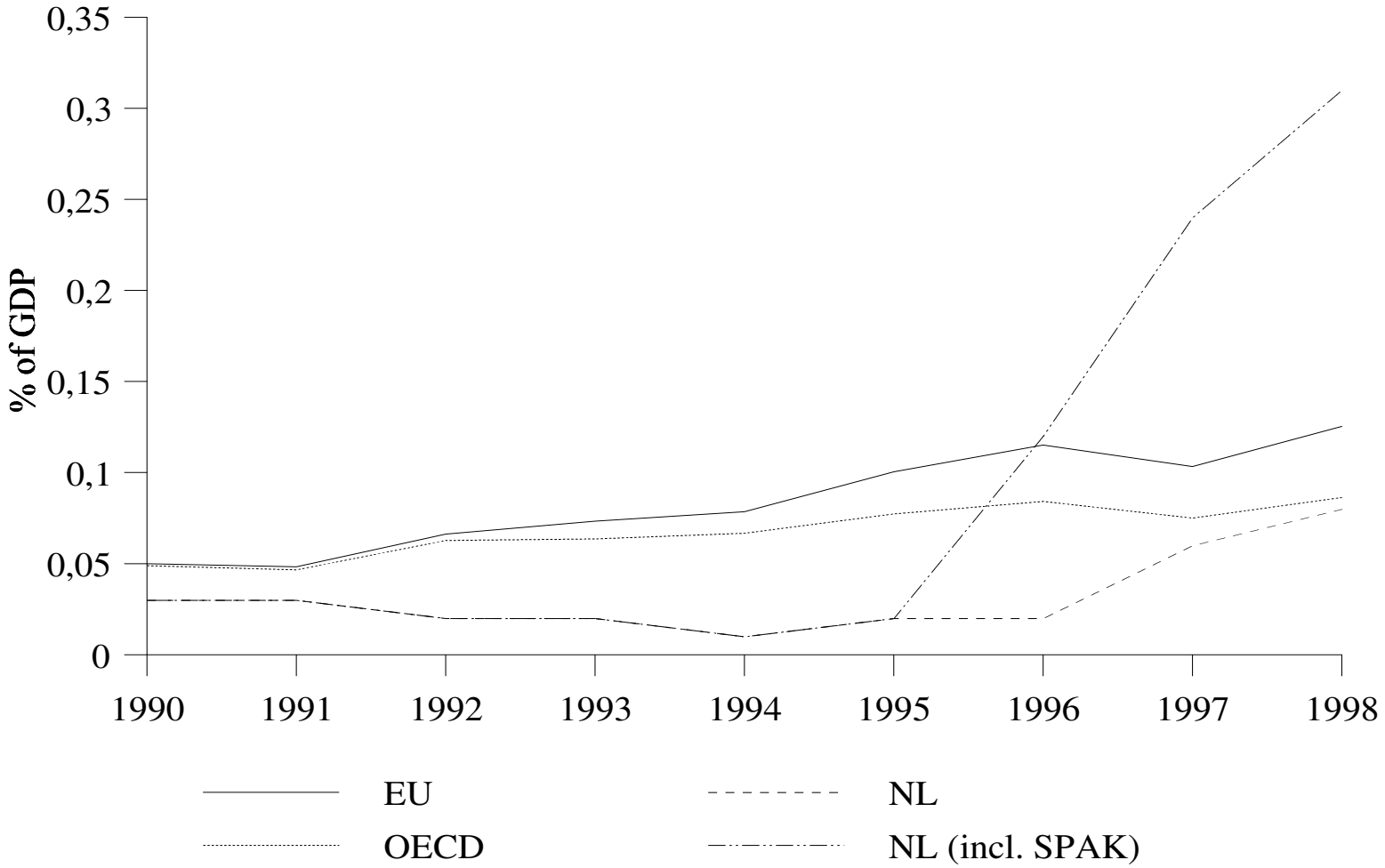



Figure 1: Subsidized employment in the private sector, as a percentage of GDP. Source: OECD Database on labour market policies

