

# Wages, Productivity and the Paradoxes of Disappearing Mass Unemployment in Europe

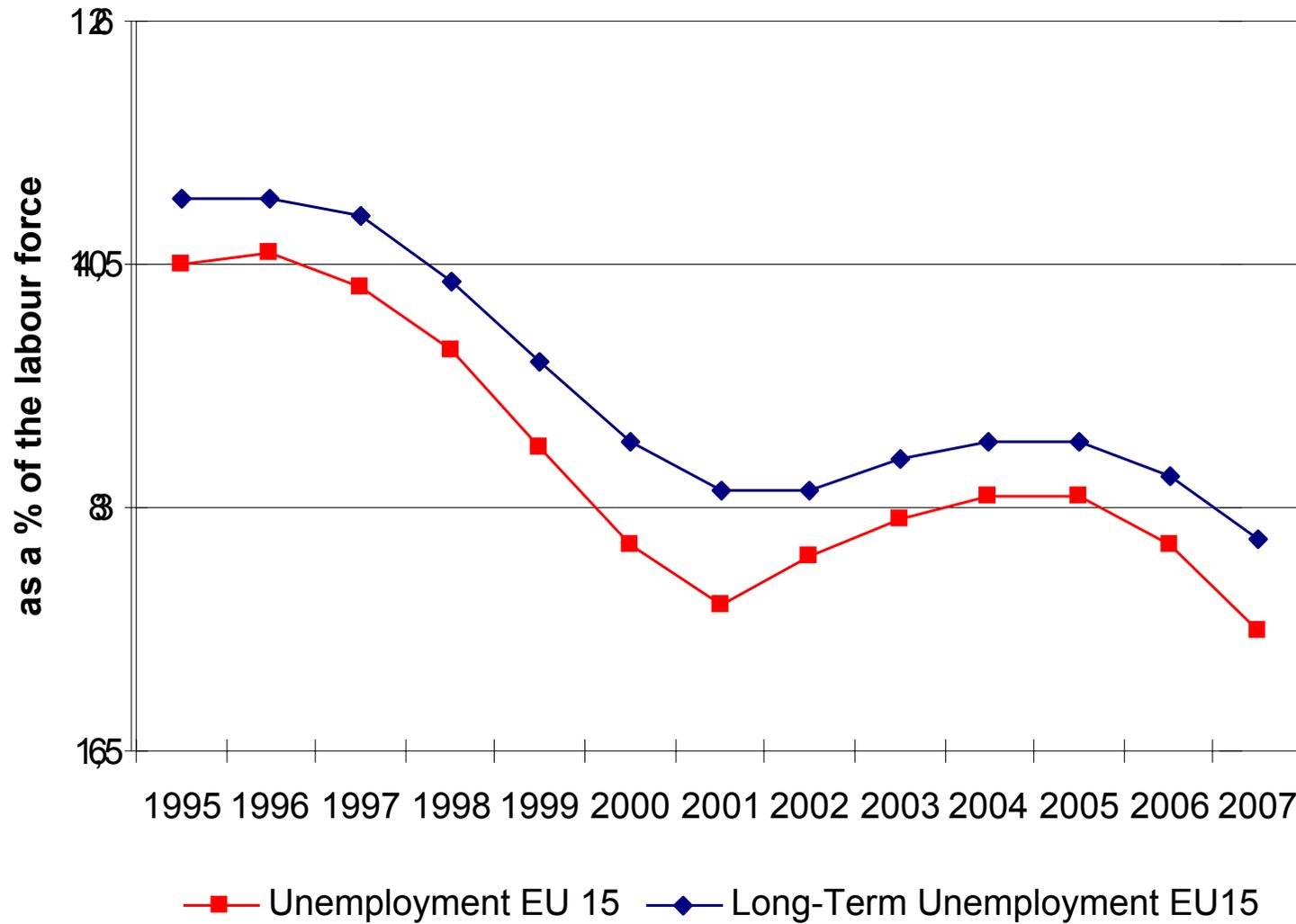
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**XXIII National Conference of  
Labour Economics  
Brescia 11-12 September 2008**

# 1994 OECD Jobs Study

- “The labour market has become particularly worrying in Europe... (...) in comparatively *inflexible* Europe, *on the other hand*, both relative employment and unemployment rates deteriorated”.
- “The high incidence of long-term unemployment in most EC countries is associated with *low inflow rates into unemployment*. The opposite relationship – low incidence of long-term unemployment and high inflows into unemployment – holds for North America”.

# Since then



Source: Eurostat

# Outline

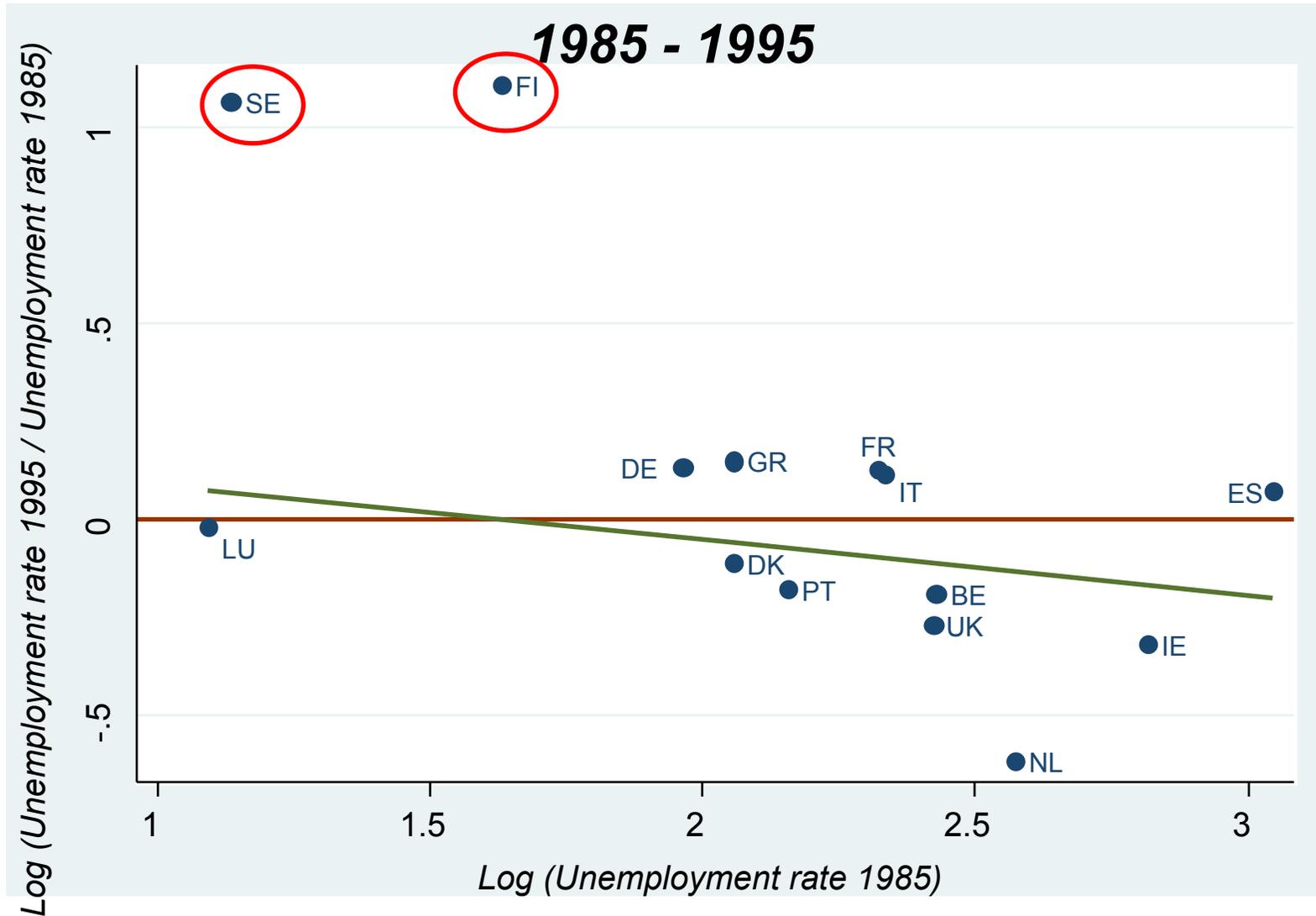
- A European dream... turning into a European nightmare
- Why? A closer look at transitions across labour market states
- Can we “cheat” the employment labour productivity tradeoff?

# A European dream

“The Community shall have as its task (...) to promote throughout the Community (...) a high degree of *convergence* of economic performance, a high level of *employment* and of social protection, the raising of the standard of living and quality of life, and economic and *social cohesion* and solidarity among Member States”.

