



EUROPEAN CENTRAL BANK

# **Determinants of growth and the role of structural reforms and macroeconomic policies in Europe**

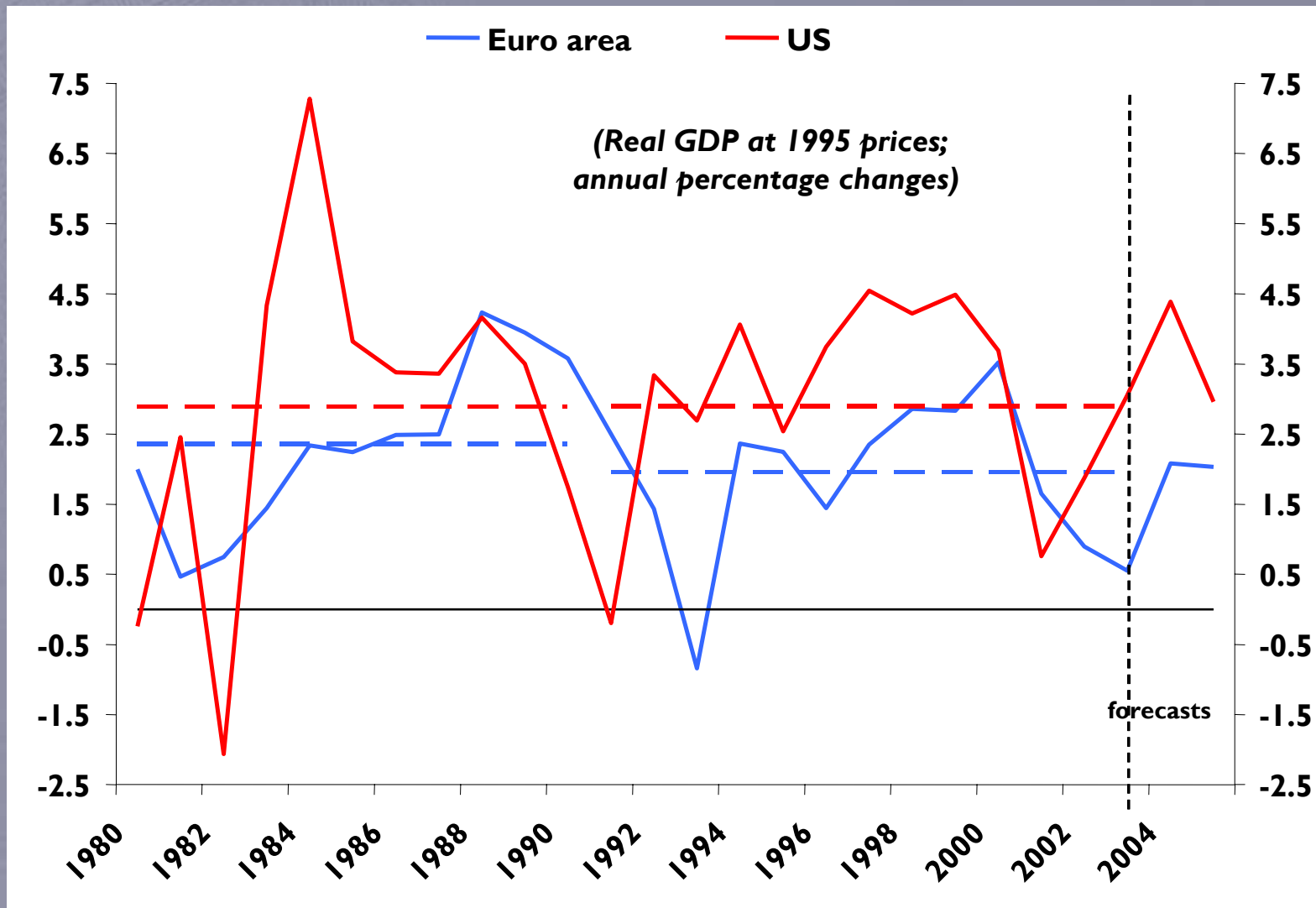
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**Vice-President of the European Central Bank**

