

Box 4

**LABOUR PRODUCTIVITY AND PRICE DEVELOPMENTS IN THE EURO AREA SERVICES SECTOR:
THE ROLE OF COMPETITION**

Limited competition in the euro area services sector is often considered to be one of the factors that hinders labour productivity growth and which contributes, in part, to higher inflation in the services sector than in the manufacturing sector. More competition in the services markets is therefore a key objective of the Lisbon Strategy. This box discusses the impact of competition on labour productivity and prices in the euro area services sector.¹

Labour productivity

The euro area and the majority of the euro area countries recorded a slowdown, relative to the 1980s, in the growth of labour productivity per person employed in the period from 1991 to 2003, both for the whole economy and for the services sector as a whole (see Table A).² In the United States, by contrast, the rate of labour productivity growth for the services sector as a whole picked up considerably, in comparison with the 1980s, in the period from 1991 to 2003, exceeding that recorded in the euro area and increasing further in the period from 1996 to 2003.³

Labour productivity growth across the euro area services industries appears to be characterised by a high degree of diversity. In the wholesale and retail trade sectors, in particular, the increase in labour productivity was far smaller in the euro area than in the United States both in the

Table A Labour productivity growth per person employed

(annual percentage changes)

	Total economy		Total services		Wholesale and retail trade		Hotels and restaurants	
	Euro area	United States ⁴⁾	Euro area	United States ⁴⁾	Euro area	United States ⁴⁾	Euro area	United States ⁴⁾
1981-1990 ¹⁾	1.83	1.33	0.90	0.61	1.50	1.86	-1.59	-0.30
1991-2003 ²⁾	1.28	1.52	0.69	1.57	1.09	3.85	-1.94	0.54
1996-2003 ³⁾	0.95	1.75	0.59	2.33	0.71	5.49	-1.62	-0.84

	Transport and storage and communication		Financial intermediation		Real estate, renting and business activities		Community, social and personal services	
	Euro area	United States ⁴⁾	Euro area	United States ⁴⁾	Euro area	United States ⁴⁾	Euro area	United States ⁴⁾
1981-1990 ¹⁾	2.76	1.72	1.83	-1.06	-0.83	-1.65	-0.17	0.05
1991-2003 ²⁾	3.85	2.72	1.60	3.71	-1.35	-0.34	n.a.	-0.37
1996-2003 ³⁾	4.32	2.52	2.50	5.16	-2.06	-0.13	-0.01	-0.02

Sources: OECD STAN, Groningen Growth and Development Centre Database, NCBS and ECB calculations.

- 1) The euro area aggregate does not include Greece.
- 2) The euro area aggregate does not include Greece. Ireland is included up to 2002.
- 3) Ireland is included only up to 2002.
- 4) Data for all sectors for the United States are up to 2001.

- 1 For more information and analysis on this topic, see Task Force of the Monetary Policy Committee of the European System of Central Banks, "Competition, productivity and prices in the euro area services sector", ECB Occasional Paper No. 44, April 2006.
- 2 See the article entitled "Labour productivity developments in the euro area: aggregate trends and sectoral patterns" in the July 2004 issue of the Monthly Bulletin.
- 3 It is worth emphasising that several measurement issues arise in the computation of labour productivity growth and price changes in the services sector which should be borne in mind when interpreting the results and making international comparisons.

1980s and in the period from 1991 to 2003. In these two sectors, the gap between the euro area and the United States has widened considerably since 1995. Part of the explanation is to be found in economies of scale. The wholesale and retail trade sectors are the services sectors with the largest number of firms and the smallest number of employees per firm in the euro area. A complementary explanation is that the increase in US labour productivity stemmed from the introduction of new technologies in this traditionally labour-intensive industry in the 1980s and in the period from 1991 to 2003, while new technologies were introduced in the euro area six to ten years later than in the United States.

Labour productivity growth in financial intermediation was also significantly weaker in the euro area than in the United States in the period from 1996 to 2003. This difference is rooted mainly in activities auxiliary to financial intermediation (such as stock exchanges and stock brokerage services, financial and mortgage advisory services, etc.) that exhibit stronger labour productivity growth in the United States. However, in both economies, there was a notable pick-up in productivity growth. These results are widely discussed in the literature⁴, which points to a greater exposure of the financial intermediation sector to international competition compared with other services sectors, and to a wider use of ICT technologies in this sector.

In contrast to the two sectors above, labour productivity growth in transport, storage and communications in the euro area was higher than in the United States (both in the 1980s and in the period from 1991 to 2003), and this gap widened in the period from 1996 to 2003. This positive development can be attributed to increased competition in this sector in the euro area following, in particular, the liberalisation of the telecommunications sector which, in turn, has been associated with an increase in productivity and profitability due to enhanced efficiency, product innovation and the use of ICT technologies.

