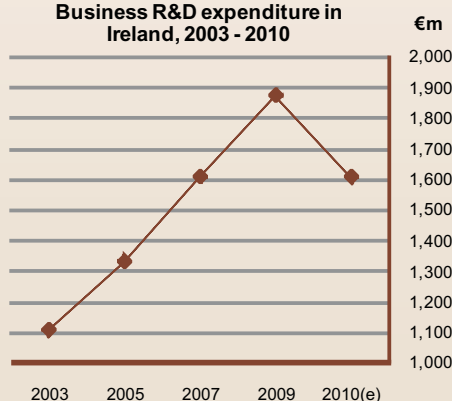




## Business Expenditure on Research and Development 2009/2010

### Revised Preliminary Findings

Business R&D expenditure in Ireland, 2003 - 2010



(e): Estimated expenditure

This release presents preliminary results from the Business Expenditure on Research and Development (BERD) Survey 2009/2010 of enterprises in Ireland. It is expected that a more detailed report will be published in the coming months.

The BERD Survey is jointly conducted by the CSO and Forfás to increase efficiency in the collection of statistical data and to reduce the burden on participating enterprises. Data was collected in accordance with Section 33 of the Statistics Act, 1993 and with EU law. The survey was carried out under the agreed set of international rules as laid out in the OECD Frascati manual.

See *Background Notes on page 4* for further information.

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### Total business expenditure on research and development by size of enterprise, 2003 - 2010

	2003	2005	2007	2009	2010 <sup>1</sup>
Small (<50 persons engaged)	265	320	278	300	326
Medium/Large (50+ persons engaged)	840	1,009	1,325	1,568	1,276
Total expenditure	1,105	1,329	1,603	1,868	1,602

Source: CSO/Forfás - Business Expenditure on Research and Development, 2009 - 2010

<sup>1</sup>Estimated expenditure

### Almost €1.9bn spent on research and development activities

Preliminary figures indicate that in 2009 almost €1.9bn was spent on research and development activities by enterprises across all business sectors in Ireland.

Estimates of expected expenditure in 2010 indicate that the research and development spend will be just over €1.6bn.

Small enterprises with less than 50 persons engaged spent €300m on research and development in 2009, while medium/large enterprises with 50 or more persons engaged spent almost €1.6bn.

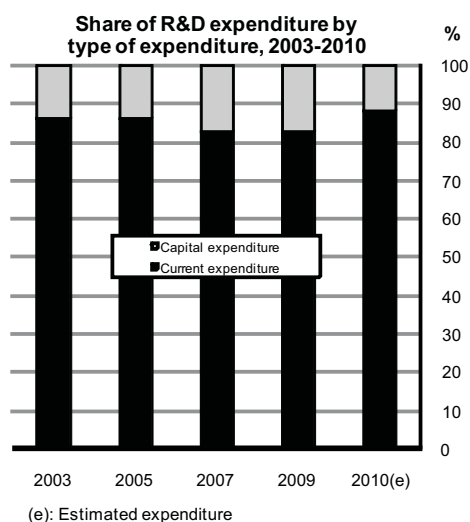
Estimated figures for 2010 indicate that the spend for small enterprises would be €326m, with a corresponding figure of €1.28bn for medium/large enterprises.

Preliminary figures for 2009 in this release also show that:

- ◆ Current expenditure on research and development activities was €1.54bn while capital expenditure was €326m. See *Table 1*.
- ◆ A total of 15,773 personnel were involved in research and development activities which equates to a full time equivalent (FTE) figure of 11,959. See *Tables 2 & 5*.
- ◆ There were 8,960 persons engaged as researchers working on research and development activities, while 3,572 persons were engaged as technicians and 3,241 as support staff. There were 7,732 FTE researchers, 2,599 FTE technicians and 1,628 FTE support staff. See *Tables 3 & 5*.
- ◆ There were 11,601 male and 4,172 female research personnel engaged in enterprises. See *Table 4*.
- ◆ There were 1,282 enterprises engaged in research and development activities in Ireland in 2009 and almost a third of these enterprises spent €500,000 or more. See *Table 6*.

The figures in this release are preliminary and are subject to revision. Final results are expected in April 2011.