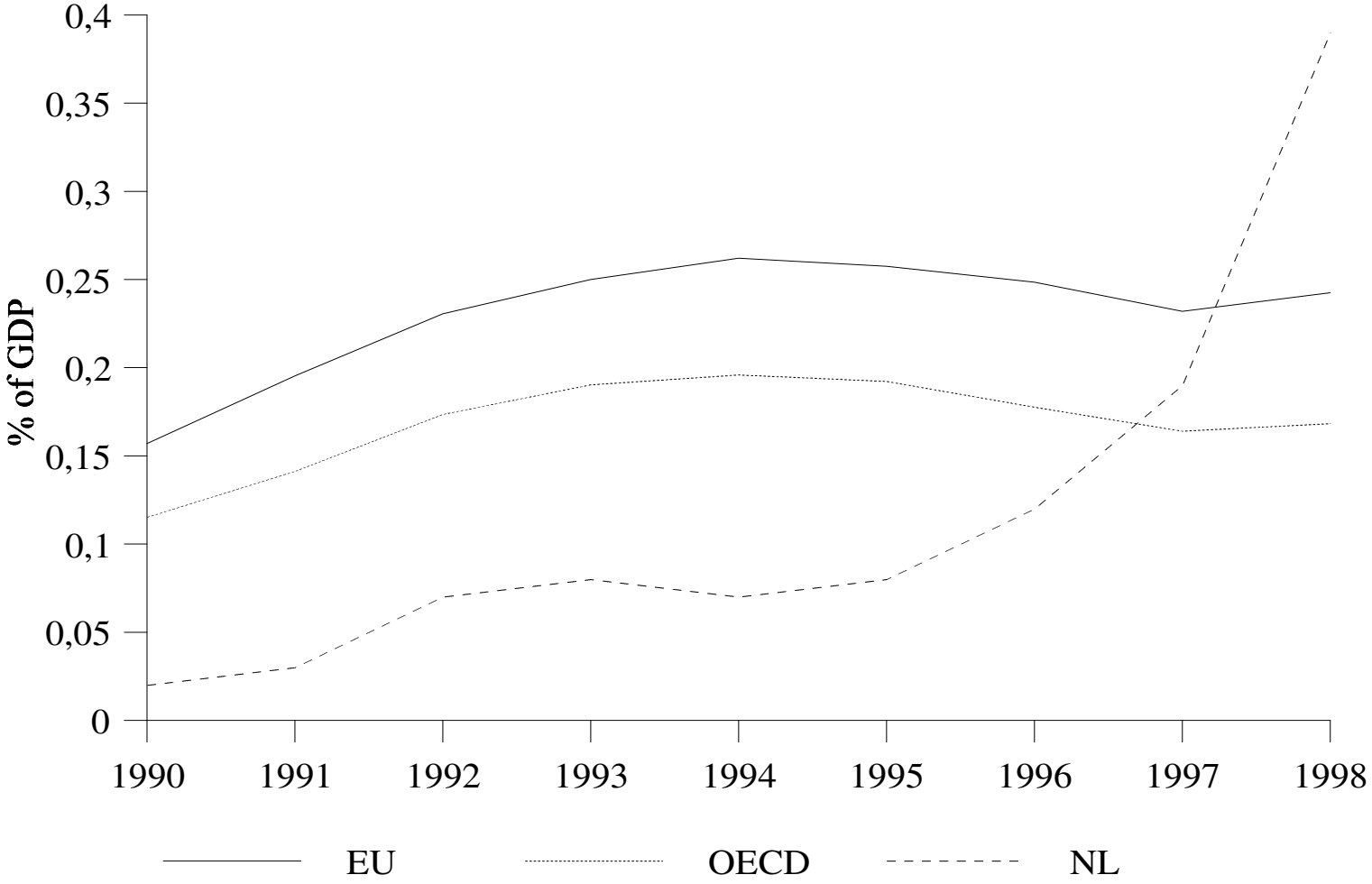