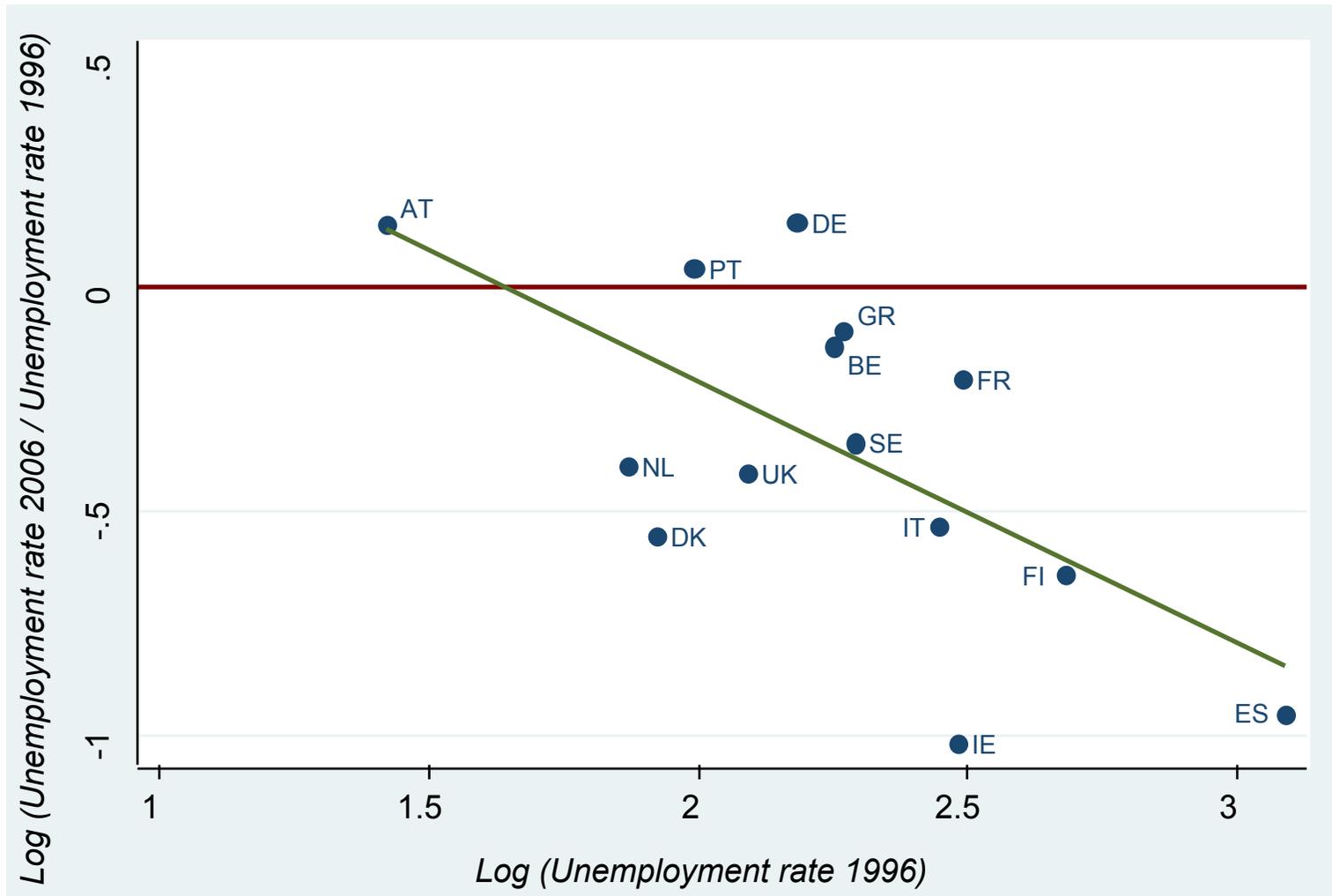
*Rome Treaty, March 25, 1957*

# Convergence: Did the countries with high unemployment experience the strongest decline in unemployment?

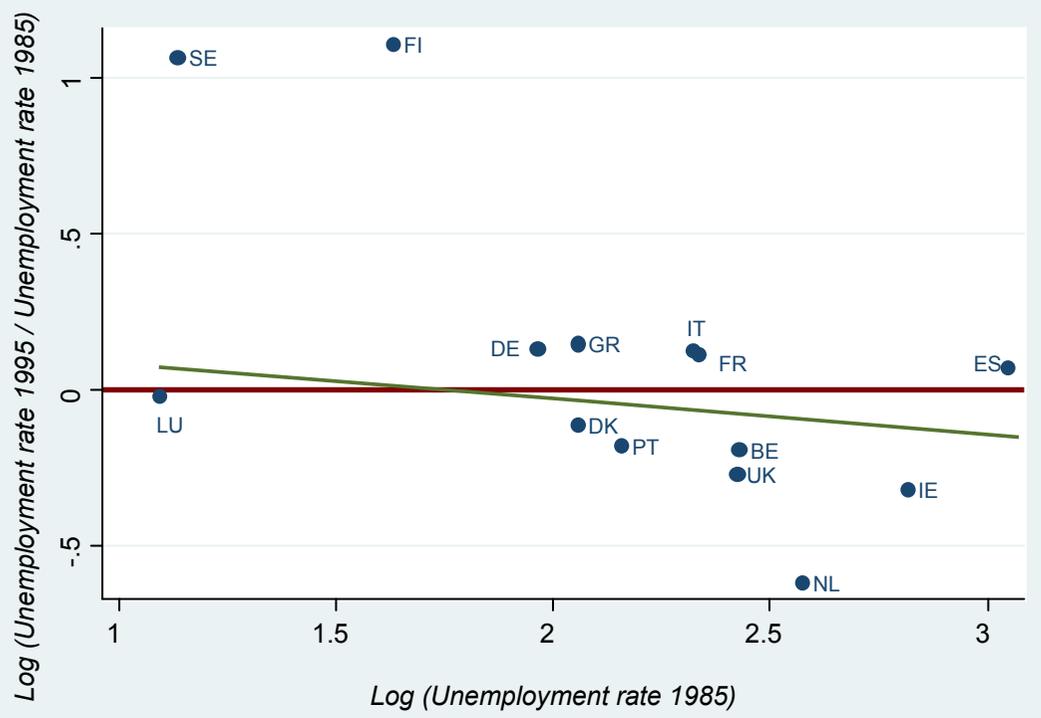


# Convergence

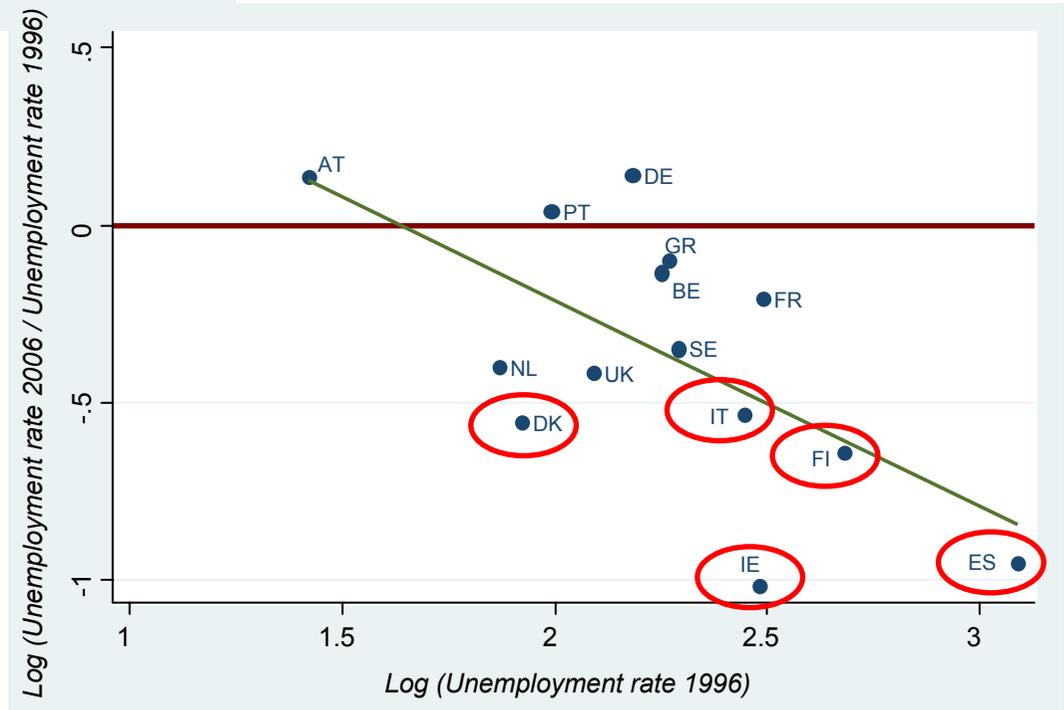
1996 - 2006



1985 - 1995

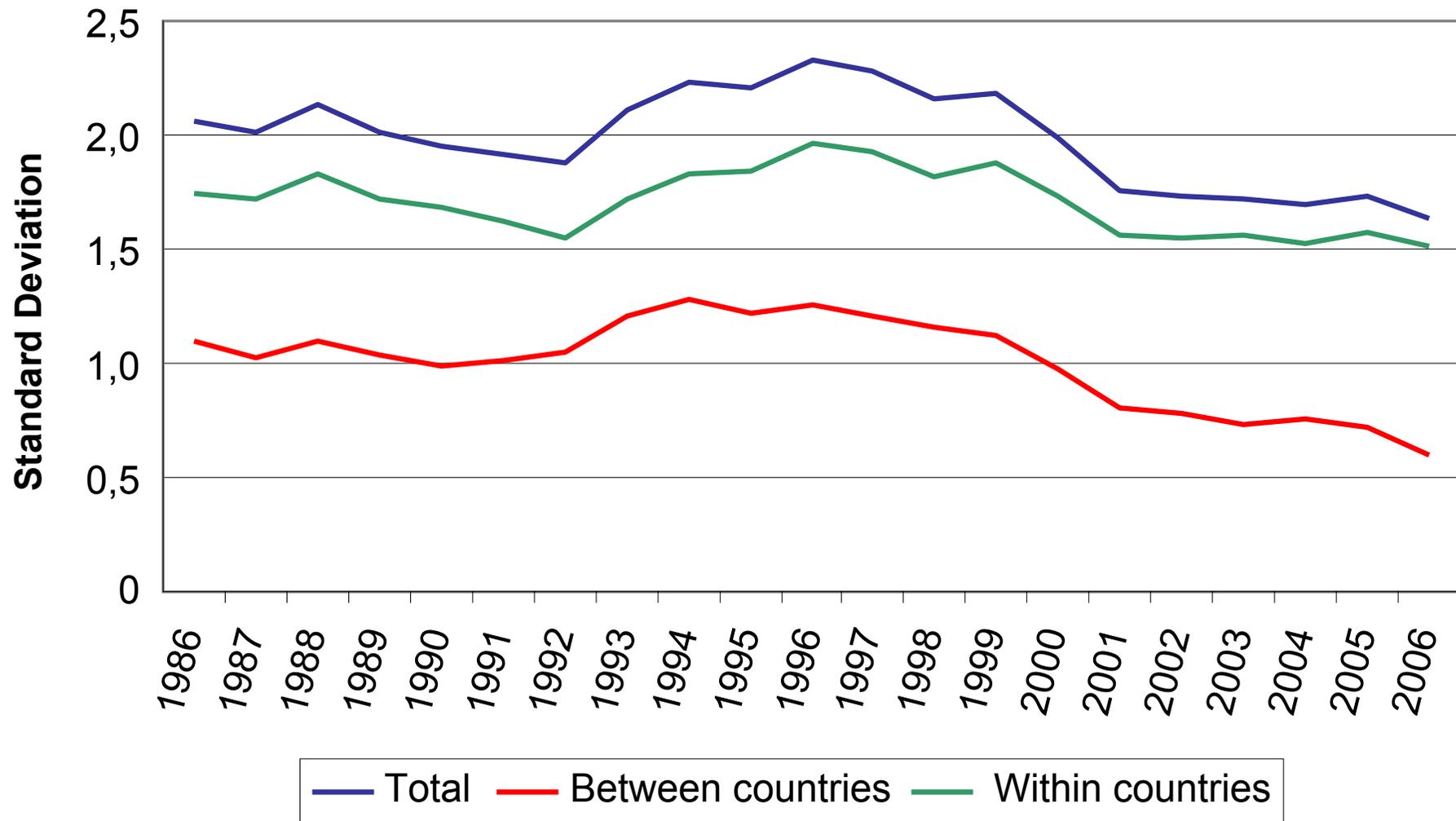


1996 - 2006

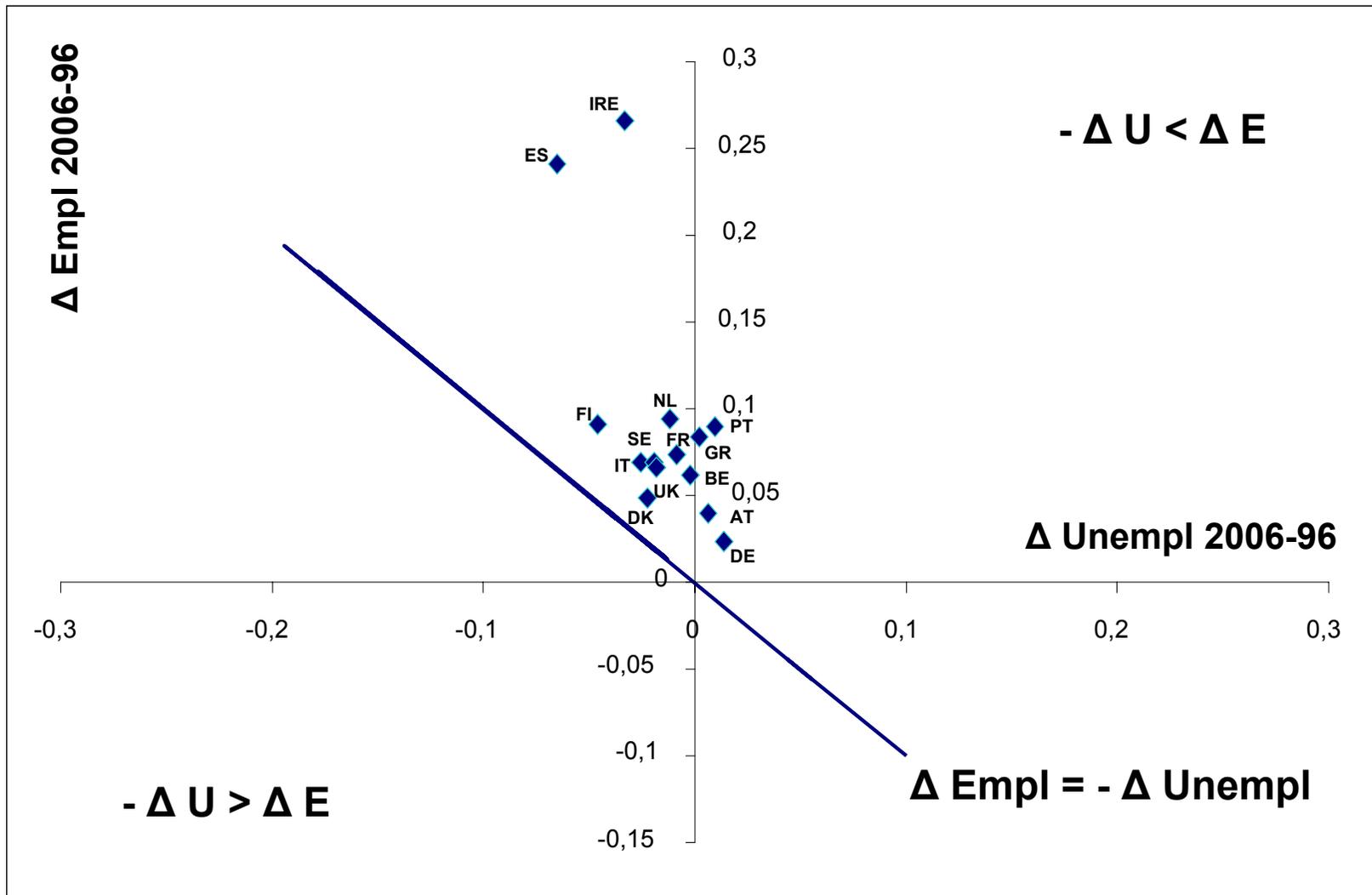


# Convergence in unemployment rates also within EU countries since the mid 1990s

(Nuts II regions)

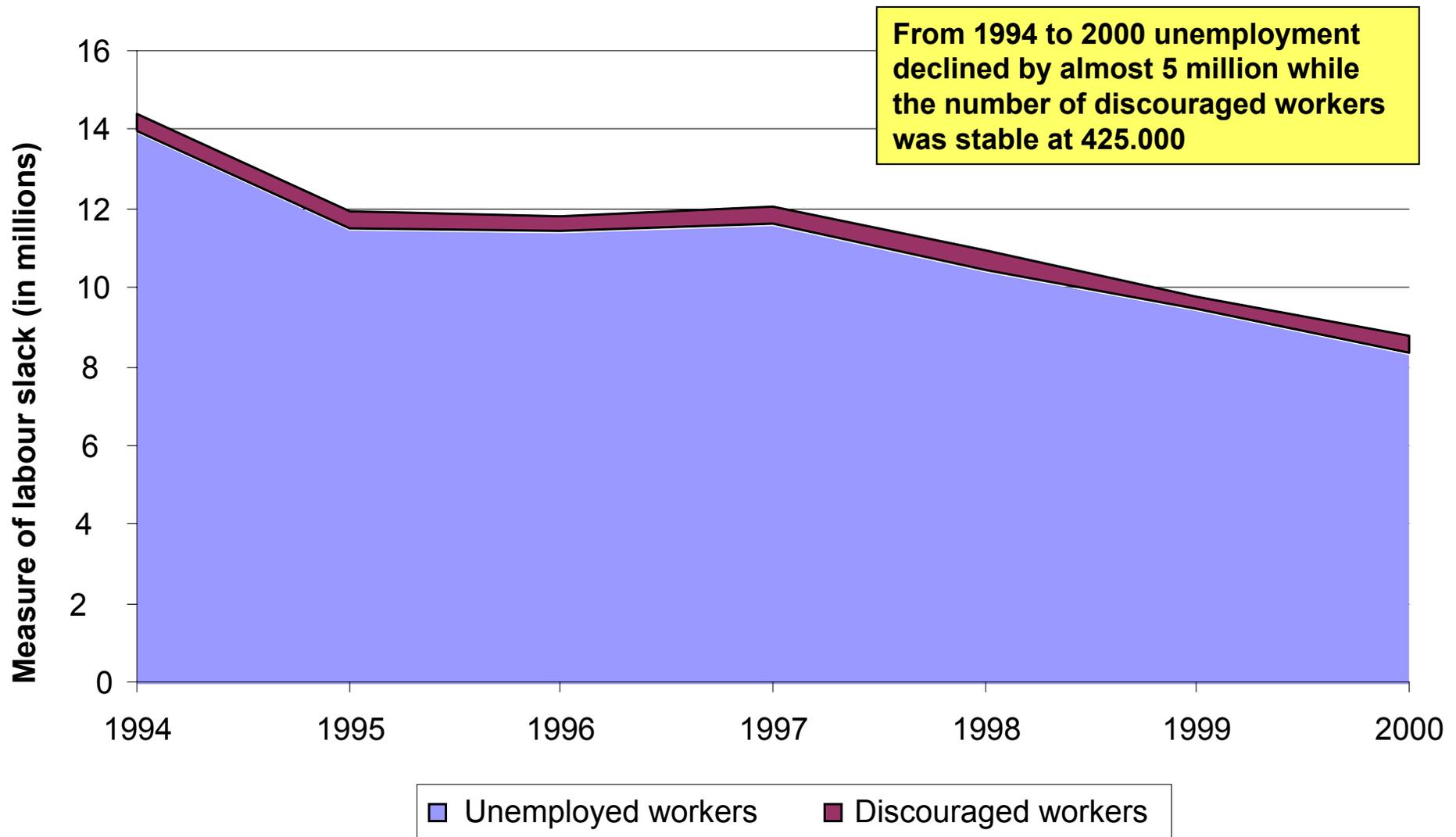


# It is not inactivity. It is employment



Unemployment and Employment expressed as a fraction of the working age population

