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The 2004 Ludwig Erhard Lecture

The Honourable Lucas Papademos
Vice President, European Central Bank
9 December, 2004



EUROPEAN CENTRAL BANK

Determinants of Growth and the Role of Structural Reforms and Macroeconomic Policies in Europe

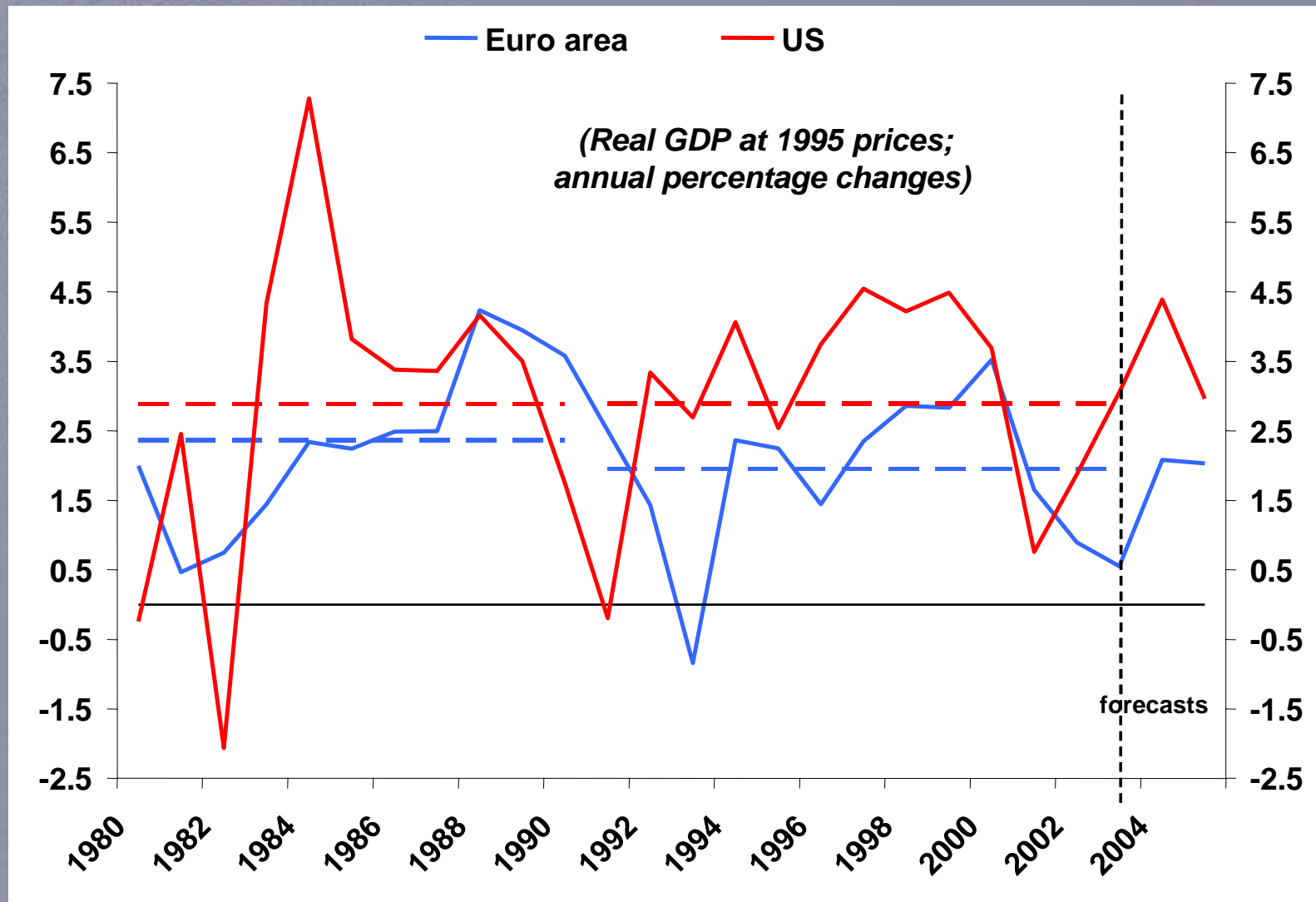
Lucas D. Papademos

