



Research in the private sector in Flanders

Facts and figures extracted from the 2008 OECD R&D survey - profit

Every two years the Centre for R&D Monitoring, in collaboration with the Flemish government Department of Economy, Science and Innovation and the Belgian Federal Science Policy Office, carries out an OECD based survey on the R&D activities of Flemish companies. This leaflet highlights a number of remarkable figures from the 2008 R&D survey (reference year 2007) with a focus on the private research efforts. Some figures for 2008 from the CIS-survey are also included. The full analysis can be found in *Vlaams Indicatorenboek WTI 2009* (in Dutch only).

General results

The OECD R&D surveys examine both R&D expenses and the number of research personnel in the private and public sector.

R&D figures for Flanders in 2007

	Total R&D expenses or GERD (in million euro)	GERD/ GDP(R) = R&D intensity	R&D personnel (in FTE)	R&D personnel (%)
Private sector (BERD)	2,650	1.40%	22,037	61.3
Public sector (non-BERD)	1,197	0.63%	13,916	38.7
TOTAL	3,847	2.03%	35,953	100

Source : 3% memorandum - Centre for R&D Monitoring

Total R&D intensity in the Flemish Region in 2007 amounted to 2.03 % of the GD(R)P. About two thirds of R&D expenses were performed by the private sector (BERD) and one third by the public sector (non-BERD). When examining the source of financial resources for research activities, we find that about 1.50% (74%) is private funding and 0.53% (26%) is public funding. This leaflet focuses all attention on the research efforts of private research institutes. More details about the public research efforts can be found in the leaflet 'Research in the public sector in Flanders - Key Figures 2010 Edition'.

Flemish companies are the most important sub-sector of the private sector. In addition, collective centres also belong to the private sector. Although the majority of collective centres are non-profit organisations, they are closely linked to certain companies as they are established and funded by the companies themselves. Research stations (e.g. Proefcentrum Fruitteelt vzw) and the centres of excellence (e.g. Vlaams Instituut voor de Logistiek) are examples of collective centres.

R&D staff

In 2007 about 22,037 full-time R&D equivalents were performing R&D activities. This figure shows a slight increase in the past five years (+5.6%).

Evolution of R&D personnel in the private sector (1993-2007)



in full-time equivalents

The male-female ratio based on a sample survey was approximately 73/27. Compared to 2005, there was a slight increase in the number of female R&D staff.

Based on the same sample, about 58.5% of R&D personnel in companies were university graduates and about 64% were employed as researchers.

Breakdown of R&D personnel by NACE Code (2007)

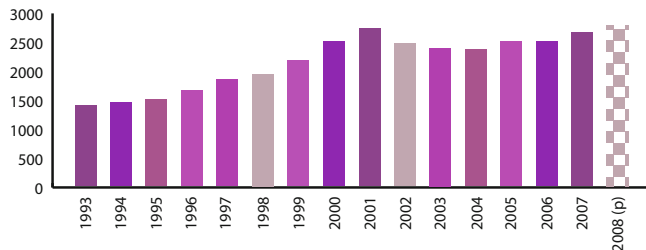
Sector	NACE codes	Share (%)	Share R&D personnel/ Total Personnel
1	10-12	6%	3.3%
2	13-15	1%	1.9%
3	16-18,31	1%	2.0%
4	19-22	28%	12.0%
5	24-25	6%	4.9%
6	26-27	18%	19.7%
7	28-30	11%	5.3%
8	01-09,23,32-37,41-43	4%	3.6%
9	61,6201,71	17%	22.8%
10	45-53,58-60,62-70,73-99	8%	3.5%
	TOTAL	100%	

Note: The sectors are – 1: Food and tobacco; 2: Textile, wearing apparel and leather; 3: Paper, printing and furniture; 4: Chemistry, refineries, pharmaceutical products, rubber and synthetics; 5: Metal and related metallic products; 6: Informatics, electronics, optics and electrical equipment; 7: Machinery and transport; 8: Other industry; 9: Telecommunications, computer software, engineering, technical testing and analysis; 10: Other services

R&D expenditure

The R&D expenses in the public sector amounted to 2,650 million euro (an increase by 7% in comparison with 2002).