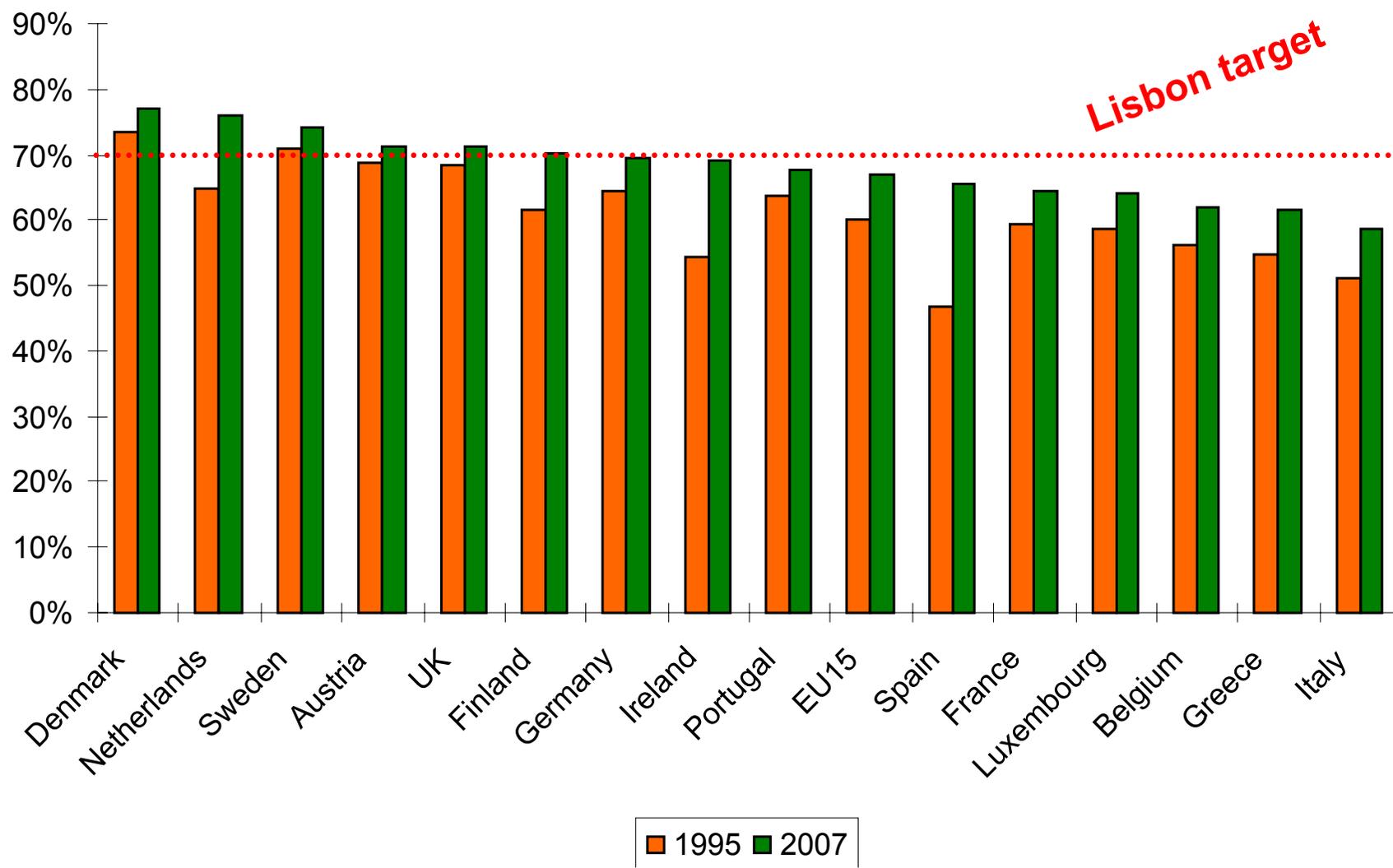
# Whatever measure of labour slack we take



EU Countries: DK, BE, FR, IRE, IT, GR, ES, PT.

# Lisbon is no longer a mirage

Employment to population rates and the distance from the Lisbon Employment Target



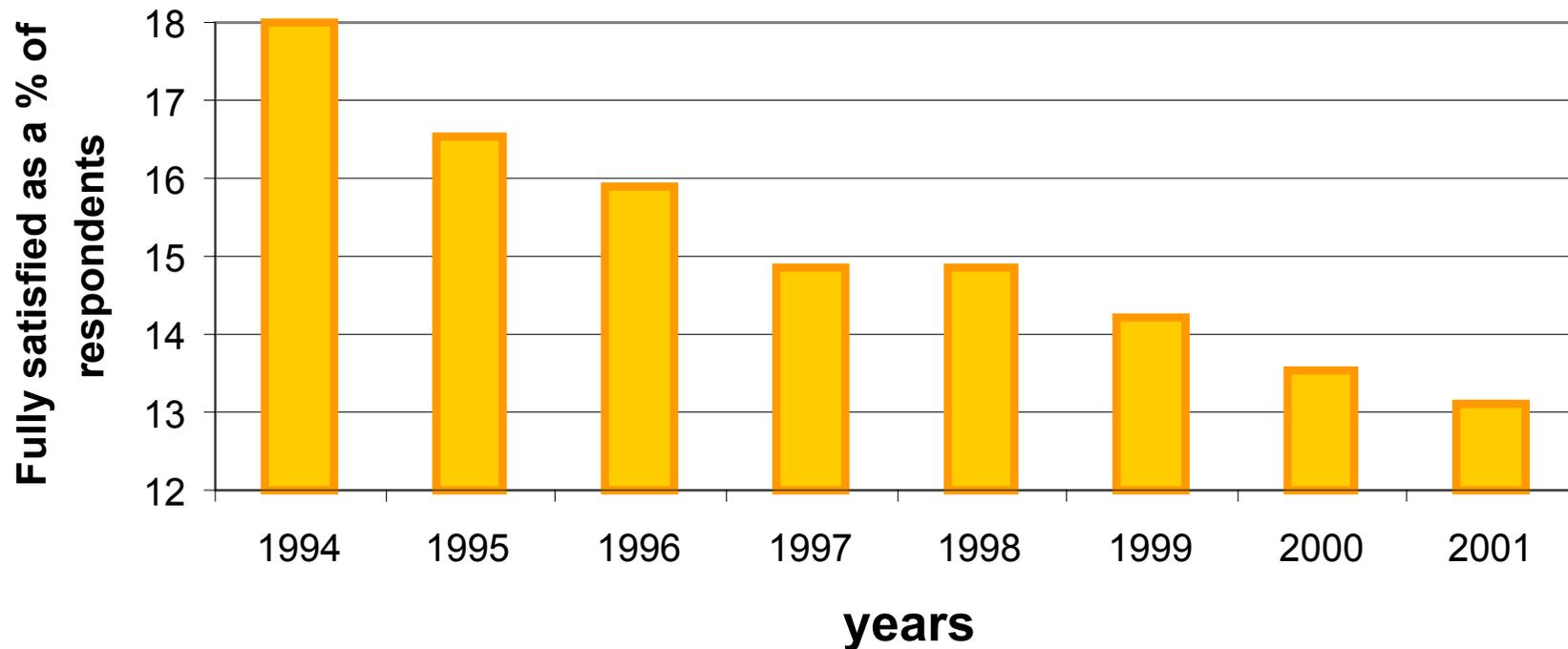
Source: Eurostat

# The dream came true?

- Since 1995, the UE15 has almost 5 millions less people unemployed.
- Decline seen in 11 countries out of 15.
- Associated with 21 millions more jobs.
- Reducing cross-country and within country unemployment differentials.
- Supposedly more “social cohesion”, but...

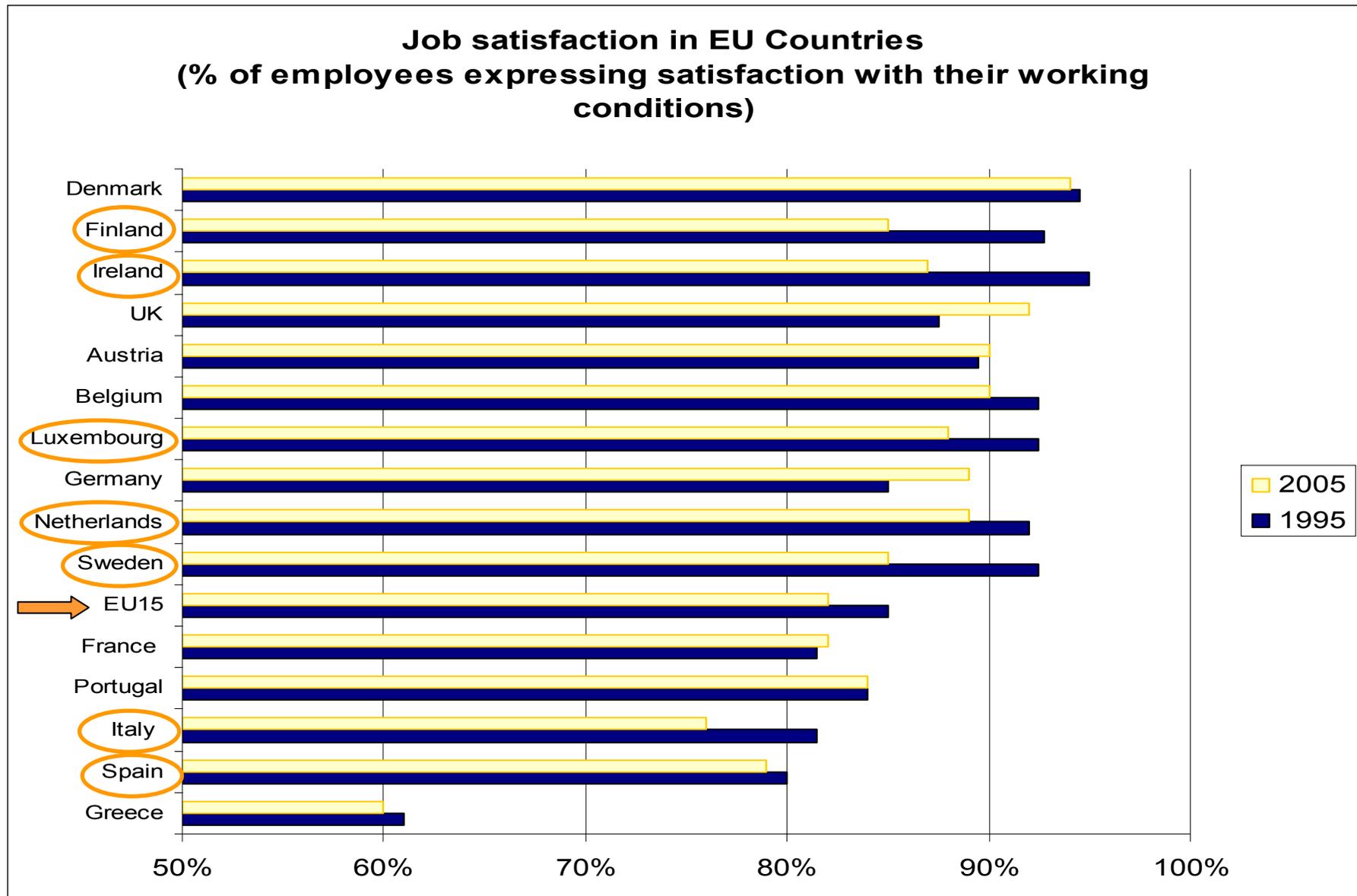
# ...Europeans are unhappy

Satisfaction with work or main activity in EU10



Source: ECHP

# Declining job satisfaction notably in the countries with the strongest unemployment decline



Source: [www.eurofund.europa.eu](http://www.eurofund.europa.eu)