**Lisbon Council's Board of Economists**

**Brussels, 9 December 2004**

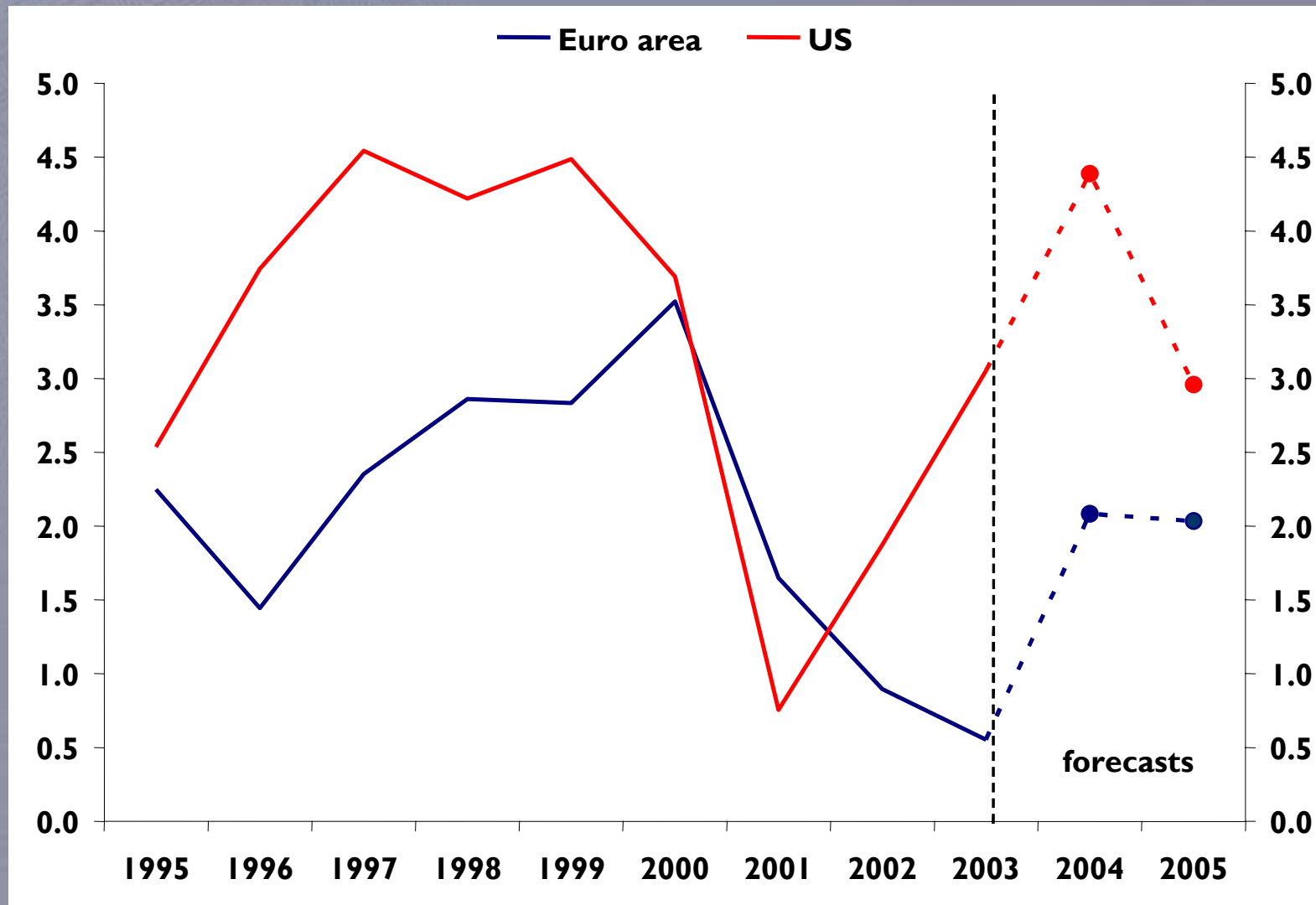
# Slide I: The gap in real GDP growth between the United States and the euro area