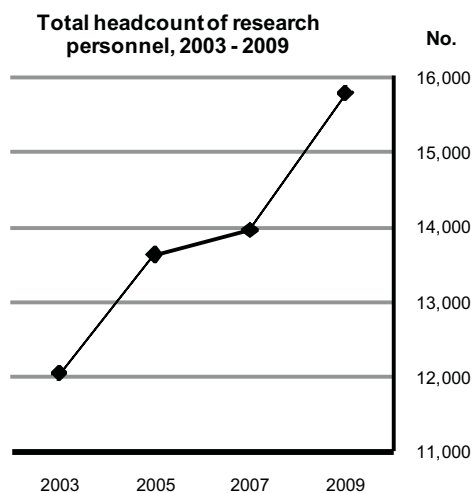
For further information contact Carol Anne Hennessy (CSO) 021 453 5161 or Jonathan Healy (Forfás) 01 607 3273.



**Table 1 Business expenditure on research and development by type of expenditure, 2003 - 2010**

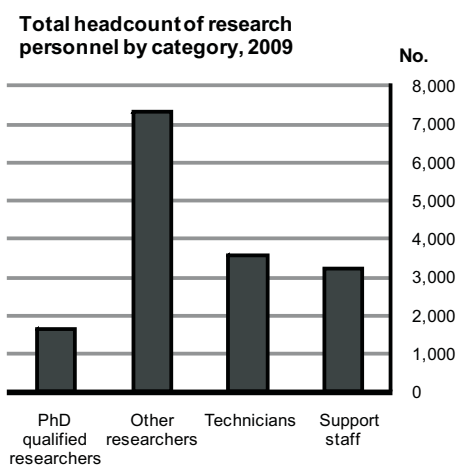
	2003	2005	2007	2009	2010 <sup>1</sup>
Current expenditure	952	1,140	1,324	1,543	1,398
Capital expenditure	153	189	279	326	203
<b>Total expenditure</b>	<b>1,105</b>	<b>1,329</b>	<b>1,603</b>	<b>1,868</b>	<b>1,602</b>

1: Estimated expenditure



**Table 2 Total headcount of research personnel by size of enterprise, 2003 - 2009**

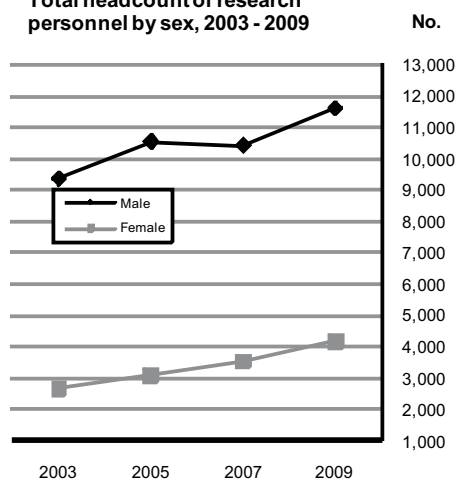
	2003	2005	2007	2009
Small (<50 persons engaged)	4,669	5,287	3,815	4,443
Medium/Large (50+ persons engaged)	7,367	8,335	10,135	11,330
<b>Total research personnel (headcount)</b>	<b>12,037</b>	<b>13,621</b>	<b>13,950</b>	<b>15,773</b>



**Table 3 Total headcount of research personnel by category, 2003 - 2009**

	2003	2005	2007	2009
Researchers	6,611	7,696	8,242	8,960
of which:				
PhD qualified researchers	466	830	1,179	1,639
Other researchers	6,145	6,866	7,063	7,321
Technicians	2,799	3,095	2,949	3,572
Support staff	2,627	2,830	2,760	3,241
<b>Total research personnel (headcount)</b>	<b>12,037</b>	<b>13,621</b>	<b>13,950</b>	<b>15,773</b>

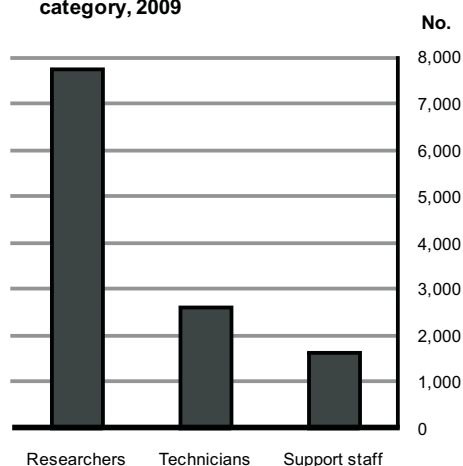
**Total headcount of research personnel by sex, 2003 - 2009**