# Characteristics of those satisfied

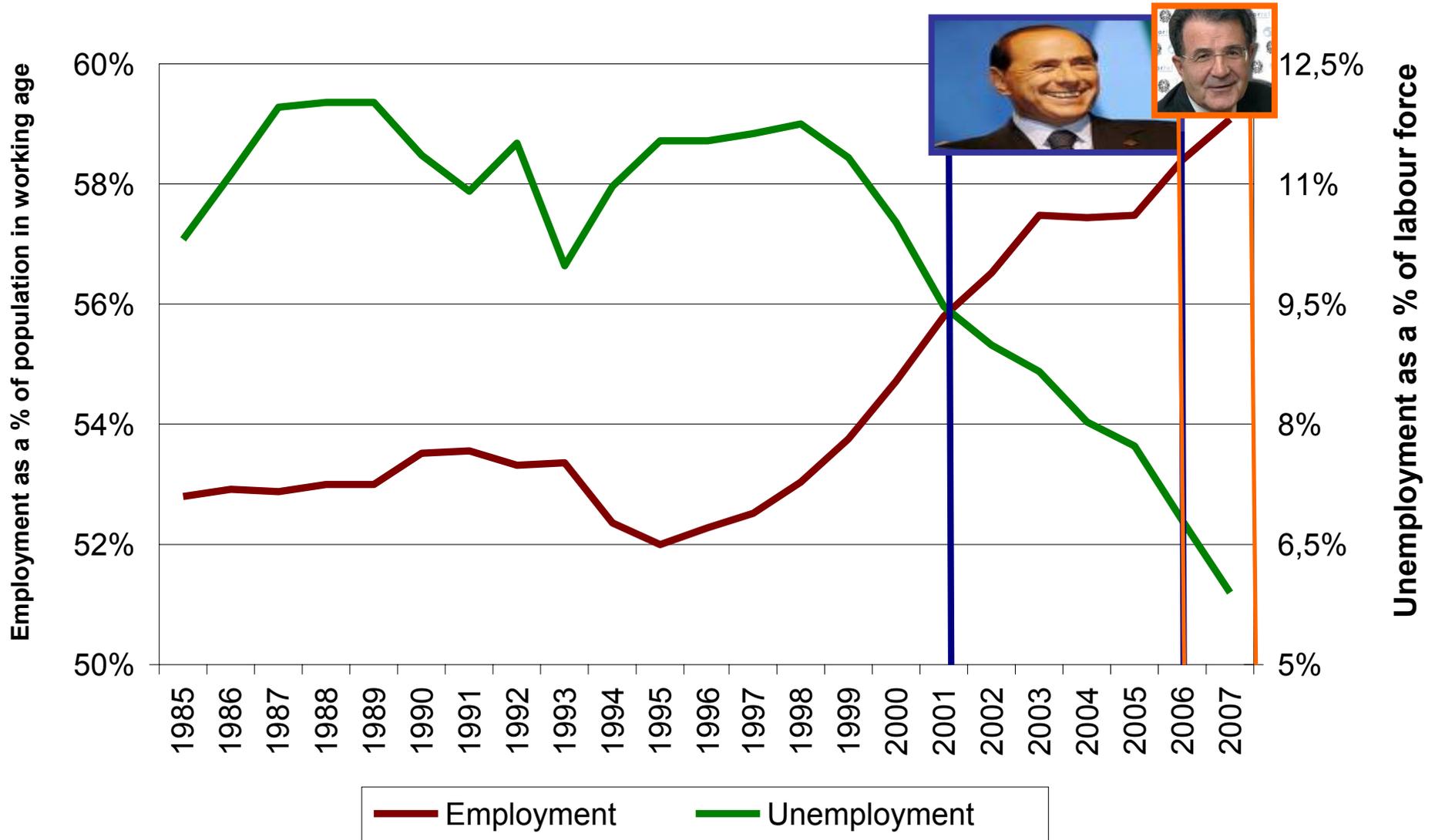
	Job satisfaction
Male	-0,008 (-1,36)
Under 30	-0,018 (-2,64) <sup>***</sup>
Over 50	-0,002 (-0,20)
Permanent contract worker	0,089 (-12,47) <sup>***</sup>
Permanent contract worker (year 2000)	-0,030 (-4,30) <sup>***</sup>
Permanent contract worker (year 2005)	-0,045 (-5,76) <sup>***</sup>
Male (year 2000)	-0,012 (-1,56)
Male (year 2005)	-0,003 (-0,34)
Under 30 (year 2000)	0,011 (1,35)
Under 30 (year 2005)	0,003 (0,30)
Over 50 (year 2000)	0,017 (1,44)
Over 50 (year 2005)	0,003 (0,24)
Number of Observations	40519

Source: EWCS (1995, 2000 and 2005)

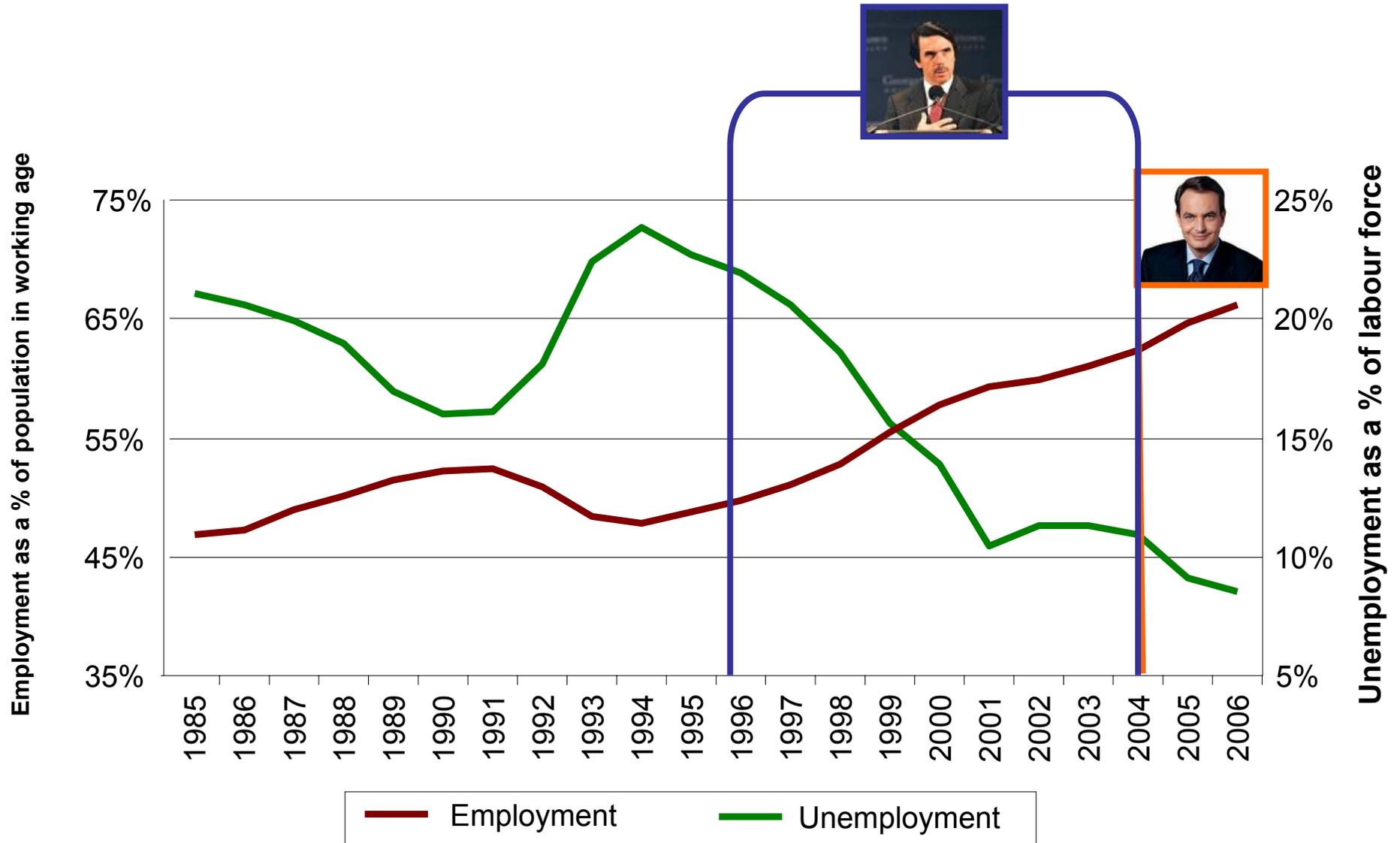
# Reducing unemployment is not a popular business

- Under Berlusconi II (June 2001- May 2006) 1,354,320 jobs were created. Yet support for the Govt fell by 43%.
- Under Prodi II (May 2006 - December 2007) 432,512 jobs were created. Yet consensus fell by 51%.
- Aznar had to go in spite of 4,982,050 jobs created and halving the Spanish unemployment rate.

# Italy



# Spain



# Outline

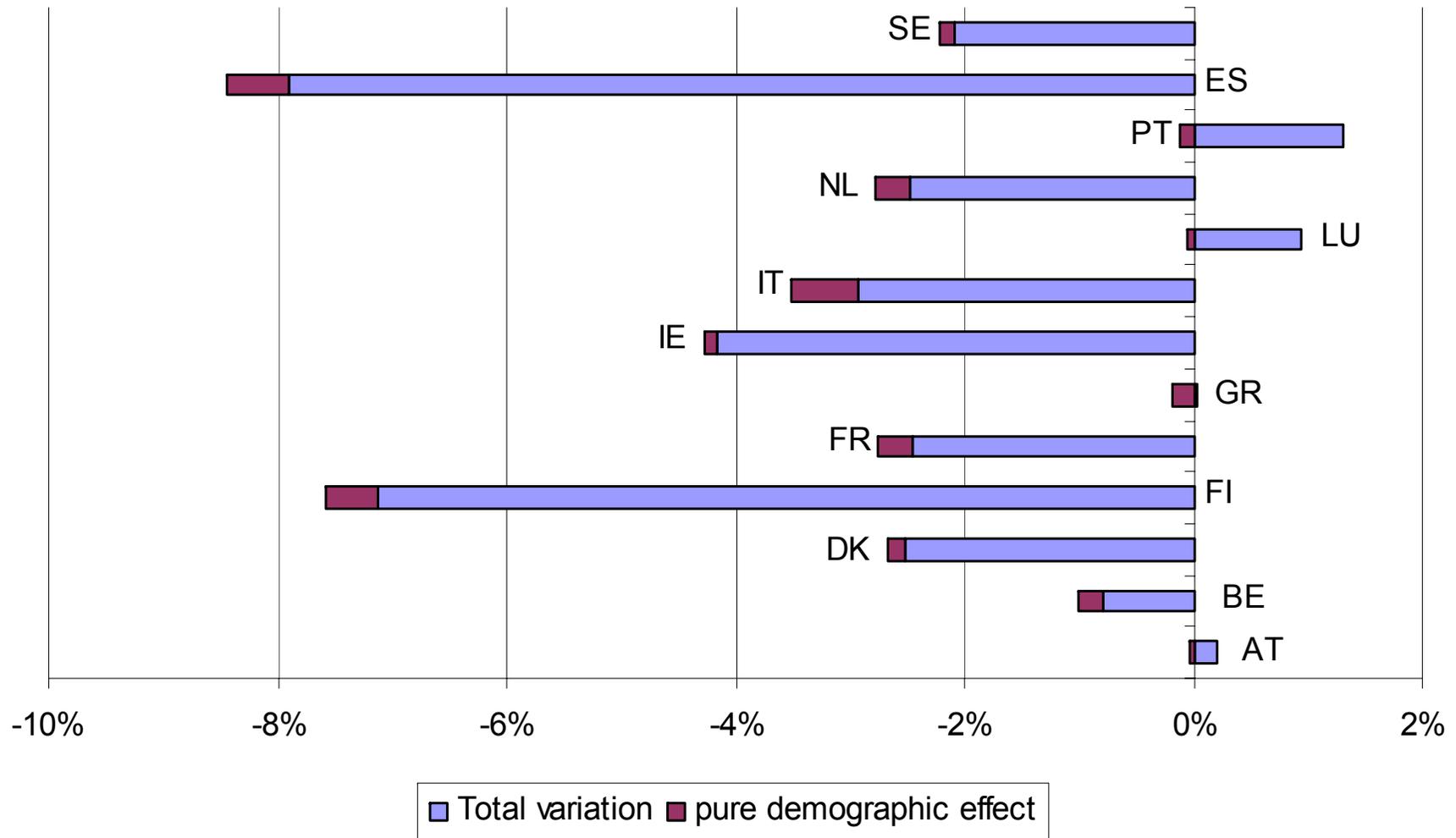
- A European dream..... turning into a European nightmare
- **Why?**
  - a simple explanation
  - looking at flows
- Can we cheat the employment labour productivity tradeoff?

# The simple explanation

- Lower unemployment could simply be related to demographics.
- Insofar as unemployment rates are higher for the young people than for the other age groups, the ageing of Europeans may involve a reduction of unemployment.
- Is this the reason why we no longer see mass unemployment in Europe?