Evolution of R&D expenses in the private sector (1993-2007)



Based on the 2009 CIS results, the Centre for R&D Monitoring calculated that R&D expenditure by companies further increase in 2008 to more than 2,740 million euro (+5.30%). This figure doesn't include R&D expenses of collective centres.

2008 (p): provisional figure for BERD 2008, R&D expenses 2008 based on CIS 2009 and R&D expenses collective centres constant compared to 2007.

in million euro

Breakdown of R&D expenses by NACE Code (2007)

Sector	NACE codes	Share (%)	Share R&D expenses / Sales
1	10-12	4%	0.6%
2	13-15	1%	0.6%
3	16-18,31	1%	0.4%
4	19-22	39%	3.5%
5	24-25	5%	1.0%
6	26-27	16%	6.0%
7	28-30	10%	1.6%
8	01-09,23,32-37,41-43	4%	1.1%
9	61,6201,71	14%	9.0%
10	45-53,58-60,62-70,73-99	6%	0.5%
	TOTAL	100%	

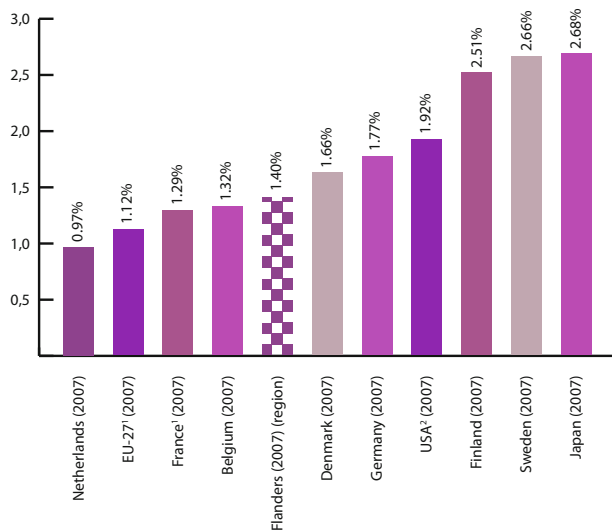
Evolution of R&D intensity (BERD/GDP(R)) between 1993 and 2007

Year	1993	1998	2002	2005	2007
Companies + collective centres	1.29%	1.48%	1.61%	1.44%	1.40%

Total R&D intensity of BERD (1.40%) can be split up into companies (1.37%) and collective centres (0.03%). R&D intensity of BERD also can be classified by source of funds: private funders (1.33%) and public funders (0.07%).

International comparison

BERD R&D intensity



R&D intensity of companies and collective centres (profit sector) amounted to 1.40% in 2007. This is an average score internationally compared. Scandinavia, Japan and the USA scored higher, while Flanders performs better than the EU-27 figure.

Source: OECD, *Main Science and Technology Indicators*, Volume 2009/2

¹ provisional (France), OECD secretariat estimate EU-27

² most or all capital expenditure

Glossary

BERD	Business Expenditures on R&D
CIS	Community Innovation Survey
FTE	Full-time equivalent
GERD	Gross Expenditures on R&D
GD(R)P	(Regional) Gross Domestic Product
GOVERD	Governmental Expenditures on R&D
HERD	Higher Education Expenditures on R&D
OECD	Organisation for Economic Co-operation and Development
PNP	Private Not for Profit Organisation Expenditures on R&D
R&D	Research & Development
R&D intensity	GERD / GD(R)P

More information

More information can be found in the publication Vlaams Indicatorenboek WTI 2009 by the Centre for R&D Monitoring (in Dutch only) (available at: www.ewi-vlaanderen.be/publicaties or www.ecoom.be).

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