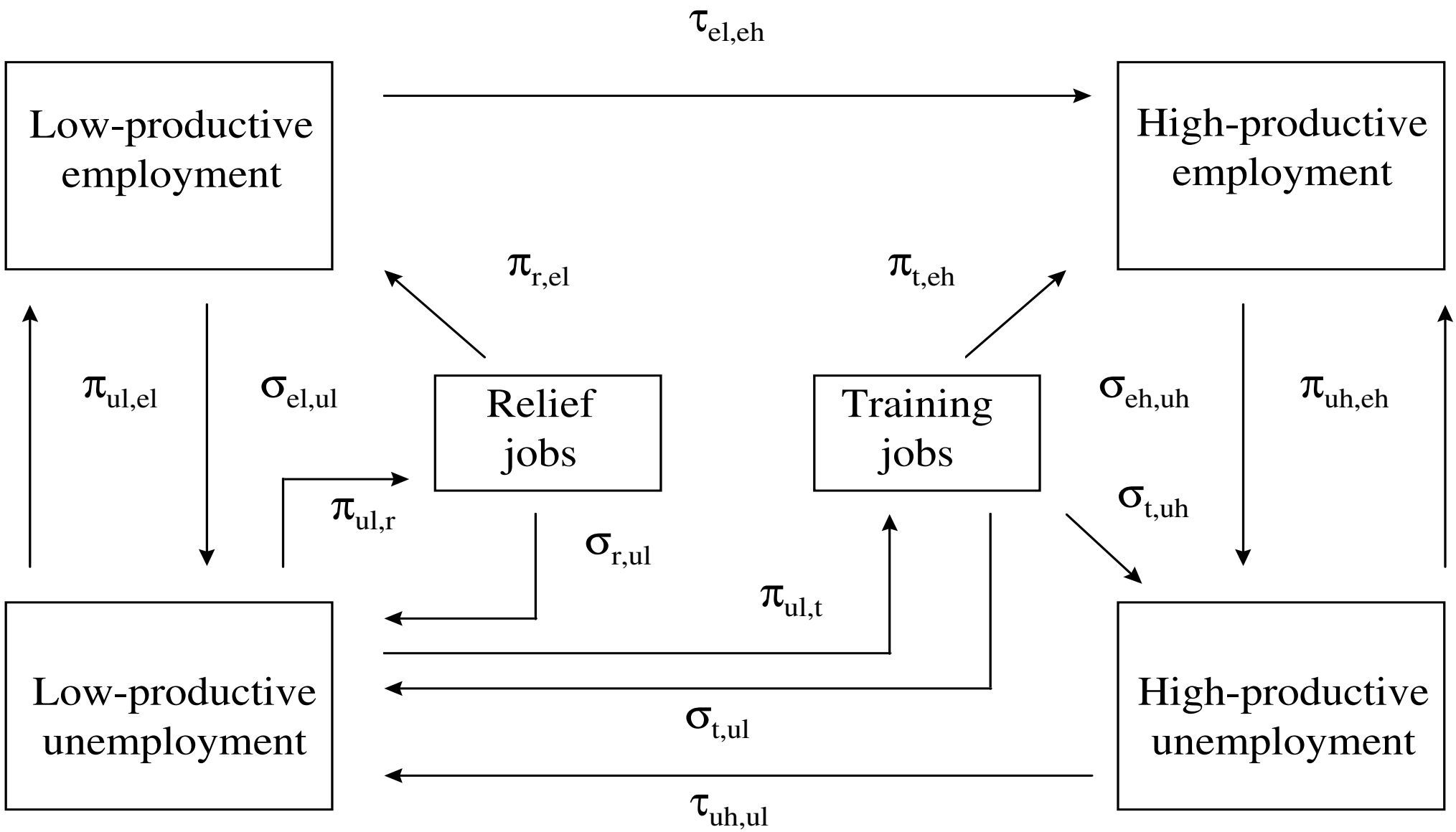