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

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

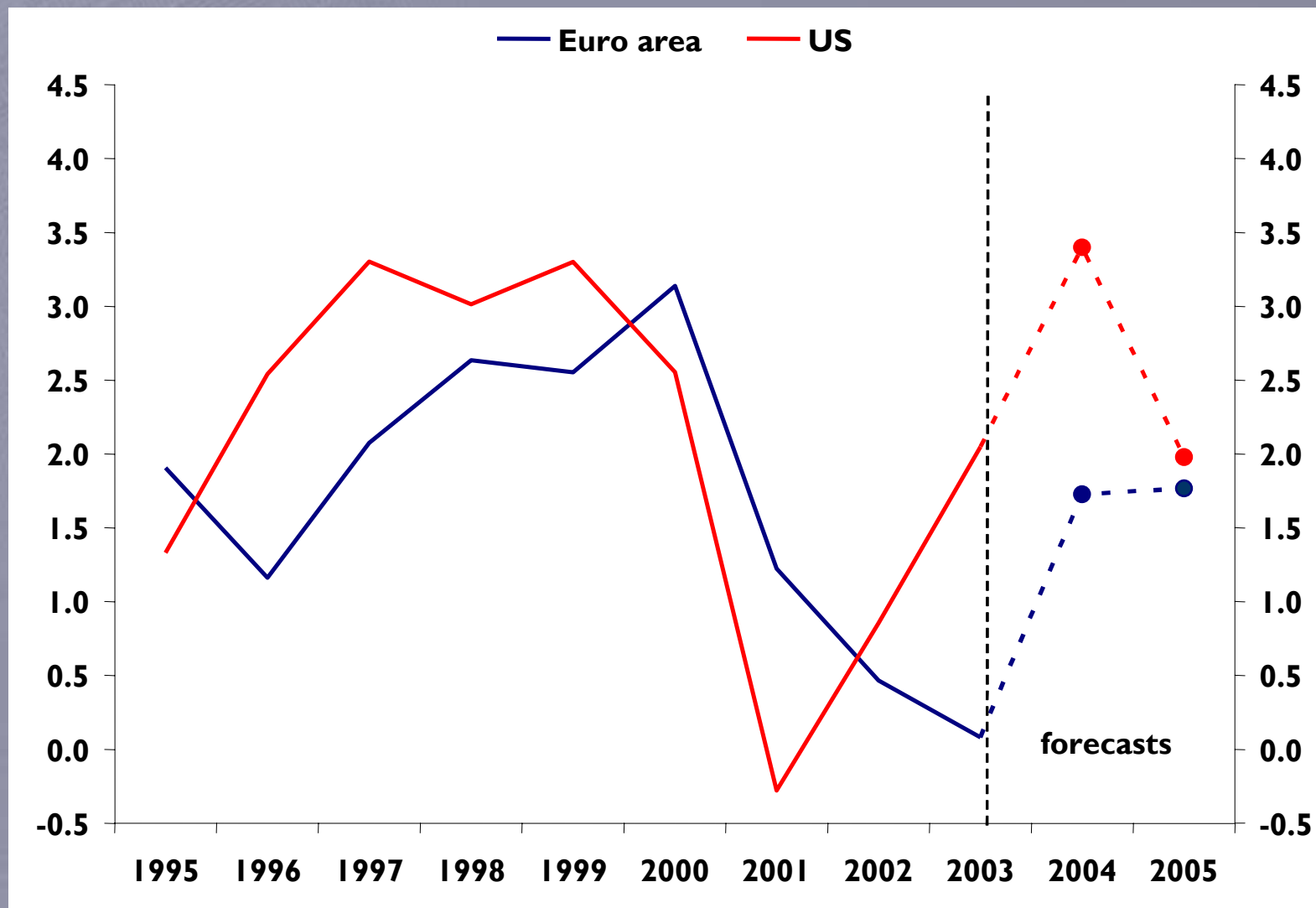
(real GDP at 1995 prices, annual percentage changes)