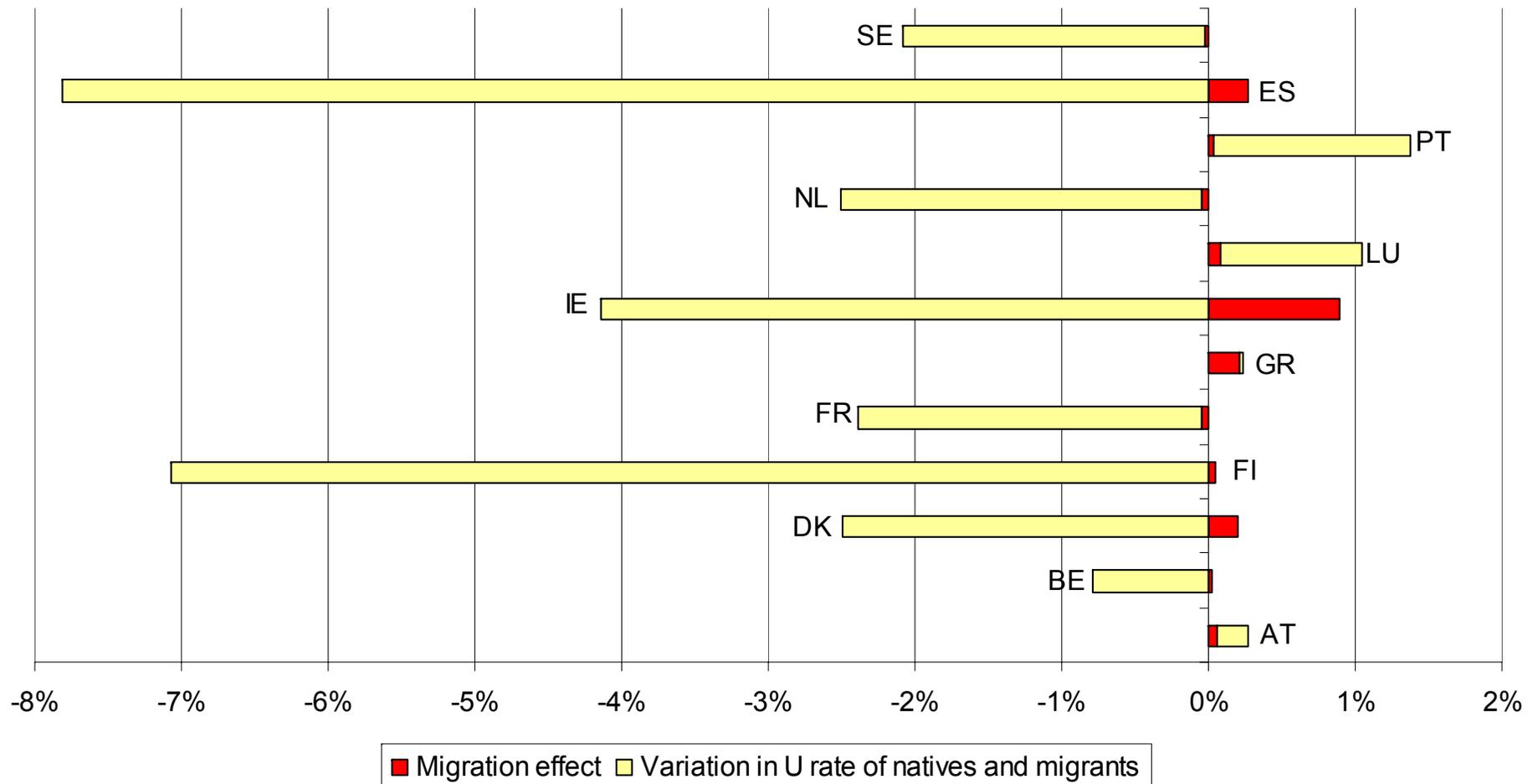
# No. It isn't

1995-2007 Variation of Unemployment as a % of the Working Age Population



# Also more migrants, but they have higher unemployment rates than natives

1995-2007 Variation of Unemployment as a % of the Working Age Population

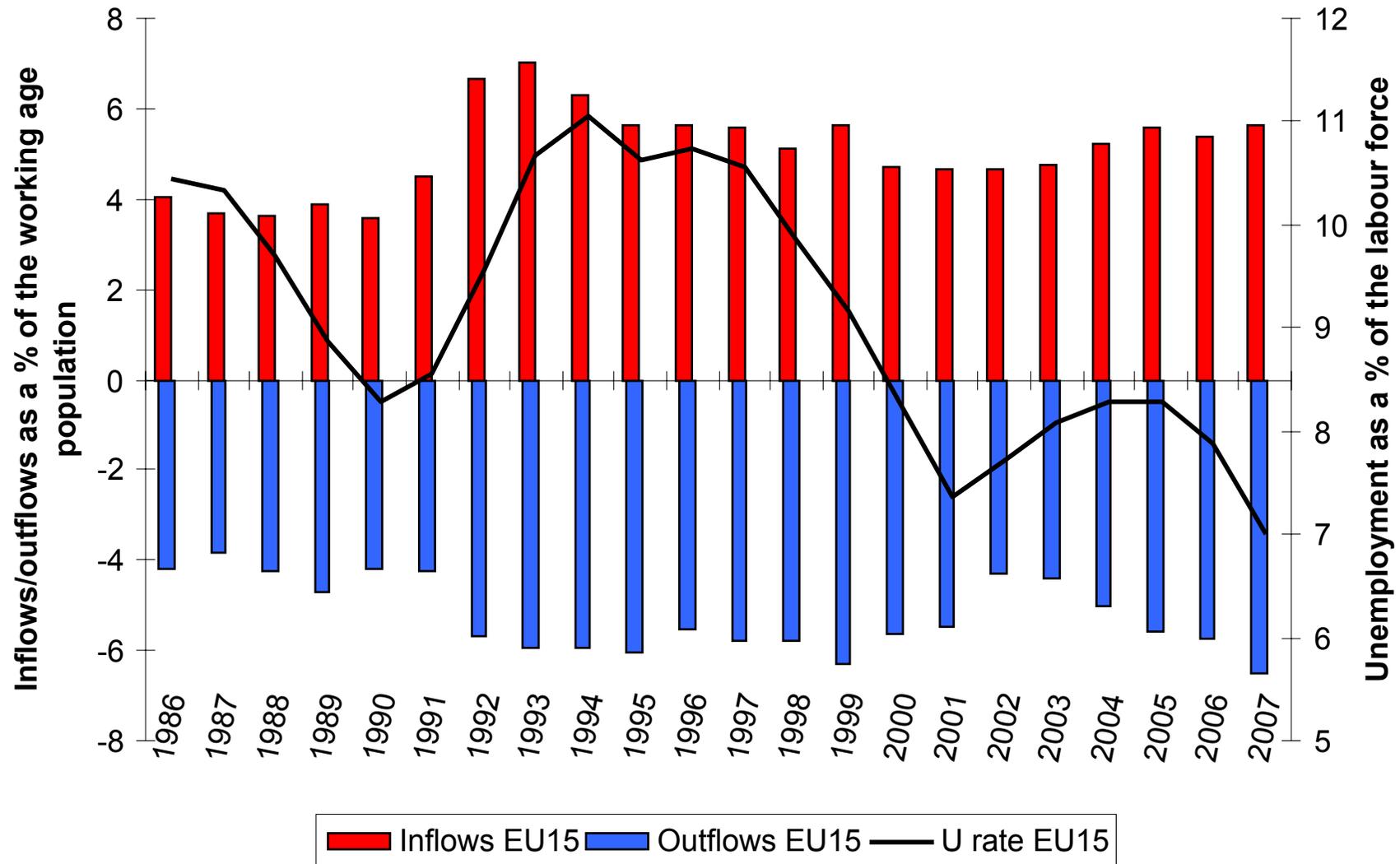


# Alternative explanation: the costs of leaving Euroclerosis

## **3 measures of mobility:**

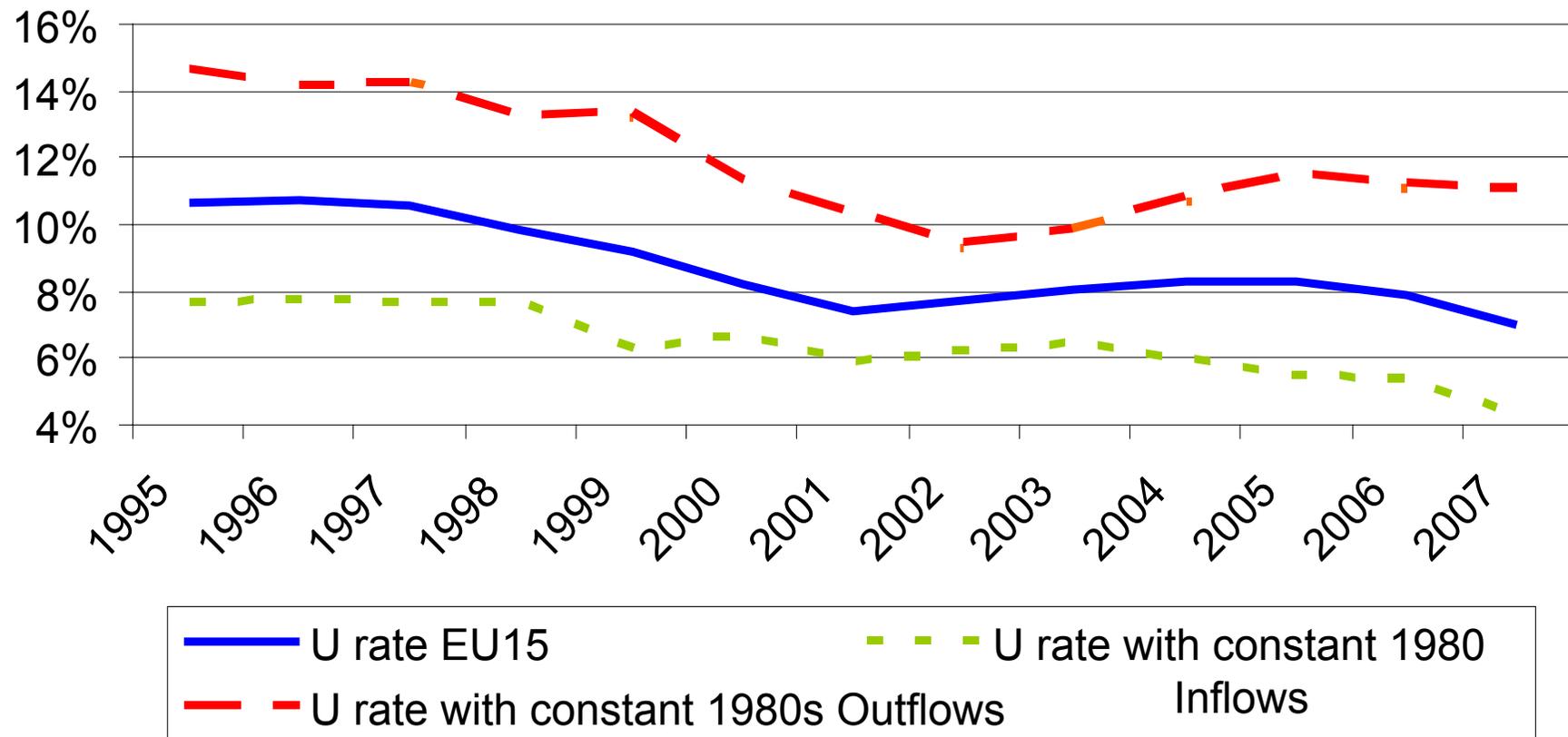
1. Unemployment turnover (proxy inflows and outflows)
2. Mobility Indexes for Transition Matrices
3. Job-to-job shifts among dependent employment

# Unemployment declined with *larger* unemployment inflows



# Counterfactual Experiment

## EU 15



Source: OECD

# Let us look at transition matrices

## Example of Spain

	Employment $t$	Unemployment $t$	Inactivity $t$
Employment $t-1$	91.8	4.0	4.2
Unemployment $t-1$	44.6	39.4	15.9
Inactivity $t-1$	3.0	1.7	95.2

**Yearly Average**  
**2001 – 2004**

Out of 100 hundred unemployed, 45 find a job  
...and 16 leave the labour market altogether  
within a year ....  
another 39 remain unemployed....