Figure 2: Subsidized employment in the public and non-profit sector, as a percentage of GDP. Source: OECD Database on labour market policies

Tool

- Stripped down version of the MIMIC model
- No capital, no sectors, exogenous labor force
- Introduce subsidized employment
- Core is the flow model


Low-productive employment
High-productive employment
Relief jobs
Training jobs
Low-productive unemployment
High-productive unemployment
$\tau_{el,eh}$
$\pi_{r,el}$
$\pi_{t,eh}$
$\pi_{ul,el}$
$\sigma_{el,ul}$
$\sigma_{eh,uh}$
$\pi_{uh,eh}$
$\pi_{ul,r}$
$\sigma_{r,ul}$
$\sigma_{t,uh}$
$\pi_{ul,t}$
$\sigma_{t,ul}$
$\tau_{uh,ul}$

Determination of the endogenous flows (1)

- Government
  - sets tax rates, subsidy rates and government consumption
  - sets benefit and compensation levels
  - sets the number of subsidized jobs
  - determine who qualifies for subsidized jobs
- Wage bargain
  - between 'representative' employer and employee
  - Nash bargaining solution

Determination of the endogenous flows (2)

- Firms
  - determine profit maximizing number of vacancies
  - determine which matches to accept and reject (minimum wage)
- Workers
  - determine search effort
  - determine which matches to accept and reject (reservation wage)
- Vacancies, number of job seekers and share of contacts accepted determine endogenous flow rates

Calibration

- Most parameters are taken from MIMIC
- Given range of estimates in literature consider 2 extreme cases of subsidized employment
- Relief jobs slow individual job finding rate down
- Training jobs speed up individual job finding rate
- Taxes and compensation outside employment push up wages

Simulations

- 'Ex ante' impulse of 120 million euro per measure
- Increase in the number of relief jobs
- Increase in the number of training jobs
- Subsidy for low-productive workers (vouchers)

# Changes in stocks

| | **relief jobs** | **training jobs** | **vouchers** |
|---|---|---|---|
| Low-productive unemployment | -6 | -19 | -10 |
| High-productive unemployment | -1 | 9 | 6 |
| Unemployment total | -7 | -10 | -4 |
| Relief jobs | 14 | -1 | -3 |
| Training jobs | 0 | 14 | 0 |
| Unemployment + subsidized employment | 7 | 3 | -7 |
| Private sector employment | -7 | -3 | 7 |

# Employment/production before and after compensating taxation

| Simulation | *no compensating taxation* relief | training | voucher | *with compensating taxation* relief | training | voucher |
|---|---|---|---|---|---|---|
| | *percentage changes* | | | *percentage changes* | | |
| Production private sector | -0.11 | 0.00 | 0.09 | -0.16 | -0.07 | 0.07 |
| Employment total | 0.12 | 0.19 | 0.09 | 0.09 | 0.14 | 0.07 |
| Employment private sector | -0.15 | -0.08 | 0.16 | -0.20 | -0.15 | 0.14 |
| *Ratio's* | *absolute changes* | | | *absolute changes* | | |
| Unemployment rate (%-points) | -0.11 | -0.17 | -0.08 | -0.08 | -0.13 | -0.07 |
| - including R and T | 0.12 | 0.07 | -0.13 | 0.16 | 0.12 | -0.11 |

Table 4: Sensitivity analysis relief jobs and training program[a]

| Simulation | relief jobs | | | training program | | | | both |
|---|---|---|---|---|---|---|---|---|
| | base sim. | overhead = wml[b] | product. r = wml[c] | base sim. | overhead = wml[b] | $\mu_t$ -50%[d] | $\mu_t$ +50%[d] | $w_r$&$w_t$ +.15 wml[e] |
| | | *percentage changes* | | | | | | |
| *Prices* | | | | | | | | |
| Labour costs[f] | 0.15 | 0.21 | 0.11 | 0.18 | 0.24 | 0.18 | 0.14 | 0.26 |
| Labour productivity | 0.04 | 0.03 | 0.04 | 0.07 | 0.07 | 0.06 | 0.07 | 0.06 |
| *Volumes* | | | | | | | | |
| Production | -0.16 | -0.25 | -0.10 | -0.07 | -0.16 | -0.15 | 0.07 | -0.26 |
| Employment (total)[g] | 0.09 | 0.03 | 0.12 | 0.14 | 0.08 | 0.07 | 0.19 | -0.16 |
| Employment (firms)[g] | -0.20 | -0.28 | -0.15 | -0.15 | -0.22 | -0.22 | -0.01 | -0.32 |
| *Ratio's* | | *absolute changes* | | | | | | |
| Unemployment rate (%-points) | -0.08 | -0.12 | -0.08 | -0.13 | -0.07 | -0.07 | -0.17 | 0.15 |
| - including R and T[h] | 0.16 | 0.12 | -0.13 | 0.12 | 0.18 | 0.17 | 0.01 | 0.26 |
| *Government budget* | | *absolute changes in billions of euro* | | | | | | |
| Wage bill | 0.13 | 0.29 | 0.01 | 0.20 | 0.37 | 0.20 | 0.17 | 0.13 |
| - relief jobs | 0.11 | 0.26 | 0.00 | 0.00 | 0.00 | 0.00 | -0.04 | 0.07 |
| - training program | 0.00 | 0.00 | 0.00 | 0.19 | 0.34 | 0.18 | 0.20 | 0.04 |
| Unemployment insurance[i] | 0.00 | 0.00 | 0.00 | 0.10 | 0.10 | 0.04 | 0.19 | 0.01 |
| Welfare benefits[i] | -0.03 | -0.01 | -0.04 | -0.11 | -0.10 | -0.05 | -0.19 | 0.04 |
| Government budget ('ex post') | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