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

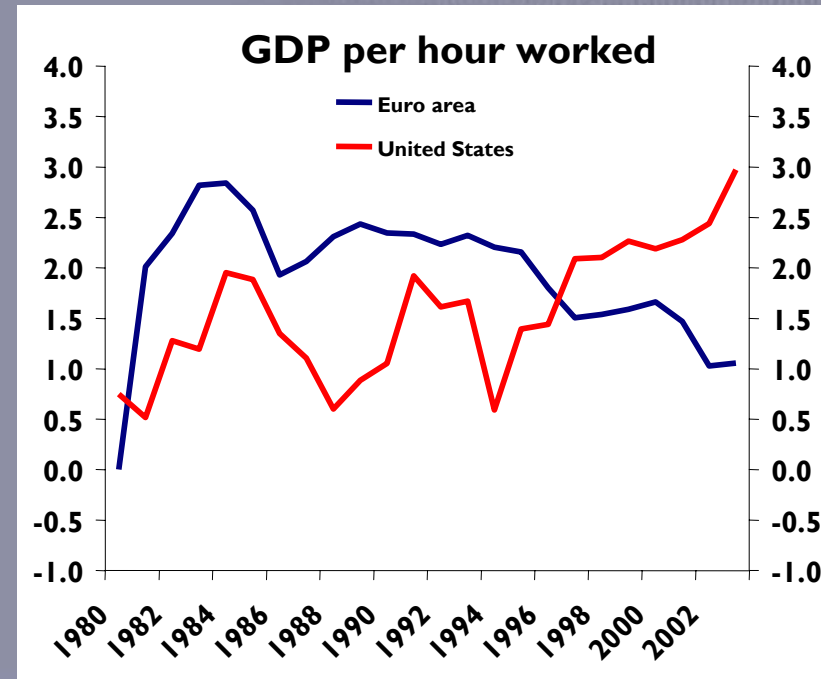
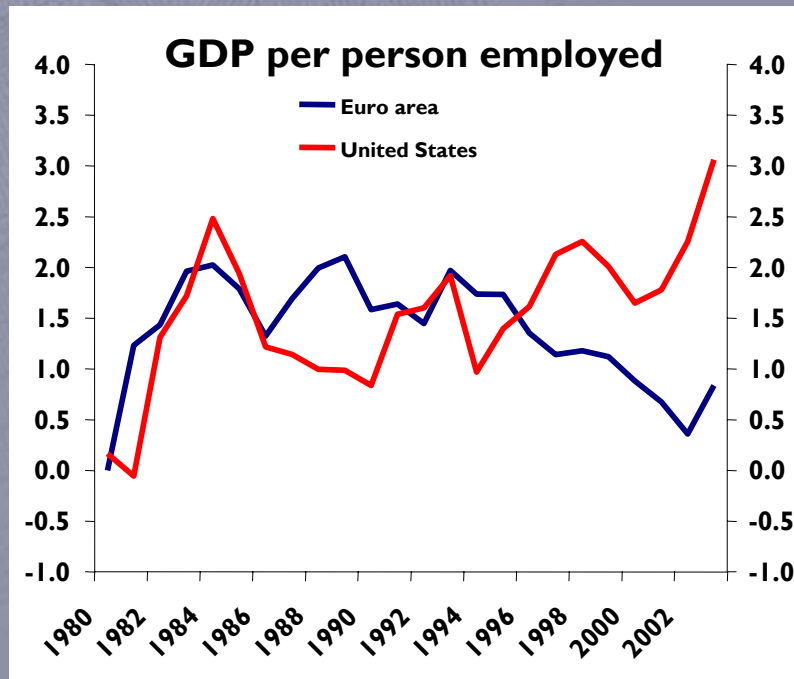
*Percentage changes and percentage points per annum*

	<b>GDP</b>	<b>GDP per hour worked</b>	<b>Labour utilisation</b>	<b>Total Population</b>
	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)