Vice-President, European Central Bank

Lisbon Council Board of Economists

Brussels, 9 December 2004

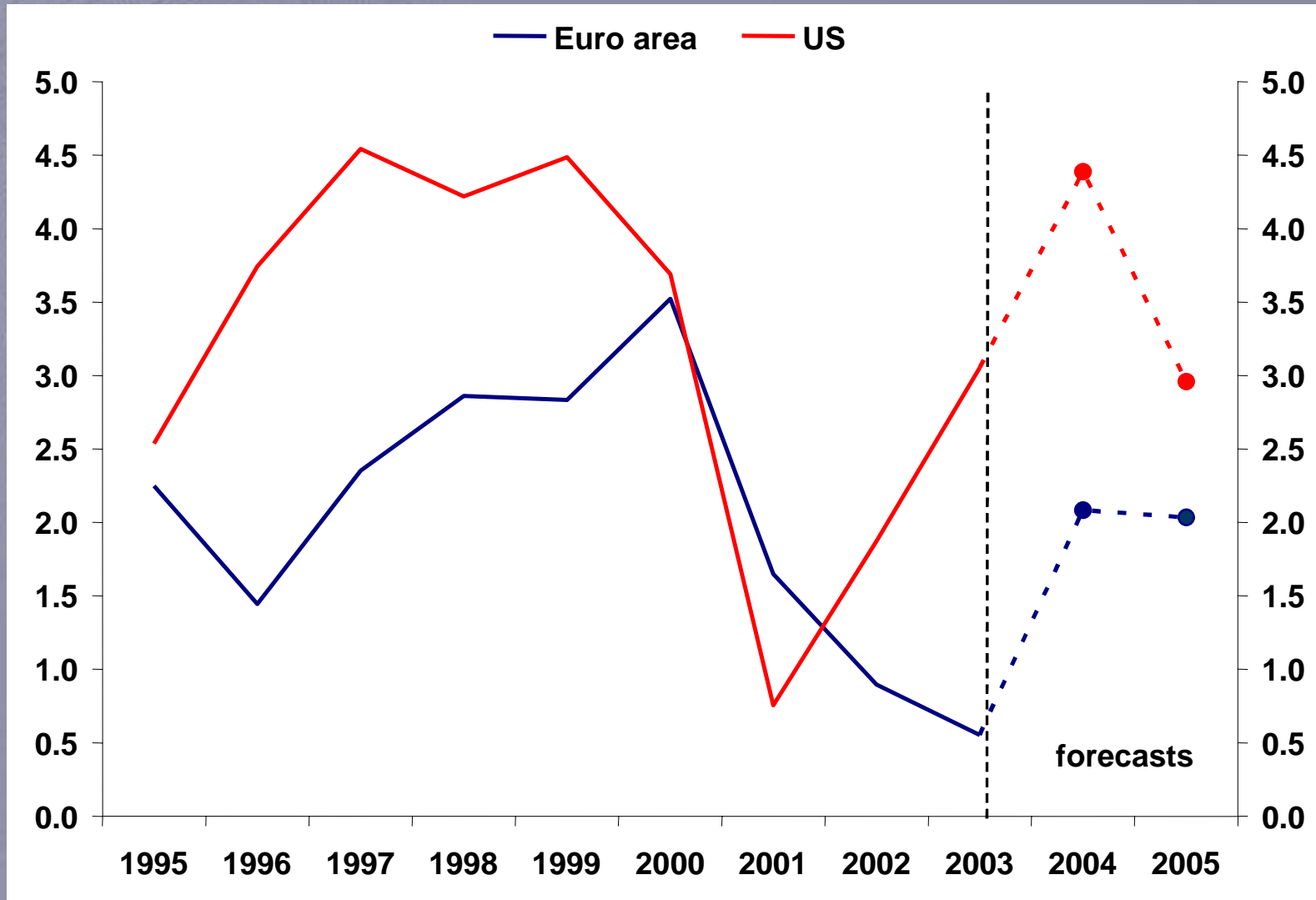
Slide 1: The gap in real GDP growth between the United States and the euro area



Source: European Commission (AMECO database). European Commission Forecasts Autumn 2004.

Slide 2: The gap in real GDP growth has been widening ...