[a] Outcomes denote differences between the simulation and the base projection after compensating taxation. 'Ex ante' cost of 115 million euro except for last column.
[b] Next to compensation we include an overhead cost of 100% of the minimum wage per participant.
[c] Productivity in relief jobs net of overhead costs equals compensation in relief jobs.
[d] Mismatch indicator for training program participants drops/rises by 50%.
[e] Increase in compensation in relief jobs and the training program from 100% to 115% of the minimum wage.
[f] Labour costs excluding search costs.
[g] Total employment includes relief jobs and the training program, employment by firms denotes private sector employment.
[h] The stock of unemployment plus the stocks of relief and training participants divided by the labour force.
[i] High-productive unemployed individuals receive unemployment insurance, low-productive unemployed individuals receive welfare benefits.

Concluding remarks regarding Jongen *et al.* (2003)

- Training jobs most successful in terms of employment
- Private sector subsidies most successful in terms of production
- However, empirical basis is weak, some short cuts
- Still, shows importance of CGE analysis

Comparison with other studies

- Time-series econometrics studies, some plant level studies
- Results employment are more or less 'in line' (with relief jobs)
- No studies on effect on production

Table 3: Comparison with other studies on aggregate employment effects

| Study | Program | Country | Net employment effect |
|---|---|---|---|
| *Subsidized employment in the public sector* | | | |
| This paper[a] | Relief jobs | The Netherlands | 31% |
| This paper[a] | Training program | The Netherlands | 48% |
| Dahlberg and Forslund (1999) | Relief jobs | Sweden | 34% |
| Dahlberg and Forslund (1999) | Subsidised employment | Sweden | 35% |
| Edin *et al.* (1999) | Youth programs | Sweden | 24% |
| Forslund (1996) | Relief jobs | Sweden | 16% |
| Forslund and Krueger (1997) | Relief jobs | Sweden | 31% |
| Gramlich and Ysander (1981) | Relief jobs | Sweden | 0% |
| Lofgren and Wikstrom (1997) | Youth programs | Sweden | 6% |
| *Subsidized employment in the private sector* | | | |
| This paper[a] | Employment subsidies | The Netherlands | 2% |
| Atkinson and Meager (1994)[b] | Employment subsidies (Workstart) | United Kingdom | <20% |
| De Koning *et al.* (1995)[b] | Employment subsidies (VMA) | The Netherlands | <10-15% |
| De Koning *et al.* (1995)[b] | Employment subsidies (RAP) | The Netherlands | <11% |
| OECD (1993)[b] | Employment subsidies (Jobstart) | Australia | <21-33% |
| OECD (1993) | Employment subsidies (Empl. Incentive) | Ireland | 4% |
| Van der Linden (1995)[b] | Employment subsidies (Empl. Program) | Belgium | <11% |

[a] After compensating taxation to balance the budget.

[b] Excluding displacement.

What have we learned?

- Lack of sophisticated micro-level studies
- Some aggregate time-series studies, with problems
- Complete lack of CGE analyses
- 'The bottom line of the research on the effectiveness of ALMPs is not terribly encouraging' - Martin (2001)
- However, for more definite answers we need more sophisticated micro- *and* macro-level analyses