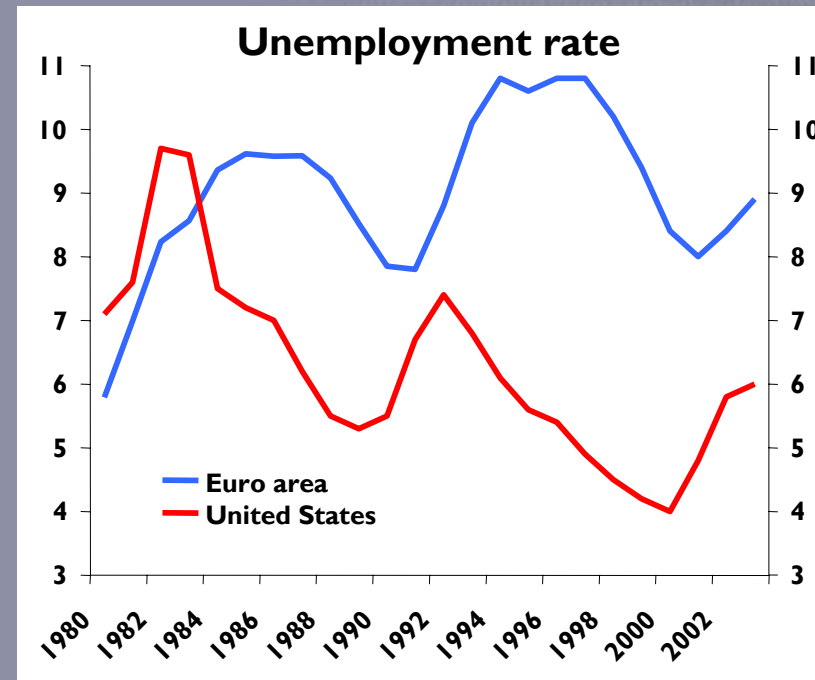
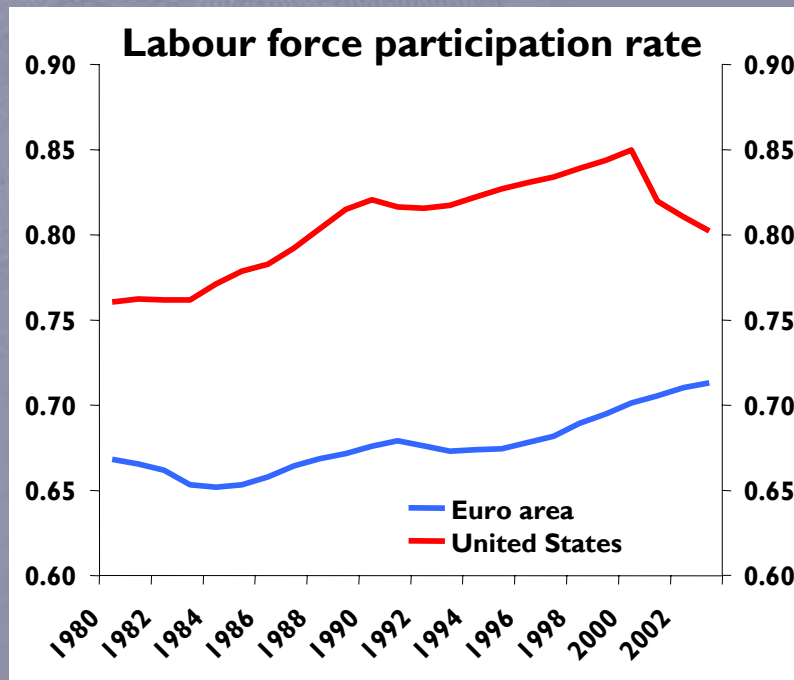
*percentage changes and percentage points per annum*

	<b>Labour utilisation</b>	<b>Labour force participation rate</b>	<b>Unemployment rate</b>	<b>Average hours worked per person