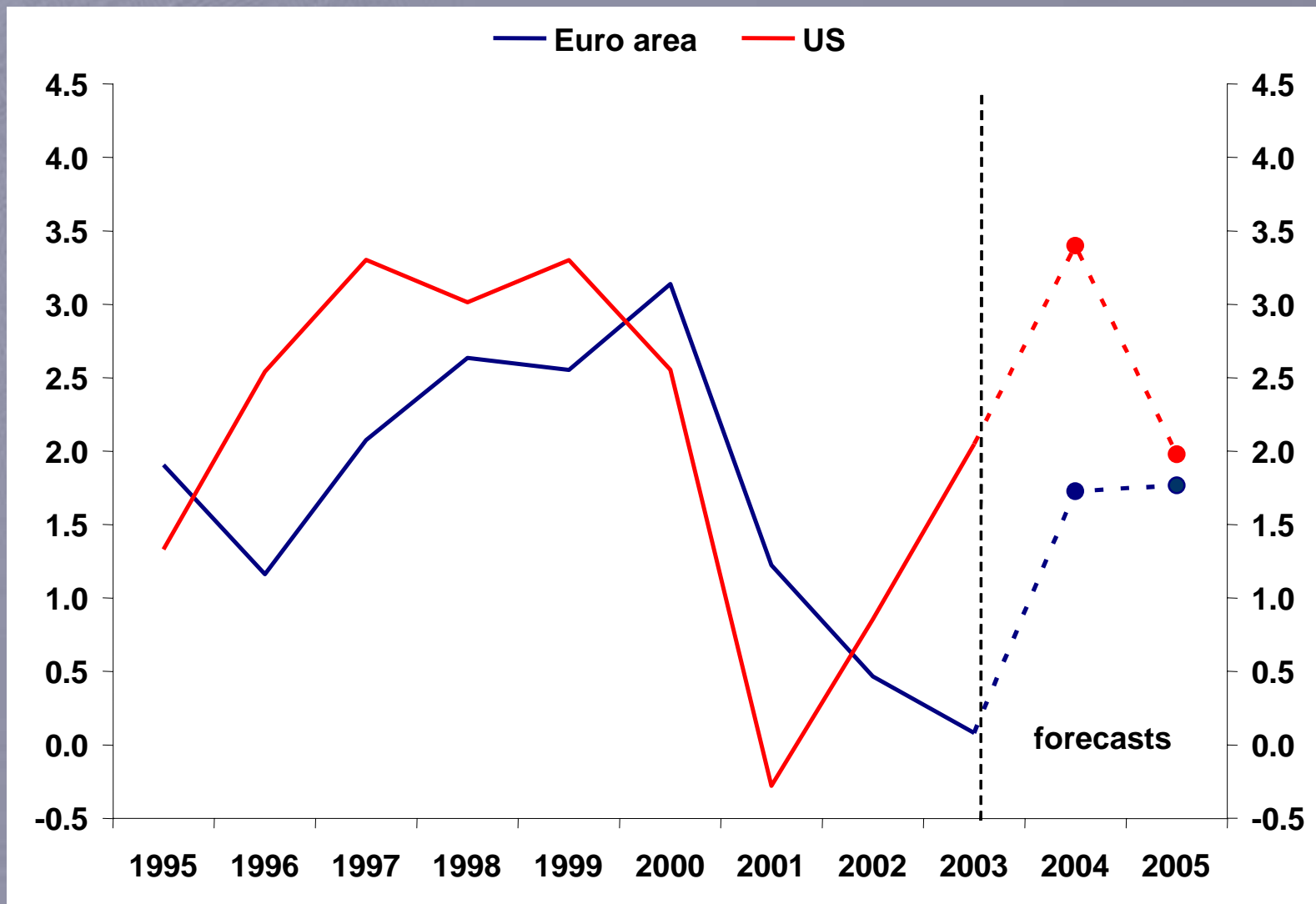
(real GDP at 1995 prices, annual percentage changes)



Source: European Commission (AMECO database). European Commission Forecasts Autumn 2004.

Slide 3: Per capita real GDP growth in the euro area and the US

(real GDP at 1995 prices per capita, annual percentage changes)



Source: European Commission (AMECO database). European Commission Forecasts Autumn 2004.

Slide 4: Decomposition of real GDP growth in the euro area and the United States, 1996 - 2003