**1986 – 1989**

	Employment <sub>t</sub>	Unemployment <sub>t</sub>	Inactivity <sub>t</sub>
Employment <sub>t-1</sub>	92.7	4.0	3.3
Unemployment <sub>t-1</sub>	30.8	62.2	7.0
Inactivity <sub>t-1</sub>	2.1	1.9	96.0

$$\text{Mobility Index} = (S - \text{tr}(M)) / (S - 1)$$

where S denotes the number of labour market states and tr(M) the trace of the transition matrix

**25%**

**In Spain more mobility across labour market states than 15-20 years ago**

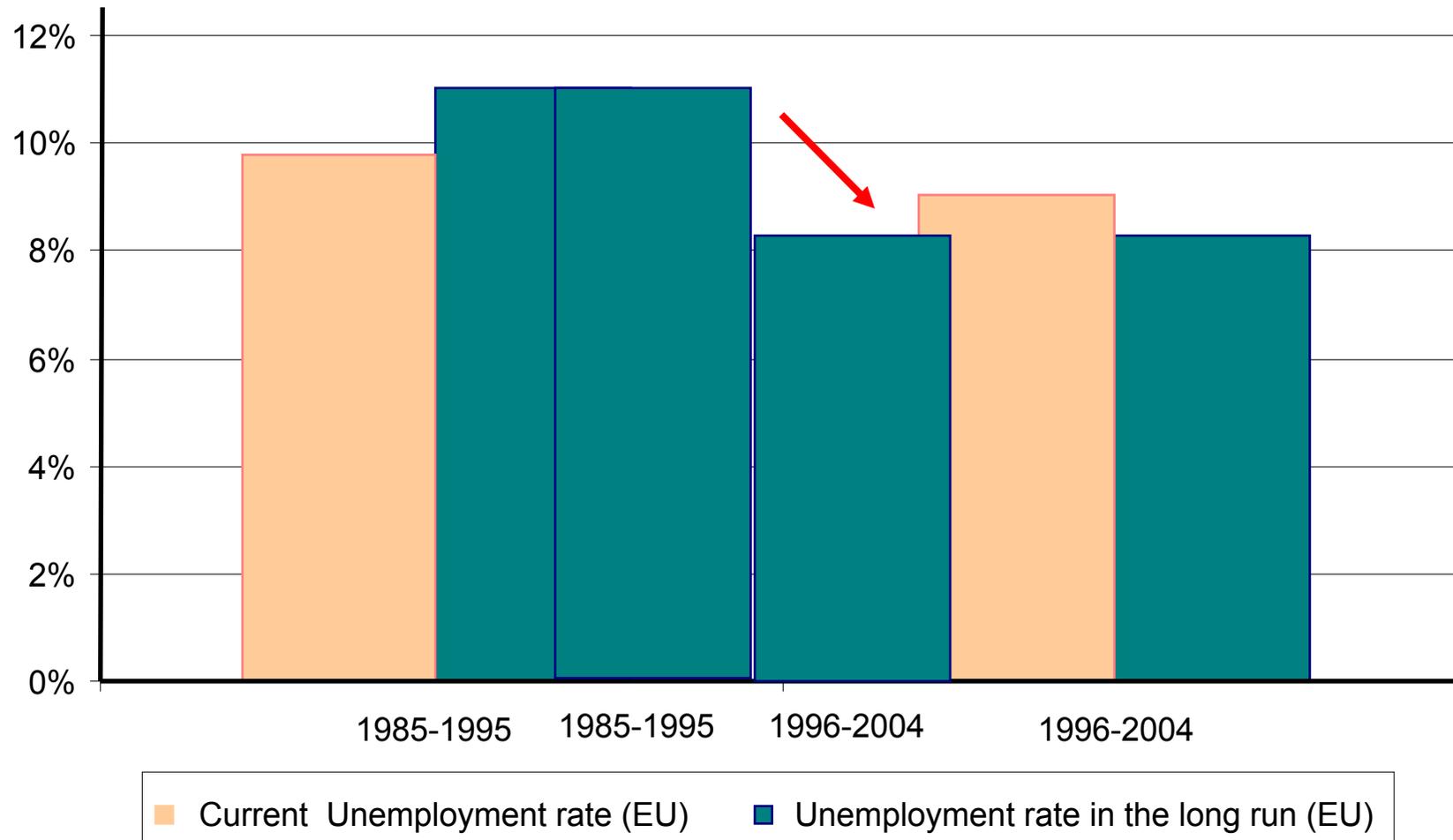
**2001 – 2004**

**Mobility Index**

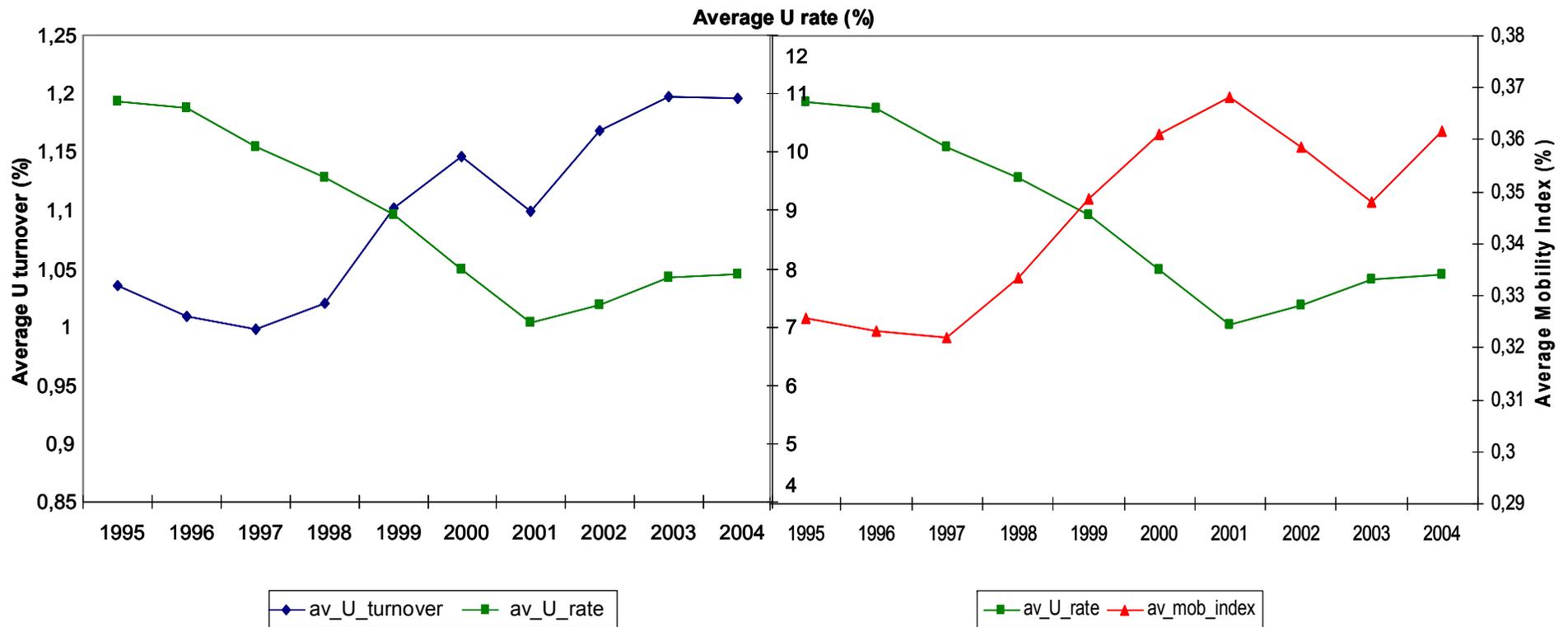
**37%**

	Employment <sub>t</sub>	Unemployment <sub>t</sub>	Inactivity <sub>t</sub>
Employment <sub>t-1</sub>	91.8	4.0	4.2
Unemployment <sub>t-1</sub>	44.6	39.5	15.9
Inactivity <sub>t-1</sub>	3.0	1.7	95.2

# What do these transitions imply in terms of the long-run unemployment rate?

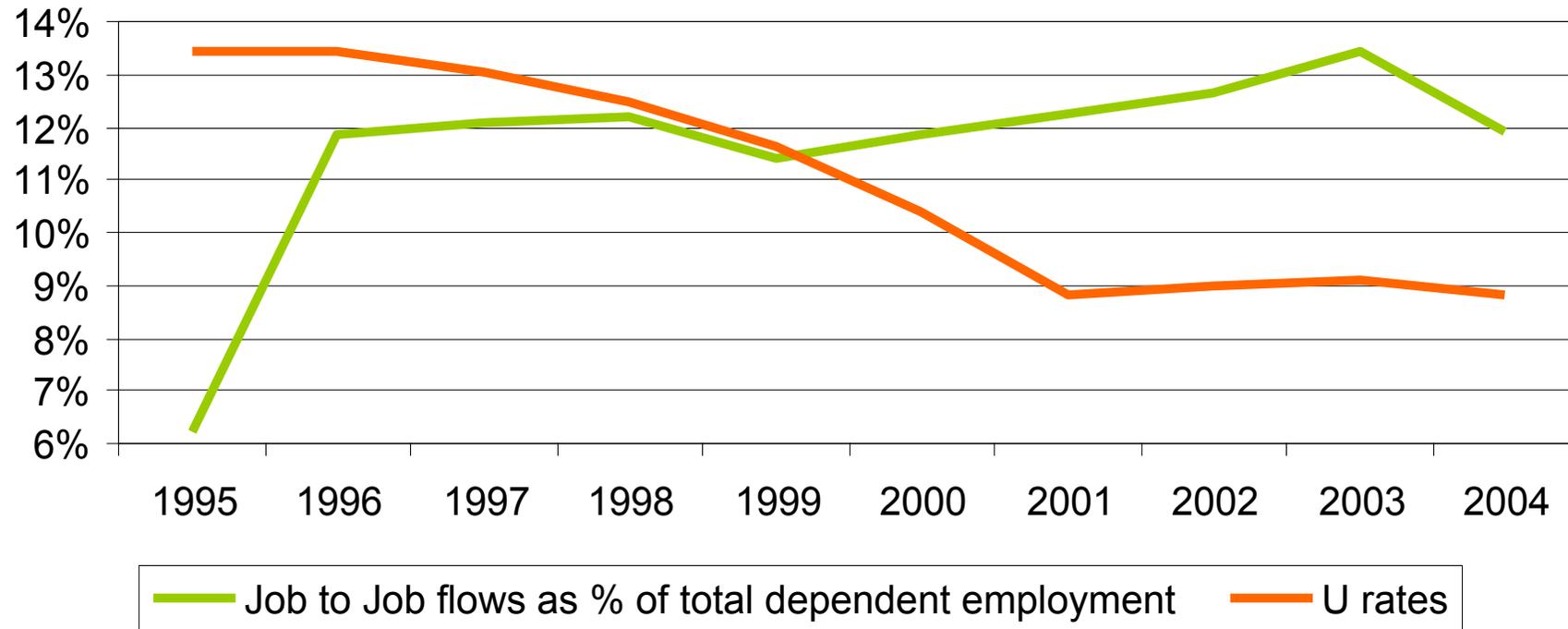


# Increase in mobility and unemployment turnover at declining unemployment



# The same with job-to-job shifts

(as a percentage of employees in 9 EU countries)



**EU Countries: Be, Dk, Es, Fi, Fr, Gr, It, Lu, Pt.**

*Notes: Proxy hirings minus inflows into employment*

# Why did mobility increase?

- Multivariate analysis (across countries and over time) of the determinants of various mobility measures
- Reduction in the generosity of Unemployment Benefits (UBs), and in the strictness of Employment Protection Legislation (EPL), notably for *temporary contracts*, increased mobility, however measured.
- Controlling for fixed country and year effects, GDP growth and lagged unemployment.

	Mobility Index (3x3 Matrix)				Mobility Index (2x2 Matrix)	
	(1)	(2)	(3)	(4)	(5)	(6)
Unemployment Benefit - Oecd Index	-0,003 (-6,69)***	-0,003 (-6,71)***	-0,003 (-6,71)***	-0,003 (-6,73)***	0,001 (1,27)	0,001 (1,29)
Employment Protection Legislation - Oecd Index	-0,047 (-7,24)***		-0,046 (-7,19)***			
Employment Protection Legislation (Regular Empl.) - Oecd Index		-0,021 (-2,75)***		-0,023 (-2,64)***	-0,016 (-2,37)***	-0,017 (-2,53)***
Employment Protection Legislation (Temporary Empl.) - Oecd Index		-0,024 (-7,38)***		-0,026 (-7,33)***	-0,003 (-1,20)	-0,003 (-1,28)
GDP growth rate	0,001 (0,78)	0,001 (0,82)			-0,001 (-0,91)	
Total Unemployment (1 year before)			-0,001 (-0,34)	-0,001 (-0,35)		-0,001 (-0,12)
Constant	0,549 (19,2)	0,547 (16,89)	0,552 (19,39)	0,548 (16,91)	0,153 (5,58)	0,153 (5,55)
Number of Observations	588	588	588	588	596	596