employed</b>	<b>Share of working age population in total population</b>
	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.

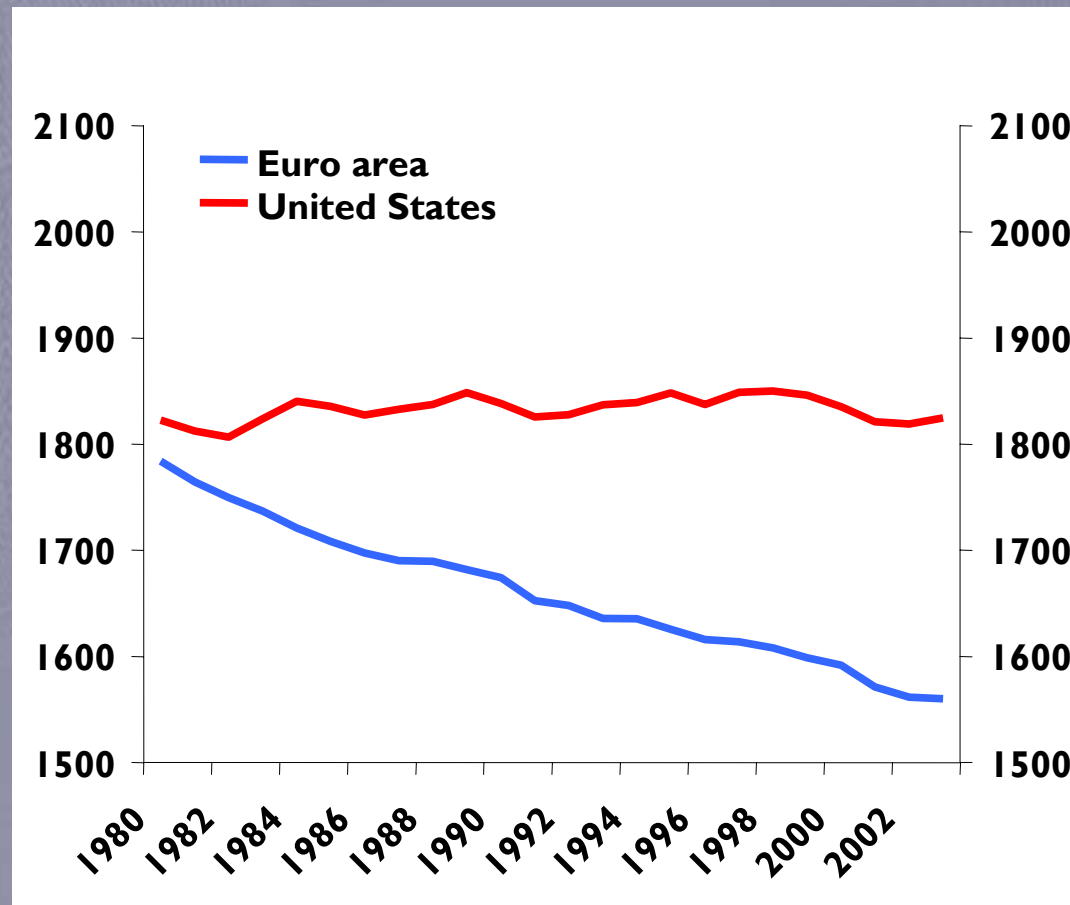
## Slide 7: Labour utilisation determinants (I): participation and unemployment rates