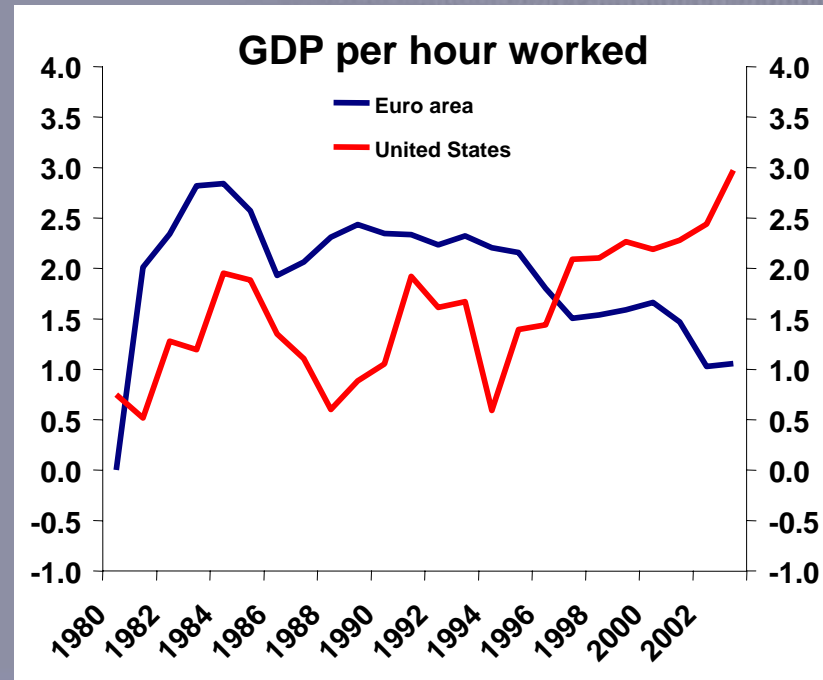
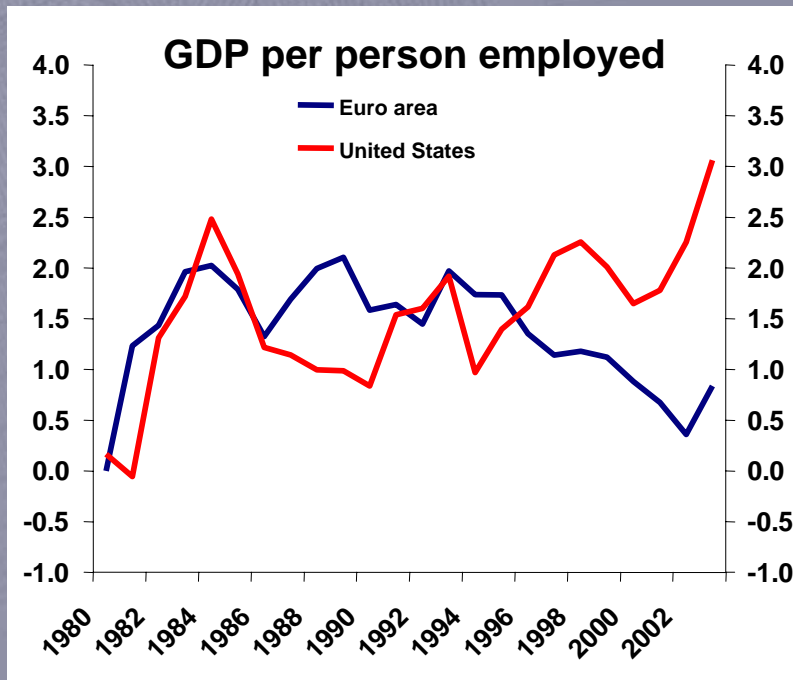
Percentage changes and percentage points per annum

	GDP	GDP per hour worked	Labour utilisation	Total Population
	sum (a) to (c)	(a)	(b)	(c)
Euro area	2.0	1.3	0.4	0.3
United States	3.3	2.3	-0.4	1.3

Source: European Commission (AMECO database), OECD (Economic Outlook database) and ECB calculations.

Note: Figures may not add up due to rounding.

Slide 5: Turnaround in labour productivity performance between the euro area and the US since the mid-1990s



Source: European Commission (AMECO database), OECD (Economic Outlook database) and ECB calculations. Data shown are three-year centred moving averages.

Slide 6: Decomposition of labour utilisation growth in the euro area and the United States (1996 – 2003)