***Dprobit regression, country and year dummies 1985-2004.***

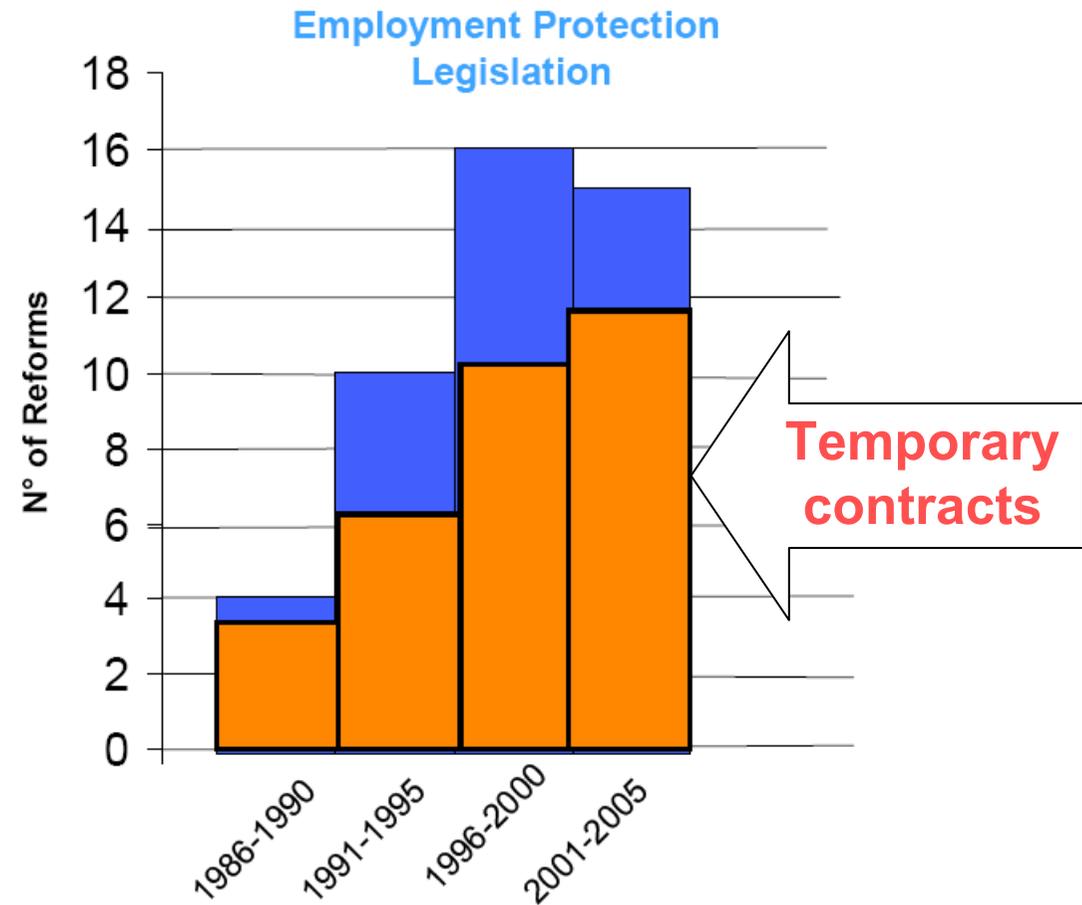
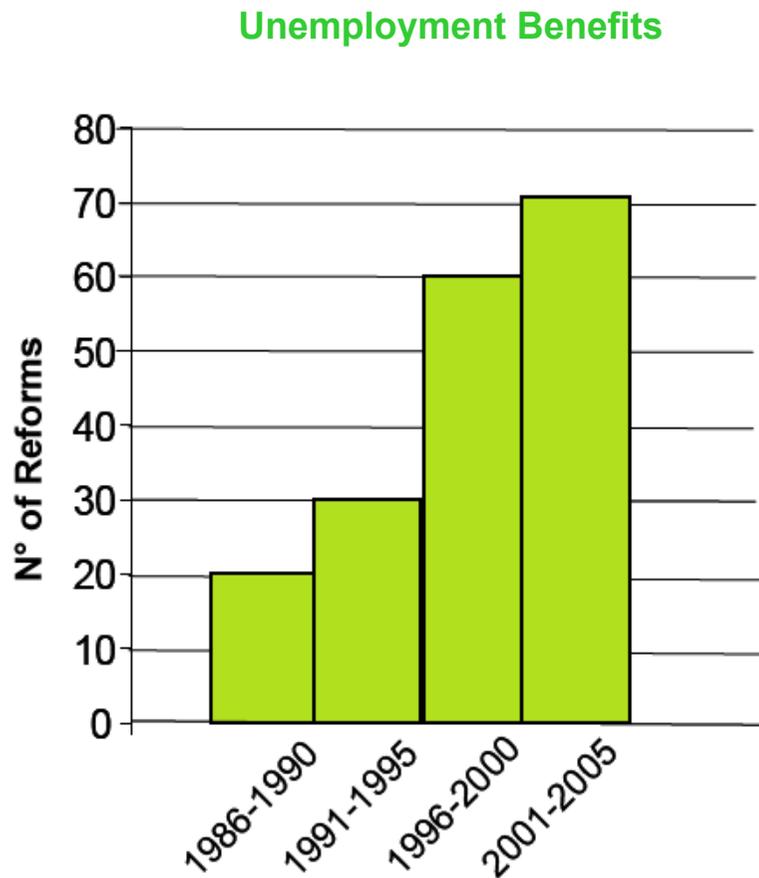
	Unemployment Turnover			
	(1)	(2)	(3)	(4)
Unemployment Benefit - Oecd Index	-0,016 (-3,10) <sup>***</sup>	-0,017 (-3,31) <sup>***</sup>	-0,015 (-2,89) <sup>***</sup>	-0,016 (-3,13) <sup>***</sup>
Employment Protection Legislation - Oecd Index	-0,223 (-3,15) <sup>***</sup>		-0,224 (-3,18) <sup>***</sup>	
Employment Protection Legislation (Regular Empl.) - Oecd Index		-0,259 (-3,17) <sup>***</sup>		-0,291 (-3,63) <sup>***</sup>
Employment Protection Legislation (Temporary Empl.) - Oecd Index		-0,101 (-2,84) <sup>***</sup>		-0,096 (-2,71) <sup>***</sup>
GDP growth rate	-0,024 (-2,19) <sup>***</sup>	-0,021 (-1,91) <sup>**</sup>		
Total Unemployment (1 year before)			-0,0002 (-2,37) <sup>***</sup>	-0,0002 (-2,54) <sup>***</sup>
Constant	2,270 (7,17)	2,620 (7,48)	2,379 (7,38)	2,820 (7,91)
Number of Observations	160	160	160	160

***Dprobit regression, Country and year dummies 1985-2004.***

	Yearly Job to Job Flows as a % of Total Dependent Empl.			
	(1)	(2)	(3)	(4)
Unemployment Benefit - Oecd Index	-0,051 (-1,65)	-0,056 (-1,50)	-0,069 (-2,20) <sup>***</sup>	-0,069 (-2,22) <sup>***</sup>
Employment Protection Legislation - Oecd Index	-2,049 (-4,11) <sup>***</sup>		-1,754 (-3,91) <sup>***</sup>	
Employment Protection Legislation (Regular Empl.) - Oecd Index		-0,074 (-0,10)		0,764 (1,15)
Employment Protection Legislation (Temporary Empl.) - Oecd Index		-0,979 (-3,85) <sup>***</sup>		-0,890 (-3,92) <sup>***</sup>
GDP growth rate	-0,072 (-0,76)	-0,063 (-0,66)		
Total Unemployment (1 year before)			0,001 (3,08) <sup>***</sup>	0,001 (3,11) <sup>***</sup>
Constant	16,879 (8,63)	16,206 (8,11)	16,432 (8,24)	12,427 (5,24)
Number of Observations	469	469	461	461

***Dprobit regression, Country and year dummies 1985-2004.***

# Acceleration of reforms reducing EPL and UBs



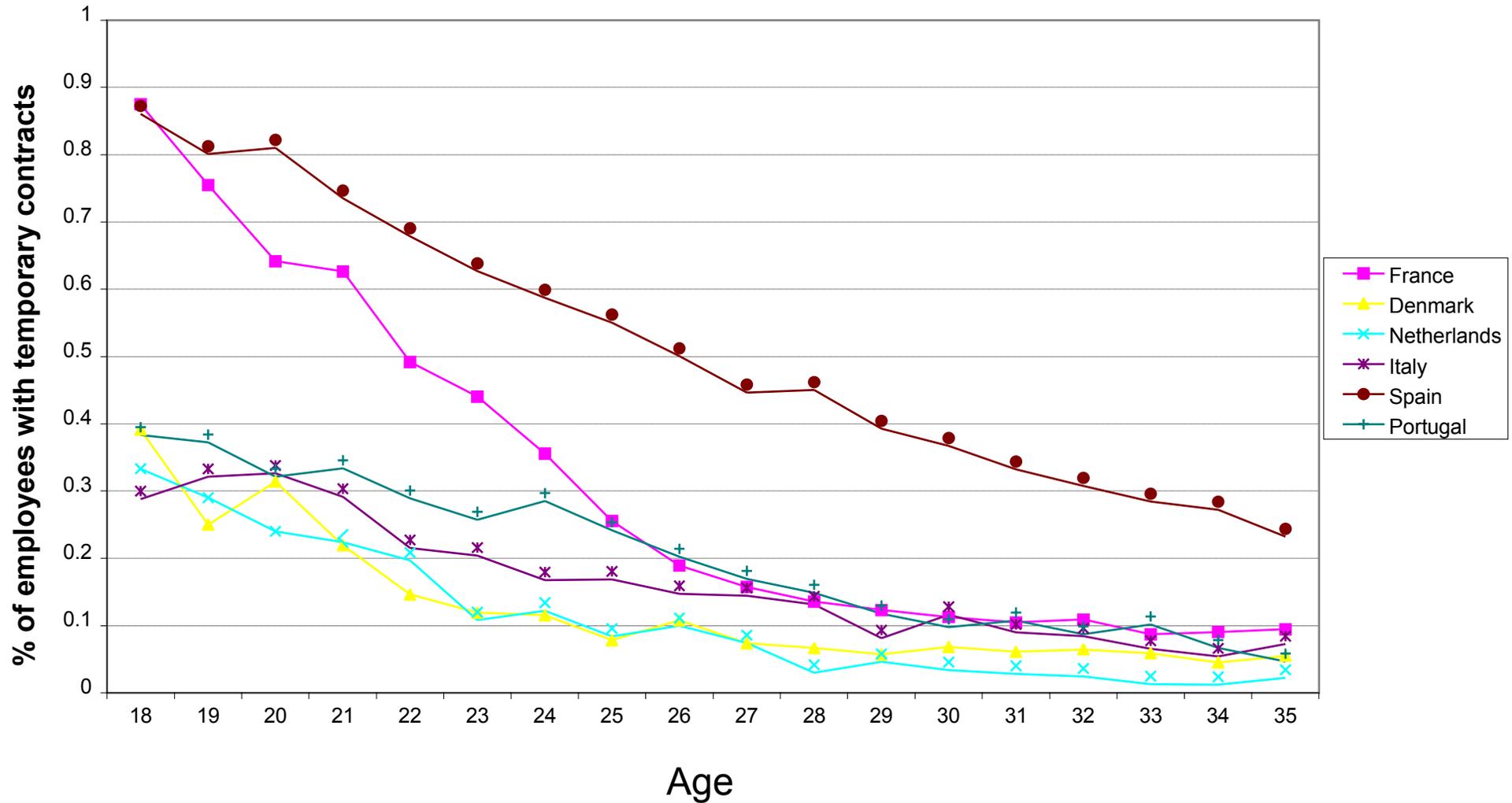
Countries: EU 14

# The growth of temporary employment in Europe





# A port of entry?...

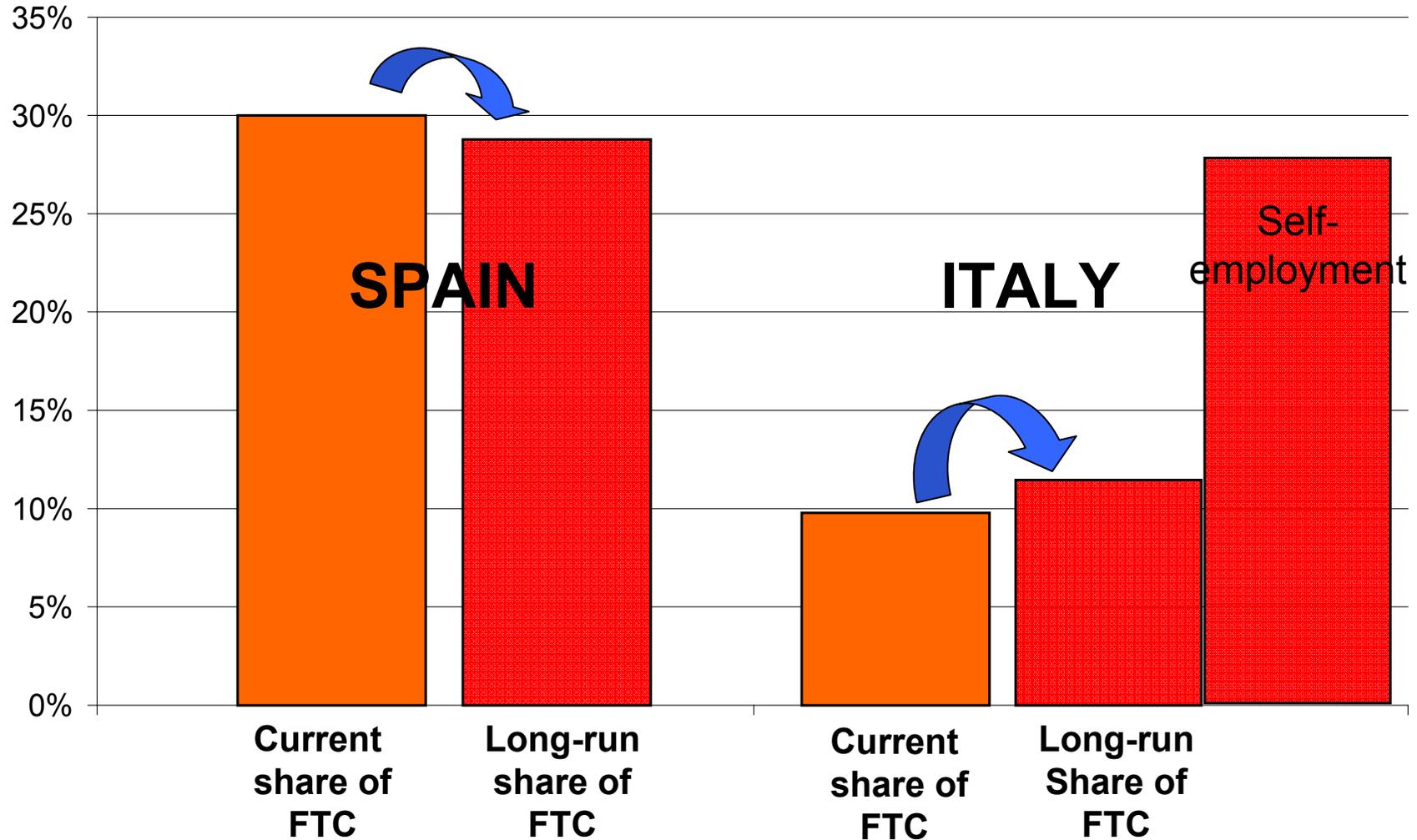


... or a dead end?