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

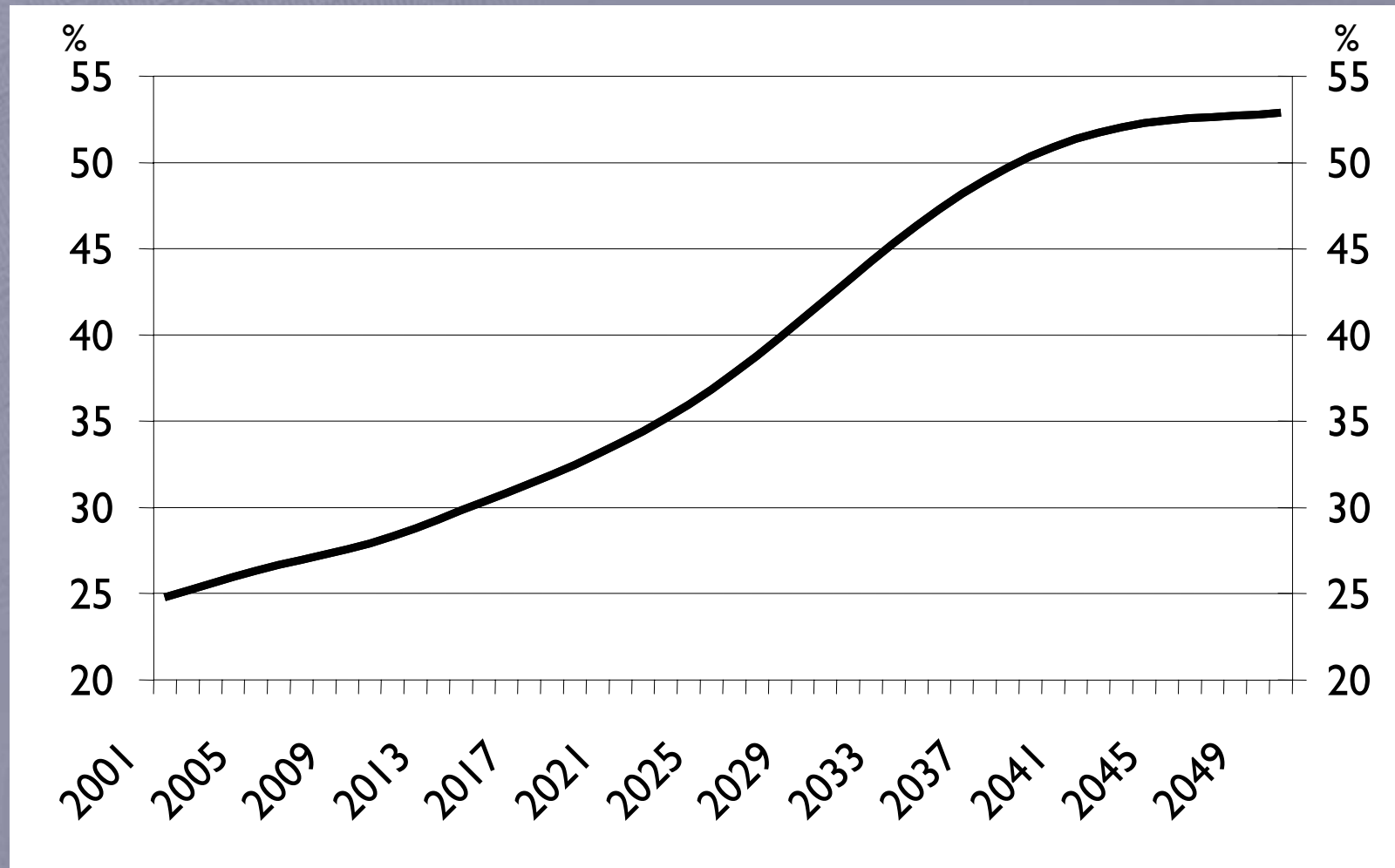


## Slide 8: Labour utilisation determinants (II): average hours worked



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	<b>42</b>	<b>36</b>	<b>40</b>
25-54	<b>87</b>	<b>65</b>	<b>76</b>
55-64	<b>47</b>	<b>27</b>	<b>37</b>
15-64	<b>73</b>	<b>53</b>	<b>63</b>

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

Source: OECD

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

### Selected EU countries / euro area / EU weighted average

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

Source: Eurostat and Banque de France.

## 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
<b>Total Economy</b>	<b>1.9</b>	<b>1.1</b>	<b>1.4</b>	<b>2.5</b>	<b>100.0</b>	<b>100.0</b>
<b>ICT Producing</b>	<b>6.7</b>	<b>8.1</b>	<b>8.7</b>	<b>10.1</b>	<b>5.9</b>	<b>7.3</b>
<b>ICT Using</b>	<b>1.7</b>	<b>1.5</b>	<b>1.6</b>	<b>4.7</b>	<b>27.0</b>	<b>30.6</b>
<b>Non-ICT</b>	<b>1.6</b>	<b>0.2</b>	<b>0.7</b>	<b>0.5</b>	<b>67.1</b>	<b>62.1</b>

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
<b>Manufacturing</b>	2.8	2.7	3.2	5.6
<i>of which:</i>				
<b>High-technology industries</b>	3.1	3.6	5.1	11.1
<b>Utilities</b>	3.3	6.9	3	2.4
<b>Business sector services</b>	1.8	0.5	1.3	7.6
<i>of which :</i>				
<b>Wholesale and retail trade</b>	1.8	0.5	1.3	7.6
<b>Telecommunication</b>	5.2	13.8	3.9	4.6
<b>Finance and Insurance</b>	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”.