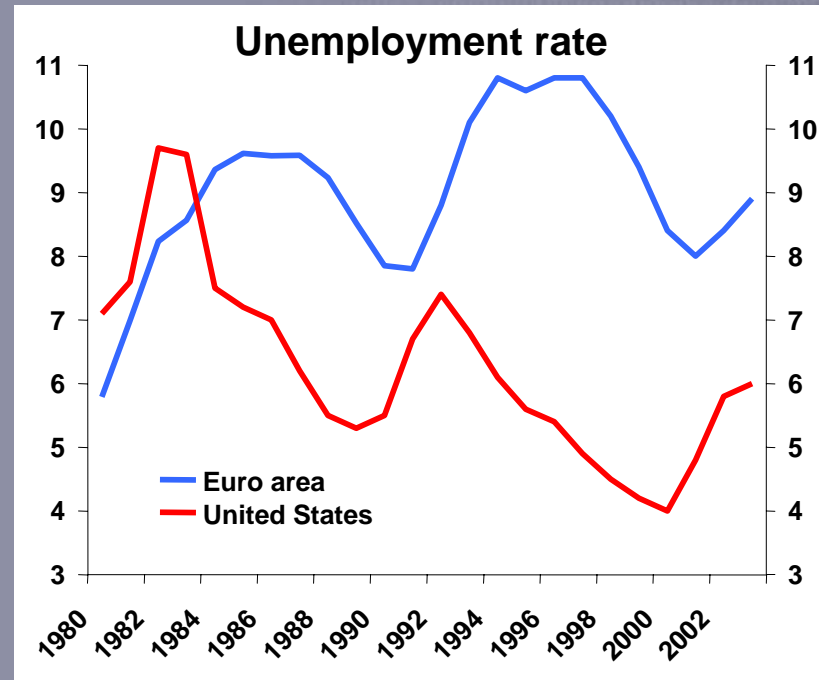
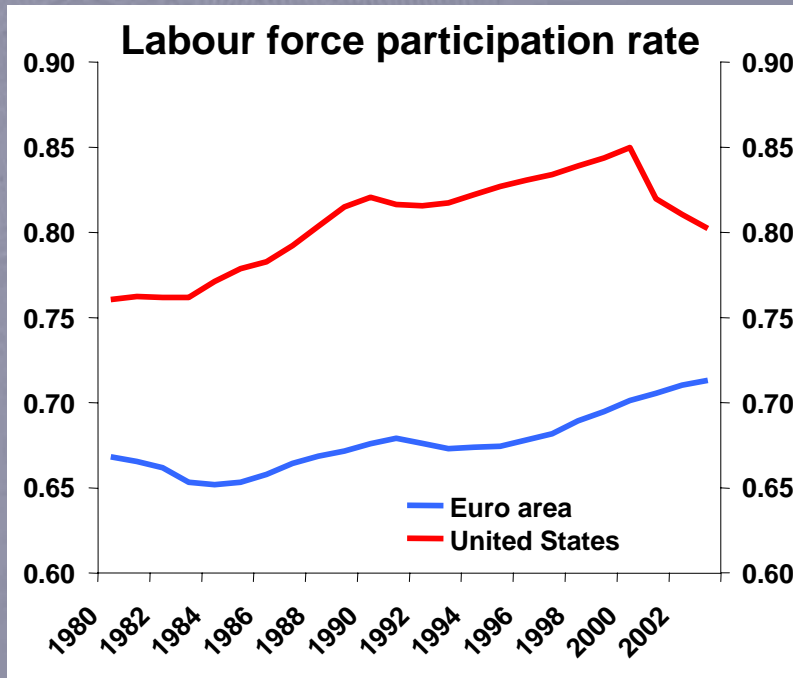
percentage changes and percentage points per annum

	Labour utilisation	Labour force participation rate	Unemployment rate	Average hours worked per person employed	Share of working age population in total population
	sum (a) to (d)	(a)	(b)	(c)	(d)
Euro area	0.4	0.7	0.2	-0.4	-0.1
United States	-0.4	-0.4	0.0	-0.2	0.3

Source: European Commission (AMECO database), OECD (Economic Outlook database) and ECB calculations.

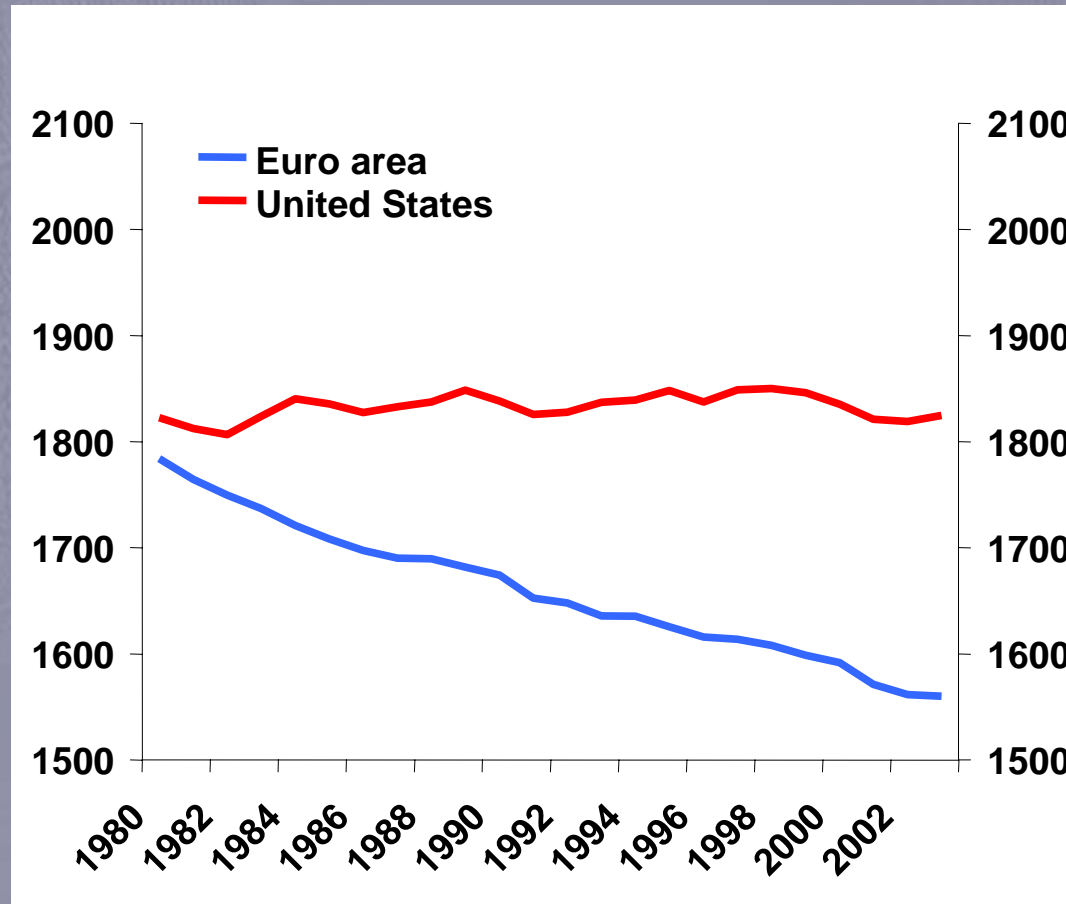
Note: Figures may not add up due to rounding. Positive contributions from unemployment reflect a decline in unemployment rate.