## *Spain*

2003 \ 2004	Permanent Contracts	Fixed Term Contracts	Unemployment	Inactivity
Permanent Contracts	97.2	1.1	1.0	0.7
Fixed Term Contracts	4.8	82.6	9.0	3.5
Unemployment	2.5	20.1	67.0	10.4
Inactivity	0.4	2.4	3.9	93.3

# Temporary contracts: a longlasting phenomenon



# Social cohesion?

D



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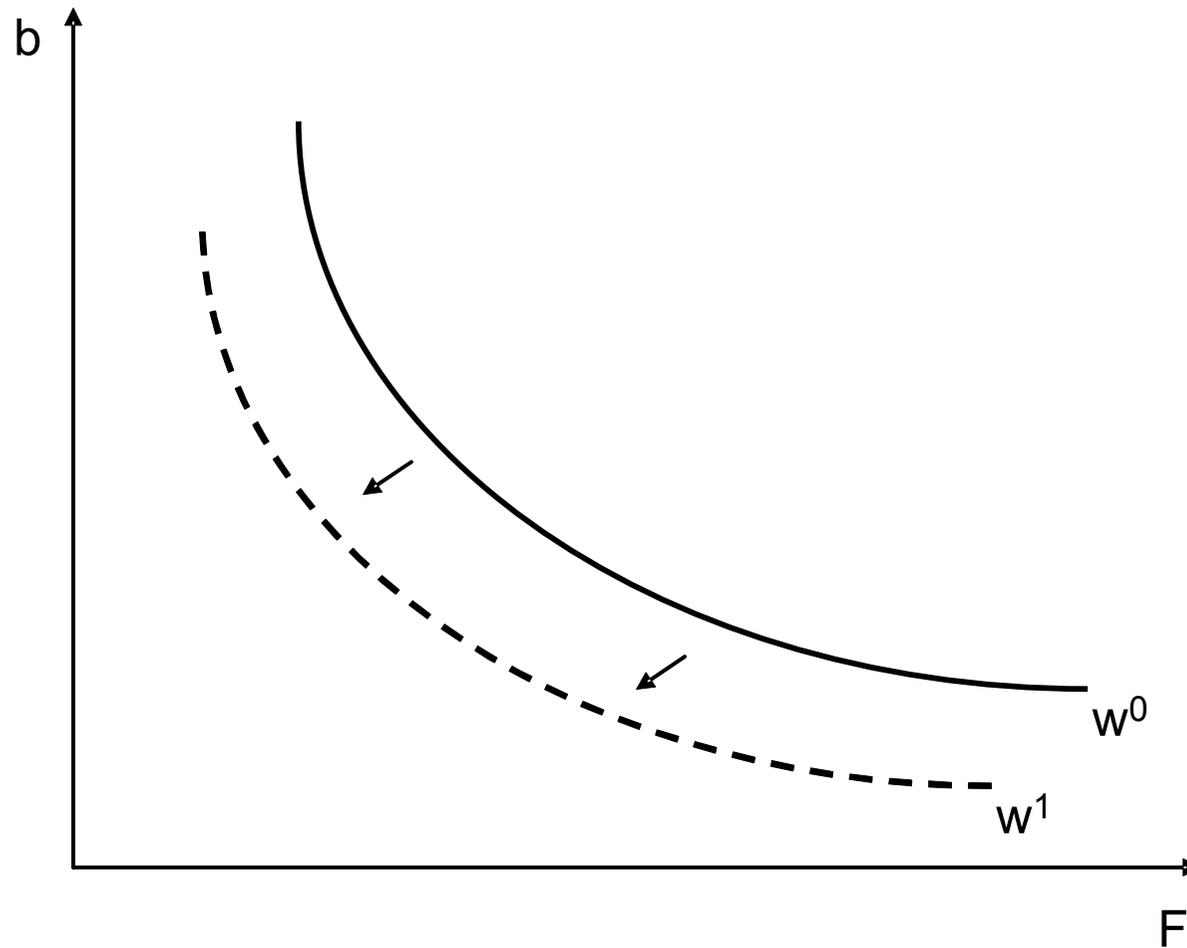
# Why are also Permanent Workers Increasingly unhappy?

- Flexicurity trade-off. Value of employment is increasing in UBs ( $b$ ) and EPL ( $F$ ) via Nash bargaining

$$(r + \delta) W = b(1 - \beta) + \beta y + rF + \delta U$$

- Decline in both  $b$  and  $F$  entails shift to a lower indifference curve

# The flexicurity tradeoff



# The costs of job-to-job shifts and wage setting

- Present discounted value of a job

$$W = w(1-\gamma) + \beta[\delta\alpha w(1-\gamma) + \delta(1-\alpha)b + (1-\delta)w(1+\gamma)]$$

where  $\gamma$  is wage tenure profile,  $w$  is market wage,  $\delta$  is job destruction rate,  $\alpha$  is job creation rate and  $b$  is (flow) value of non-employment

- Value of employment *decreases* the more with job destruction the steeper the wage-tenure profile

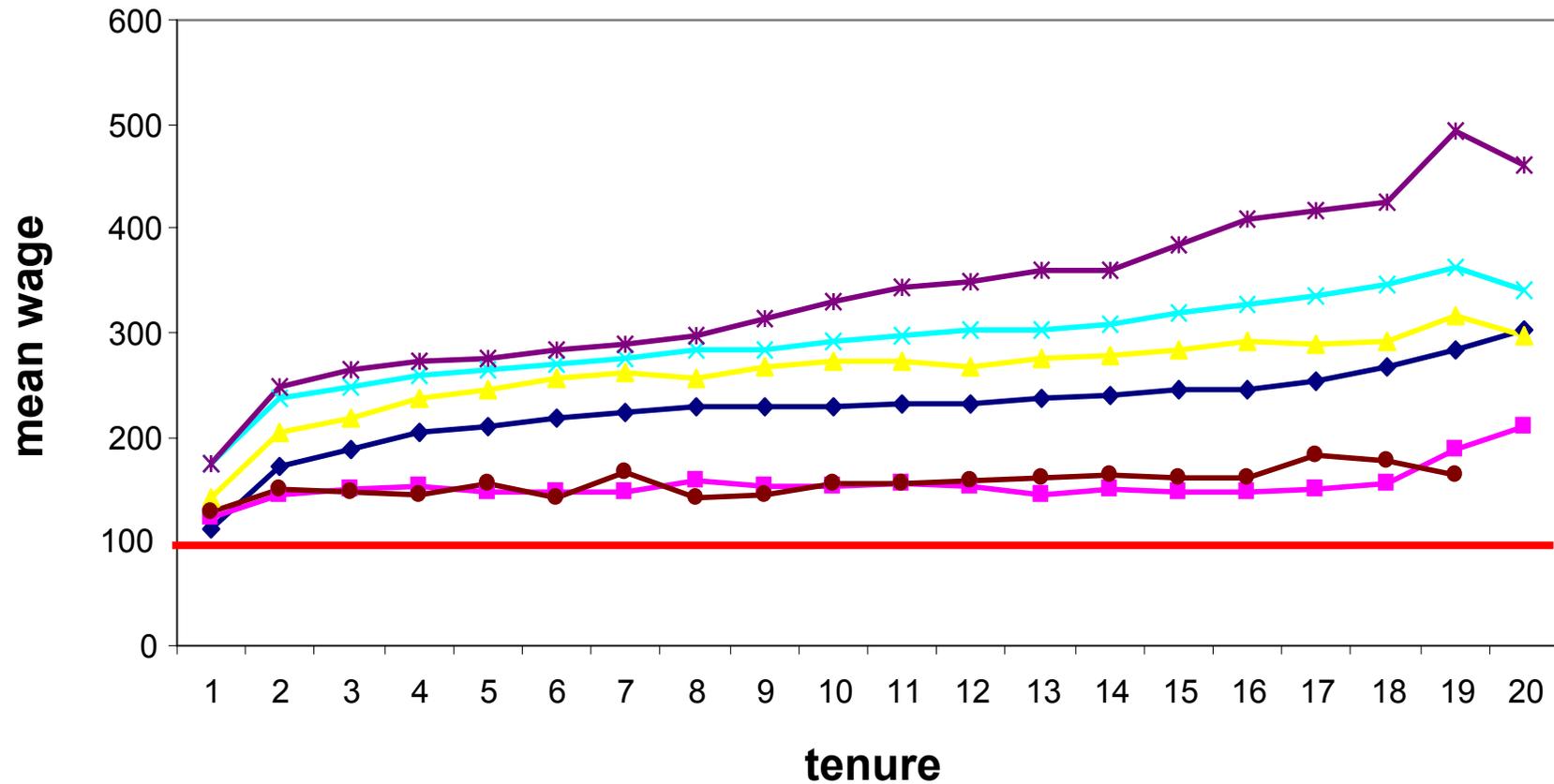
$$d^2W/(d\delta d\gamma) = \beta(1-\alpha)w < 0$$

- Value of employment *increases* the less with job creation the steeper the wage-tenure profile

$$d^2W/(d\alpha d\gamma) = -\beta\delta w < 0$$

# Unconditional wage-tenure profiles

(source ECHP)



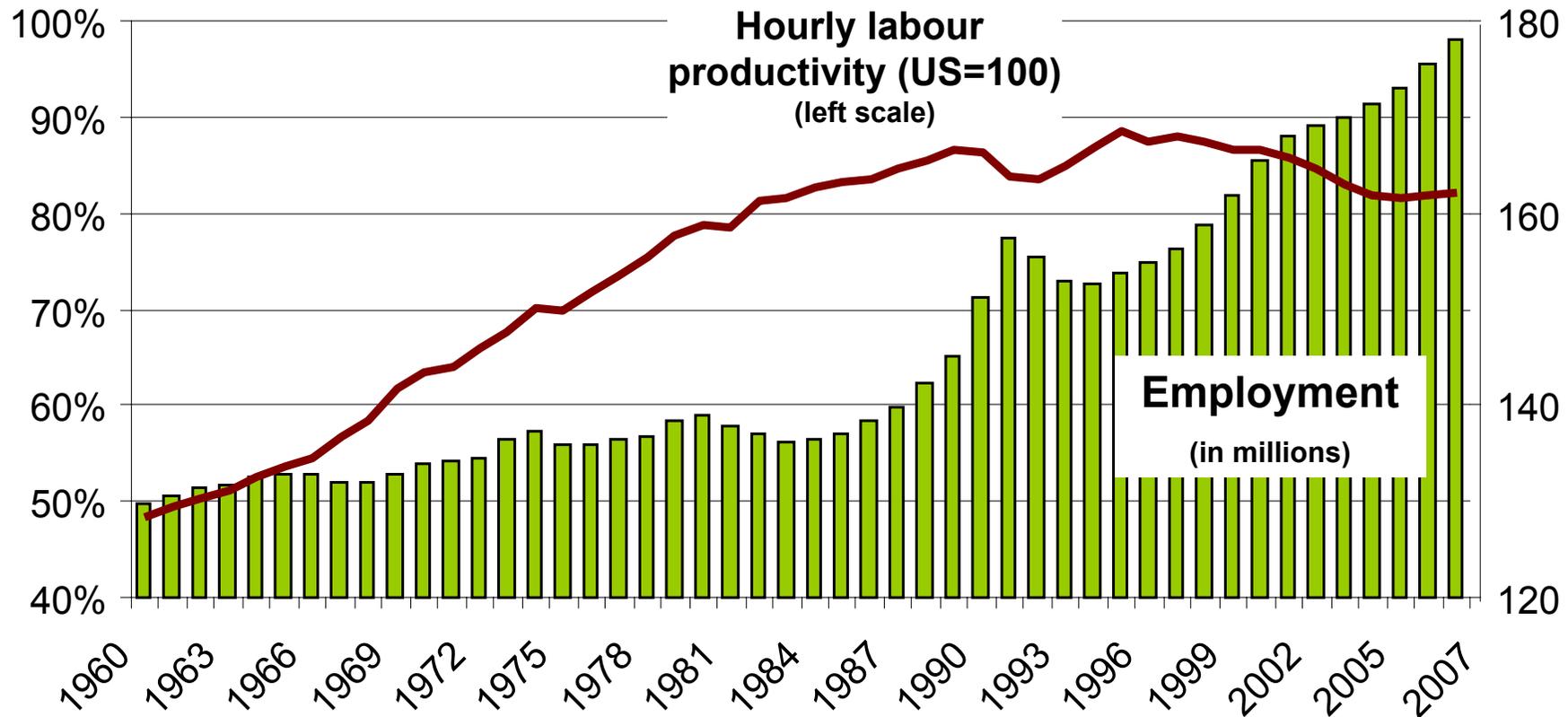
# Outline

- A European dream..... turning into a European nightmare
- Why? A look at transitions across labour market states
- Can we “cheat” the employment/productivity tradeoff?

# How to make Europeans happier about lower unemployment?

- Moving along the flexicurity tradeoff (but costly for public finance!)
- Providing tenure-tracks to stable jobs
- Reform wage setting (decentralisation, closer links wages-productivity)
- (of course) higher wages via higher labour productivity.

# Can Europe increase both employment *and* productivity?



Source: Groningen Growth & Development Centre, Total Economy Database

# What do EPL and UB reforms do to labour productivity?

- On the *job destruction* margin: lower EPL reduces the number of low productivity jobs. This *increases* productivity.
- On the *job creation* margin: temporary jobs may discourage investment in human capital. Evidence of less training on-the-job of the TEMPs. Shorter duration UBs may reduce incentives to accept high productivity, risky jobs. This *reduces* productivity.

Can we make Europeans happier while “cheating” the tradeoff then?

**Tenure track** to permanent contracts avoids segregation into temporary contracts.

Good for human capital investment.

**Decentralised wage bargaining** linking wages to productivity increases the latter via:

i. incentives (micro literature)

ii. reallocation effect (macro literature)

# Reallocation effect

