

## First preliminary results: Research & Development in the EU In relation to GDP, EU25 R&D expenditure stable at 1.9% in 2004

In real terms, EU25 R&D expenditure grew by 1.3% per year between 2001 and 2004

In 2004<sup>1</sup> the **EU25** spent nearly 200 billion euro on Research & Development (R&D). R&D intensity (i.e. expenditure as a percentage of GDP) in the **EU25** stood at 1.90% compared to 1.92% in 2003. R&D intensity remained significantly lower in the **EU25** than in other major economies. In 2003, R&D expenditure was 2.59% of GDP in the **United States**<sup>1</sup>, 3.15% in **Japan**, while it was 1.31% in **China**. R&D expenditure<sup>2</sup> in the **EU25** rose by 1.3% in real terms on average per year between 2001 and 2004, compared to -0.1% in the **United States** and +1.8% in **Japan** between 2001 and 2003.

In 2003 the business sector financed 54% of total **EU25** R&D expenditure, while the shares of the business sector in the **United States** and **Japan** were 63% and 75% respectively.

The EU goals in Research and Development, as set by the Lisbon summit strategy, are to achieve by 2010 a R&D intensity of at least 3% for the EU as a whole, and to have two thirds of R&D expenditure financed by the business sector.

This information comes from **Eurostat, the Statistical Office of the European Communities**.

### R&D intensity varies from 0.3% of GDP in Malta to 3.7% in Sweden

In 2004, the highest R&D intensities among the Member States were registered in **Sweden** (3.74% of GDP) and **Finland** (3.51%), followed by **Denmark** (2.63%), **Germany** (2.49%), **Austria** (2.26%) and **France** (2.16%). The lowest intensities were found in **Malta** (0.29%), **Cyprus** (0.37%), **Latvia** (0.42%) and **Slovakia** (0.53%).

Annual average growth rates of R&D expenditure over the period 2001 to 2004 ranged from +16% in **Estonia**, +15% in **Cyprus**, +12% in **Lithuania** and +10% in **Spain** (between 2001 and 2003) to -4% in **Portugal** (2001-2003) and -2% in **Belgium**, **Slovakia** and **Sweden**.

### Largest shares of R&D financed by business sector in Luxembourg, Finland, Germany and Sweden

The business sector finances the highest share of EU25 expenditure on R&D (54%), followed by the government sector (35%) and funding from abroad (9%). Among Member States, **Luxembourg** (80%) recorded the largest share of R&D expenditure financed by the business sector in 2003, followed by **Finland** (70%), **Germany** (66%), **Sweden** (65%), **Denmark** (61%) and **Belgium** (60%). Three Member States registered shares for the business sector of 20% or less: **Lithuania** (17%), **Malta** (19% in 2002) and **Cyprus** (20%).

## Research and Development expenditure

	R&D intensity, R&D expenditure as % of GDP			R&D expenditure <sup>1</sup>		R&D expenditure financed by business sector, as % of total
	2001	2003	2004	2004 (mio euro)	Annual average growth rate in real terms (%) 2001-2004	2003
<b>EU25</b>	1.93	1.92	1.90p	195 042p	1.3	54.3
<b>Belgium</b>	2.17	1.92	1.93p	5 465p	-2.3	60.3
<b>Czech Republic</b>	1.22	1.26	1.28	1 100	4.5	51.5
<b>Denmark</b>	2.40	2.59	2.63p	5 112p	4.3	61.3
<b>Germany</b>	2.46	2.52	2.49p	55 100p	0.8	66.3
<b>Estonia</b>	0.73	0.82	0.91p	83p	15.6	33.0
<b>Greece</b>	0.64	0.62	0.58p	967p	1.1	30.7
<b>Spain</b>	0.92	1.05	:	8 213*	10.2	48.4
<b>France</b>	2.20	2.18	2.16p	35 648p	0.9	50.8
<b>Ireland</b>	1.12	1.16	1.20	1 780	7.3	59.1
<b>Italy</b>	1.11	1.14	:	14 769*	1.3	:
<b>Cyprus</b>	0.26	0.35	0.37p	46p	15.2	19.8
<b>Latvia</b>	0.41	0.38	0.42	47	8.6	33.2
<b>Lithuania</b>	0.68	0.68	0.76	137	12.2	16.7
<b>Luxembourg</b>	:	1.78	:	426*	3.6	80.4
<b>Hungary</b>	0.95	0.95	0.89	721	1.5	30.7
<b>Malta</b>	:	0.27	0.29p	12p	1.4	18.6**
<b>Netherlands</b>	1.81	1.76	1.77p	8 657p	-0.1	50.9
<b>Austria</b>	2.04	2.19p	2.26p	5 346p	5.1	43.9
<b>Poland</b>	0.64	0.56	0.58	1 139	0.4	30.3
<b>Portugal</b>	0.85	0.78	:	1 020*	-4.3	31.7
<b>Slovenia</b>	1.56	1.54p	1.61p	418p	4.6	59.3
<b>Slovakia</b>	0.64	0.58	0.53	174	-1.8	45.1
<b>Finland</b>	3.38	3.48	3.51	5 253	4.0	70.0
<b>Sweden</b>	4.27	3.98	3.74	10 426	-2.1	65.0
<b>United Kingdom</b>	1.89	1.88	:	30 092*	2.2	43.9
<b>Bulgaria</b>	0.47	0.50	0.51	99	8.2	26.8
<b>Croatia</b>	:	1.14	:	292*	6.7	42.1
<b>Romania</b>	0.39	0.40	0.40	235	:	45.4
<b>Turkey</b>	0.72	0.66**	:	1 280**	-1.0	41.3**
<b>Iceland</b>	3.08	2.97	3.01	297	1.7	43.9
<b>Norway</b>	1.60	1.75	:	3411*	5.2	49.2
<b>China</b>	1.07	1.31	:	16 444*	:	60.1
<b>Japan</b>	3.07	3.15	:	119 748*	1.8	74.5
<b>United States</b>	2.71	2.59p	:	251 577p*	-0.1	63.1

: Data not available

p: estimated or provisional data

EU25: Eurostat estimate

Exceptions to the reference year: \* 2003, \*\* 2002.

% annual average growth is for 2001-2004 except for Luxembourg: 2000-2003; Turkey: 2001-2002; Spain, Italy, Portugal, United Kingdom, Norway, Japan and USA: 2001-2003; Croatia: 2002-2003; Malta: 2002-2004.

Luxembourg: Data for the higher education sector correspond to 2001

Hungary: Including expenditure not allocated to R&D units

USA: Excludes most or all capital expenditure

China, USA and Japan: OECD data

1. Preliminary data.
2. R&D expenditure is expressed in million current euro while the annual average growth rates in real terms of R&D expenditure are calculated from expenditure expressed in million constant 1995 Purchasing Power Standard (PPS). PPS is an artificial currency that reflects differences in national price levels that are not taken into account by exchange rates. This unit allows meaningful volume comparisons of economic indicators over countries. Aggregates expressed in PPS are derived by dividing aggregates in current prices and national currency with the respective Purchasing Power Parity (PPP).

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