Price developments

Turning to price developments, the rates of change for value-added prices for total services and for the majority of the industries forming the services sector decreased, compared with the 1980s, in the period from 1991 to 2003 in the euro area (see Table B), but they generally remained higher than for the whole economy. In particular, there was a fall over time in value-added price changes in transport, storage and communications. This has mainly been related to the above-mentioned opening-up of the transport and telecommunications sectors to competition since the first half of the 1990s in the majority of euro area countries. Similarly, there have been significant moderations in the value-added price changes in the financial intermediation and the wholesale and retail trade sectors in the euro area. However, in the latter sectors, the most recent fall in price changes was even more pronounced in the United States, reflecting better productivity performance.

Competition

Several findings in the literature lead to the conclusion that competition is an important factor in explaining both labour productivity and price developments in the services sector. It is

⁴ See, for example, M. O'Mahony and B. van Ark, "EU Productivity Performance Overview", in M. O'Mahony and B. van Ark (eds.), *EU Productivity and Competitiveness: An Industry Perspective, Can Europe Resume the Catching-up Process?*, European Commission, DG Enterprise, Brussels 2003.

Table B Value added deflator

(annual percentage changes)

	Total economy		Total services		Wholesale and retail trade		Hotels and restaurants	
	Euro area	United States ⁴⁾	Euro area	United States ⁴⁾	Euro area	United States ⁴⁾	Euro area	United States ⁴⁾
1981-1990 ¹⁾	5.81	4.25	6.27	5.24	6.04	2.96	10.07	6.56
1991-2003 ¹⁾	2.10	2.12	2.49	2.55	1.93	0.48	4.67	4.39
1996-2003 ²⁾	1.64	1.81	1.90	1.94	1.42	-0.87	4.37	5.37

	Transport, storage and communications		Financial intermediation		Real estate, renting and business activities		Community, social and personal services ³⁾	
	Euro area	United States ⁴⁾	Euro area	United States ⁴⁾	Euro area	United States ⁴⁾	Euro area	United States ⁴⁾
1981-1990 ¹⁾	4.66	3.68	6.29	8.48	6.39	5.89	6.50	6.26
1991-2003 ¹⁾	0.41	0.76	1.41	4.12	3.12	2.98	2.94	3.77
1996-2003 ²⁾	-0.38	0.10	0.46	2.47	2.37	3.10	2.47	3.37

Sources: OECD STAN, Groningen Growth and Development Centre Database, NCBs and ECB calculations.

1) The euro area aggregate does not include Greece and Ireland.

2) The euro area aggregate does not include Ireland.

3) Data for the euro area are up to 2002.

4) Data for all sectors for the United States are up to 2001.

generally found that deregulation and liberalisation contribute to higher levels and rates of growth in labour productivity. At the same time, higher competition is generally found to exert downward pressure on costs and prices.

Proxies capturing the degree of regulation indicate that the regulatory environment in the euro area countries has become more supportive of services market competition over time, although for the most part it remains tighter than in the United States (see Table C, in which a higher index indicates stricter regulation). However, results differ across service industries. Retail and professional services, for example, showed only limited progress in terms of deregulation in the period between the mid-1990s and 2003.

Differences in the degree of regulation across countries and services industries remain considerable. Some network industries (telecommunications and air transport) have experienced a marked opening-up to international competition since the beginning of the 1990s, even though there is further scope for an increase in effective competition.⁵

Table C Product market regulation¹⁾

	Overall product market regulation		Sector-specific administrative barriers		Retail		Professional services	
	Level in 2003	Change from 1998 to 2003	Level in 2003	Change from 1998 to 2003	Level in 2003	Change from 1998 to 2003	Level in 2003	Change from 1996 to 2003
Euro area ²⁾	1.5	-0.7	1.7	-0.5	2.8	-0.3	2.3	-0.3
United States	1.0	-0.3	1.0	0.2	2.6	-	1.8	-

Source: OECD.

1) A higher index indicates stricter regulation.

2) Simple average.

⁵ See R. Martin, M. Roma and I. Vansteenkiste, "Regulatory reforms in selected EU network industries", ECB Occasional Paper No 28, 2005.

Given the great and increasing importance of the services sector in the euro area, it is essential that its development, including the degree of competition, is monitored very closely. Measures aimed at increasing services market competition may increase economic efficiency and economies of scale. This would support a higher level and rate of growth in labour productivity in the services sector, and would promote a more dynamic economy. In addition, measures aimed at increasing services market competition may have a dampening impact on relative price changes in some services sectors, and may thus also temporarily curb aggregate inflation. Overall, a higher level of competition in the services sector would tend to support more efficient and more flexible services markets, facilitate adjustment processes and increase the resilience of the euro area to economic shocks.