Slide 7: Labour utilisation determinants (I): participation and unemployment rates



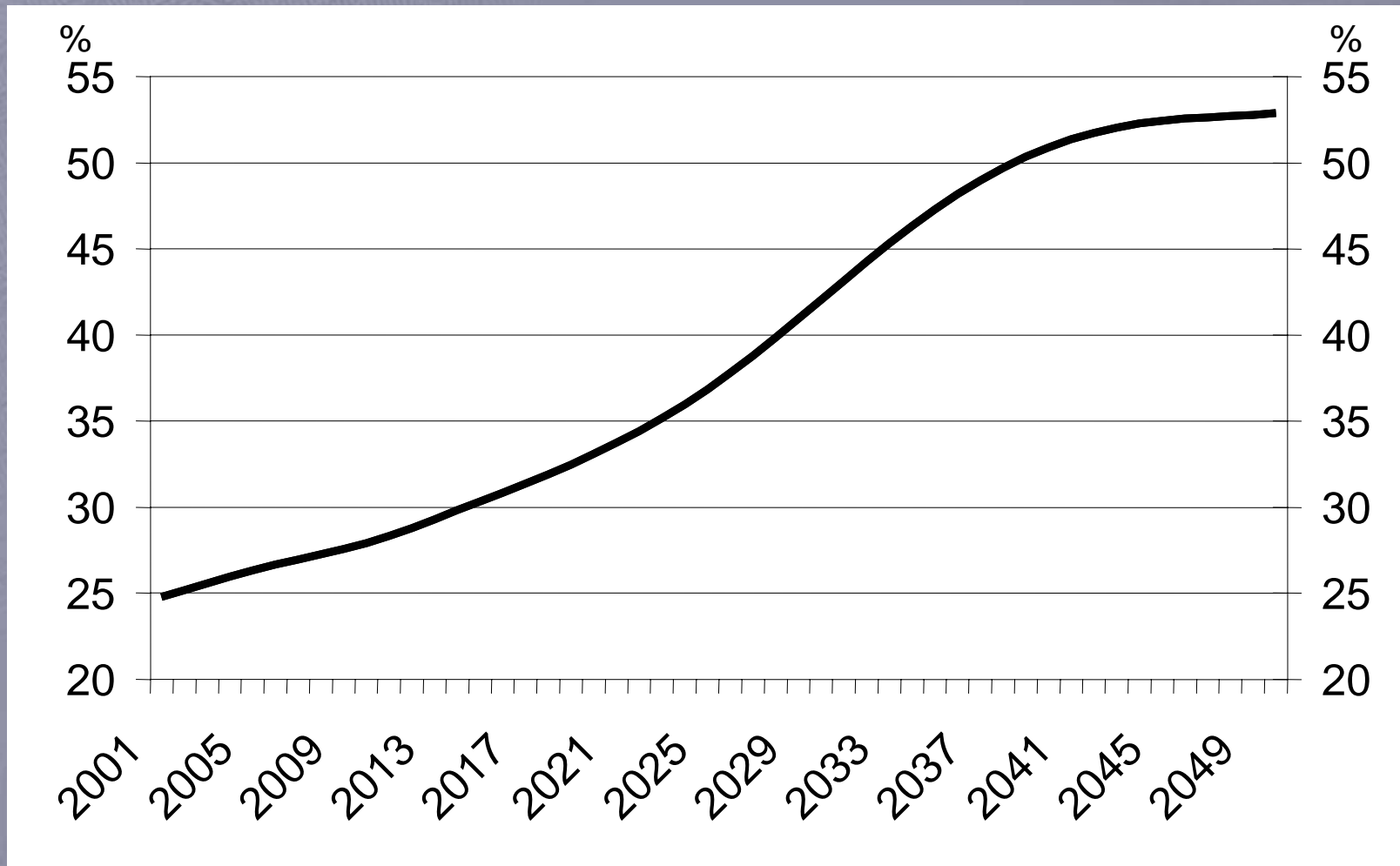
Source: European Commission (AMECO database). Participation calculated as total labour force (employment and unemployment) over working age population.