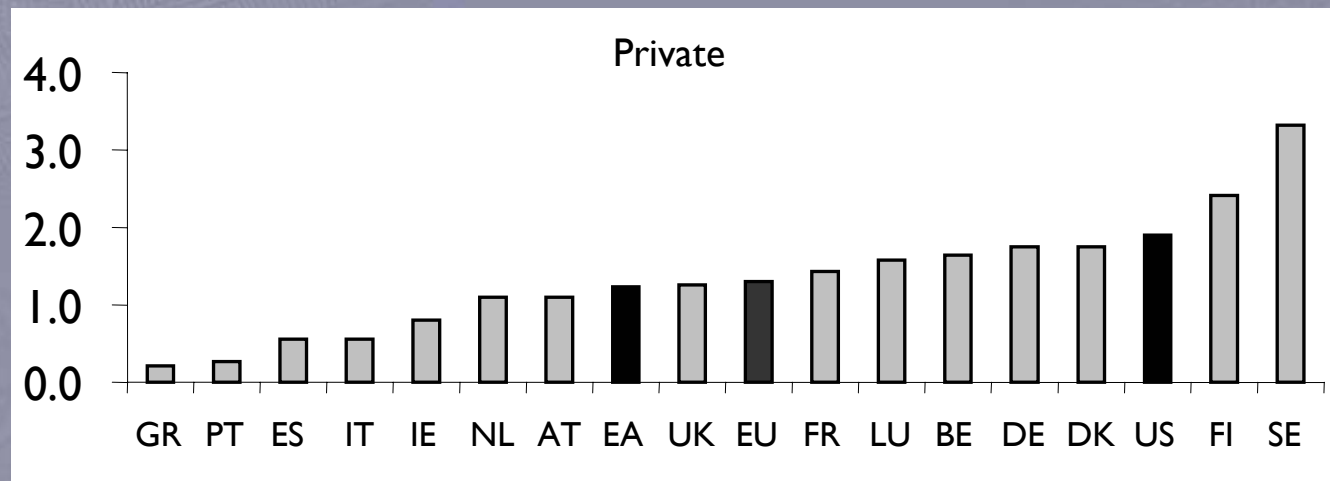
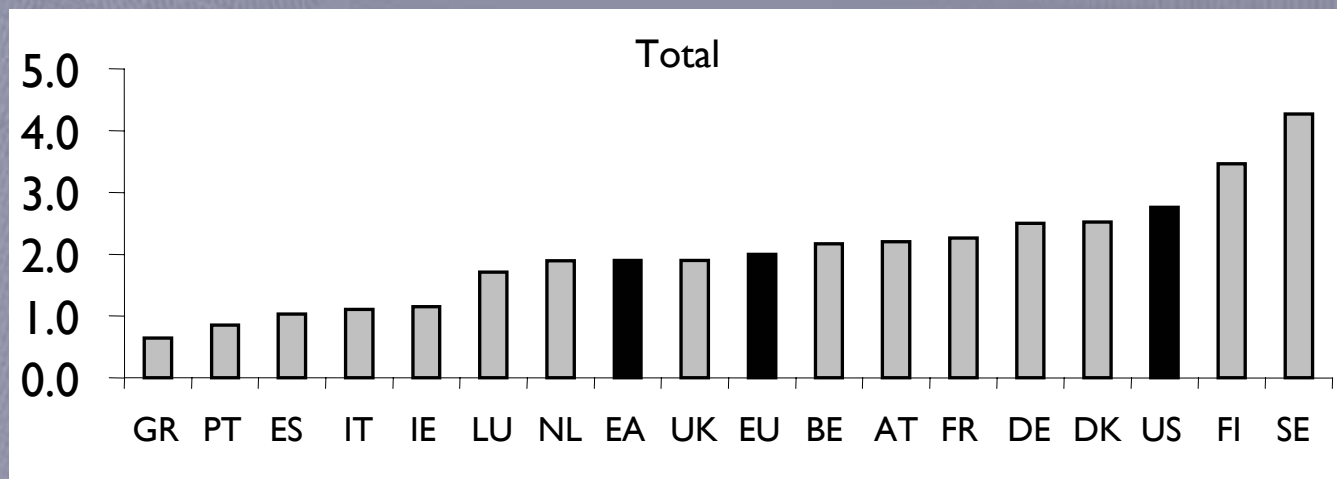
## Slide 14: Educational attainment of the population aged 25-64 (2000, in percent)

	Below upper secondary	Upper secondary and post secondary	Tertiary
<b>Belgium</b>	<b>41.5</b>	<b>31.4</b>	<b>27.1</b>
<b>Germany</b>	<b>17.4</b>	<b>59.4</b>	<b>23.2</b>
<b>Greece</b>	<b>48.6</b>	<b>33.6</b>	<b>17.8</b>
<b>Spain</b>	<b>59.7</b>	<b>16.2</b>	<b>23.6</b>
<b>France</b>	<b>36.1</b>	<b>40.6</b>	<b>23.0</b>
<b>Ireland</b>	<b>42.4</b>	<b>22.0</b>	<b>35.6</b>
<b>Italy</b>	<b>56.7</b>	<b>33.2</b>	<b>10.0</b>
<b>Luxembourg</b>	<b>47.3</b>	<b>34.6</b>	<b>18.1</b>
<b>Netherlands</b>	<b>45.0</b>	<b>32.0</b>	<b>22.2</b>
<b>Austria</b>	<b>24.3</b>	<b>61.8</b>	<b>13.9</b>
<b>Portugal</b>	<b>80.1</b>	<b>10.8</b>	<b>9.0</b>
<b>Finland</b>	<b>26.2</b>	<b>41.5</b>	<b>32.3</b>
<b>Euro area</b>	<b>39.7</b>	<b>39.8</b>	<b>20.4</b>
<b>Denmark</b>	<b>19.8</b>	<b>53.7</b>	<b>26.5</b>
<b>Sweden</b>	<b>19.4</b>	<b>49.0</b>	<b>31.6</b>
<b>United Kingdom</b>	<b>37.1</b>	<b>36.9</b>	<b>26.1</b>
<b>EUI5</b>	<b>38.9</b>	<b>37.3</b>	<b>23.8</b>
<b>USA</b>	<b>12.3</b>	<b>50.3</b>	<b>37.3</b>

Source: OECD.

# Slide 15: Investment in Research & Development (2003)

*in percent of GDP*



Source: Eurostat.