**Table 4 Total headcount of research personnel by sex, 2003 - 2009**

	No.			
	2003	2005	2007	2009
Male	9,367	10,547	10,428	11,601
Female	2,670	3,074	3,522	4,172
<b>Total research personnel (headcount)</b>	<b>12,037</b>	<b>13,621</b>	<b>13,950</b>	<b>15,773</b>

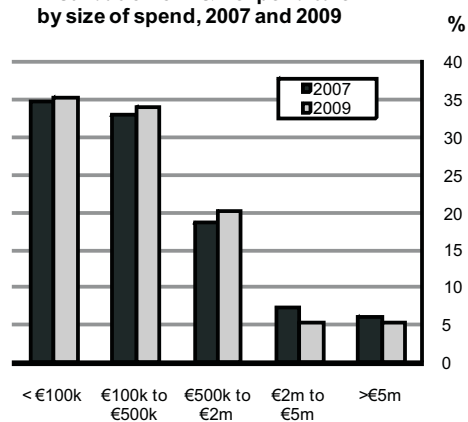
**FTE research personnel by category, 2009**



**Table 5 Full time equivalent (FTE) research personnel by category, 2003 - 2009**

	No.			
	2003	2005	2007	2009
Researchers	6,012	6,768	7,262	7,732
Technicians	1,909	2,314	2,156	2,599
Support staff	1,359	1,256	1,539	1,628
<b>Total research personnel (FTE)</b>	<b>9,280</b>	<b>10,338</b>	<b>10,956</b>	<b>11,959</b>

**Distribution of R&D expenditure by size of spend, 2007 and 2009**



**Table 6 Number of enterprises with expenditure on research and development by size of spend, 2003 - 2009**

	No.			
	2003	2005	2007	2009
< €100,000	451	546	419	451
€100,000 to €500,000	411	453	398	435
€500,000 to €2,000,000	181	253	226	260
€2,000,000 to €5,000,000	39	68	90	69
>€5,000,000	42	50	73	67
<b>Total enterprises</b>	<b>1,125</b>	<b>1,370</b>	<b>1,206</b>	<b>1,282</b>

## Background Notes

- Introduction** The Business Expenditure on Research and Development (BERD) Survey 2009-2010 is a survey of the research and development activities of enterprises in Ireland and other EU Member States. The BERD Survey is carried out under Commission Regulation (EC) No 753/2004 implementing Decision No 1608/2003/EC. The survey collected information about the research and development activities of enterprises across all business sectors of the economy. Most questions gather information on the spending and performance of research and development.
- Source** The BERD Survey is jointly conducted by the CSO and Forfás under Section 11 of the Statistics Act, 1993 to increase efficiency in the collection of statistical data and to reduce the burden on the participating enterprises. Data was collected in accordance with Section 33 of the Statistics Act, 1993 and with EU law. The survey was carried out under the agreed set of international rules as laid out in the OECD Frascati manual. Data is strictly confidential and will be used only for statistical purposes.
- Survey** The BERD Survey is a target survey which is issued to all enterprises which are believed to be actively engaged in research and development across all business sectors of the economy. These enterprises were identified from various sources which included previous responses to the survey, other CSO and Forfás data and other administrative sources.
- Questionnaire** The BERD questionnaire is available from [http://www.cso.ie/surveysandmethodologies/surveys/industry/bus\\_exp\\_res\\_dev.htm](http://www.cso.ie/surveysandmethodologies/surveys/industry/bus_exp_res_dev.htm)
- Definition** **Research and Development:** Research and Development (R&D) is creative work undertaken on a systematic basis in order to create new or improved products, processes, services or other applications. R&D is distinguishable from other activities by the presence of an appreciable element of novelty and by the resolution of problems and uncertainties using scientific or technological means. Routine activities, such as routine software development, routine monitoring/analysis or pre-production preparation, where there is no appreciable novelty or problem resolution, are not considered to be R&D for the purpose of this survey.
- The business classification used for BERD 2007/2008 was the Statistical Classification of Economic Activities in the European Community NACE Rev 1.1. BERD 2009/2010 used NACE Rev. 2 classification. Therefore; conclusions should not be drawn regarding the direction or scale of any changes between BERD 2007/2008 and BERD 2009/2010. Results for previous years are included but comparisons should be treated with caution.