Slide 8: Labour utilisation determinants (II): average hours worked



Source: European Commission (AMECO database), Eurostat and ECB calculations.

Slide 9: Old age dependency ratio in the euro area (2001 – 2050)



Source: United-Nations estimates- medium scenario.

Slide 10: Employment rates by age group and gender (2000)

	<i>euro area</i>		
	Male	Female	Total
15-24	42	36	40
25-54	87	65	76
55-64	47	27	37
15-64	73	53	63

	<i>United States</i>		
	Male	Female	Total
15-24	62	58	60
25-54	89	74	81
55-64	66	50	58
15-64	81	68	74

Source: OECD

Slide 11: Structural hourly labour productivity level – relative to the US level (2002)

Selected EU countries / euro area / EU weighted

Country	Observed hourly productivity level relative to the US level	Effect (in %) of the gap with the US....		Structural hourly productivity level relative to the US level
	(a)	... in hours worked (b)	.. In the employment rate (c)	(a) - (b) - (c)
United States	100.0	0.0	0.0	100.0
Belgium	106.3	4.9	8.5	92.8
Germany	91.7	7.2	4.6	80.0
Greece	64.2	-2.3	10.4	56.1
Spain	73.6	0.2	8.6	64.9
France	106.6	5.2	7.5	93.9
Ireland	103.6	2.8	4.8	96.0
Italy	91.8	3.8	11.3	76.7
Netherlands	100.2	9.2	-0.9	91.9
Portugal	52.6	1.9	2.6	48.2
Euro area	92.4	4.8	7.0	80.7
United Kingdom	78.6	2.1	-0.6	77.0
EU weighted average	89.9	4.3	5.6	80.0

Slide 12: Sectoral labour productivity growth per head

Annual average growth rate

Sectors	Productivity growth				GDP shares	
	1990-1995		1995-2000		2000	
	EU	US	EU	US	EU	US
Total Economy	1.9	1.1	1.4	2.5	100.0	100.0
ICT Producing	6.7	8.1	8.7	10.1	5.9	7.3
ICT Using	1.7	1.5	1.6	4.7	27.0	30.6
Non-ICT	1.6	0.2	0.7	0.5	67.1	62.1

Source: Van Ark et al.

Slide 13: Labour productivity by sector in the euro area and the United States (1986-1995 and 1996-2000)

per person employed; percentage change per annum

	Euro area		United States	
	1986-1995	1996-2000	1986-1995	1996-2000
Manufacturing	2.8	2.7	3.2	5.6
<i>of which:</i>				
High-technology industries	3.1	3.6	5.1	11.1
Utilities	3.3	6.9	3	2.4
Business sector services	1.8	0.5	1.3	7.6
<i>of which :</i>				
Wholesale and retail trade	1.8	0.5	1.3	7.6
Telecommunication	5.2	13.8	3.9	4.6
Finance and Insurance	1.6	3.7	1.2	6.5

Source: OECD (STAN database) and ECB calculations. See ECB Monthly Bulletin article of July 2004 on “*Labour productivity developments in the euro area: aggregate trends and sectoral patterns*”.

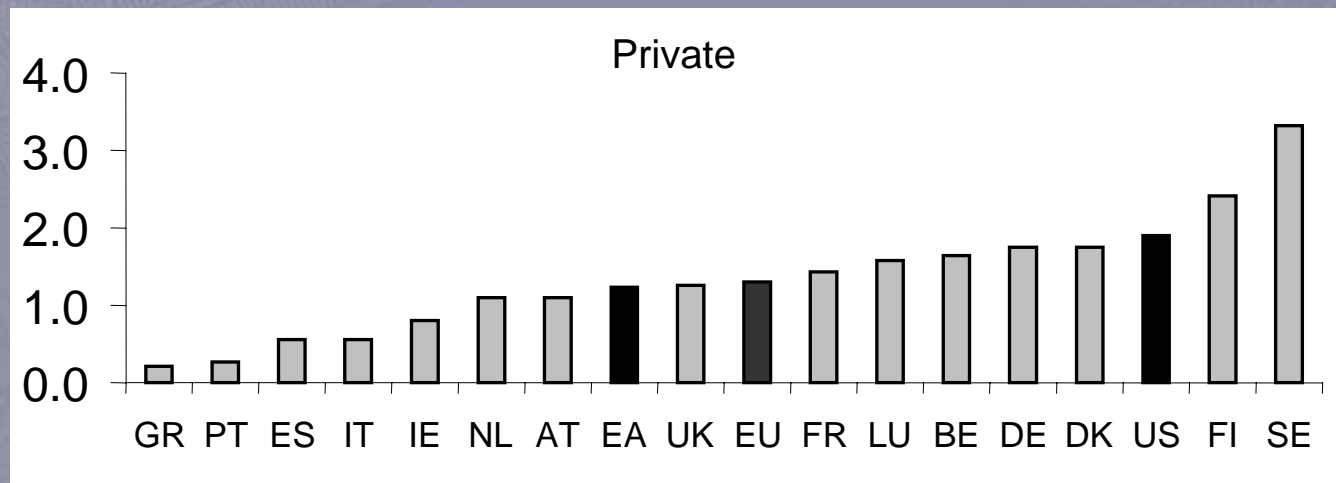
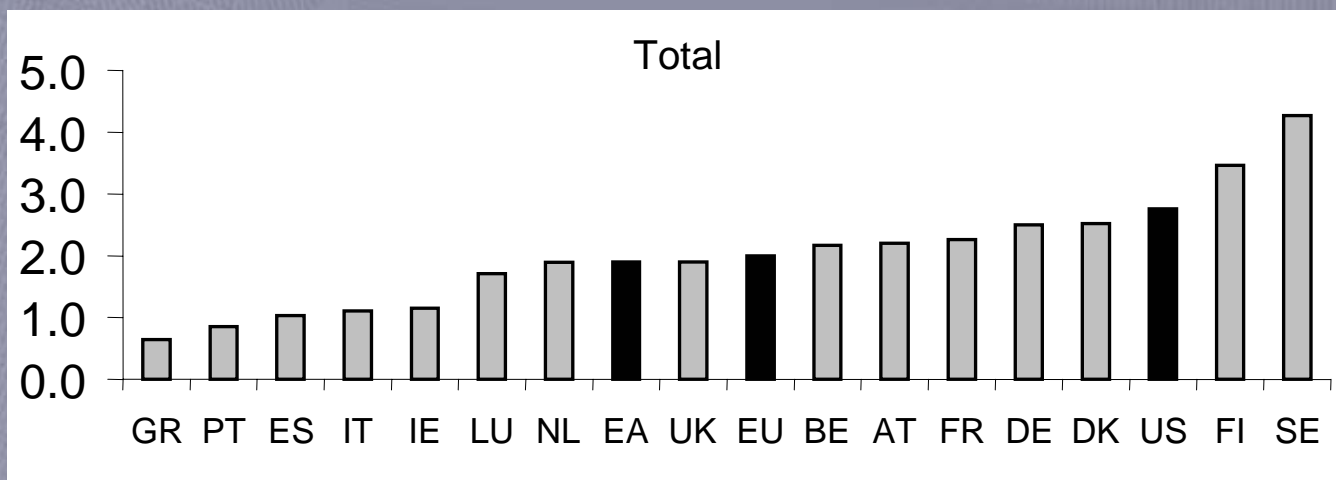
Slide 14: Educational attainment of the population aged 25-64 (2000, in percent)

	Below upper secondary	Upper secondary and post secondary	Tertiary
Belgium	41.5	31.4	27.1
Germany	17.4	59.4	23.2
Greece	48.6	33.6	17.8
Spain	59.7	16.2	23.6
France	36.1	40.6	23.0
Ireland	42.4	22.0	35.6
Italy	56.7	33.2	10.0
Luxembourg	47.3	34.6	18.1
Netherlands	45.0	32.0	22.2
Austria	24.3	61.8	13.9
Portugal	80.1	10.8	9.0
Finland	26.2	41.5	32.3
Euro area	39.7	39.8	20.4
Denmark	19.8	53.7	26.5
Sweden	19.4	49.0	31.6
United Kingdom	37.1	36.9	26.1
EU15	38.9	37.3	23.8
USA	12.3	50.3	37.3

Source: OECD.

Slide 15: Investment in Research & Development (2003)

in percent of GDP



Source: Eurostat.