Dedicated Biotechnology Firms*

The number of dedicated biotechnology firms[1] (DBFs) per million inhabitants is highest in Sweden, Switzerland and Canada. If a wider definition is considered then there are a high number of biotechnology firms in New Zealand, as 47 firms per million inhabitants identified at least one biotechnology process.

The order of countries is relatively unaffected when considering the ratio of dedicated biotechnology firms to millions of GDP (expressed in USD PPPs). However, dedicated biotechnology firm ratios do not take into consideration the size of the firms involved.

Over half of dedicated biotechnology firms in the University of Siena study were involved in cell and tissue culture and engineering, DNA or proteins and molecules. These three areas accounted for 55 per cent of areas in which dedicated biotechnology firms were involved.

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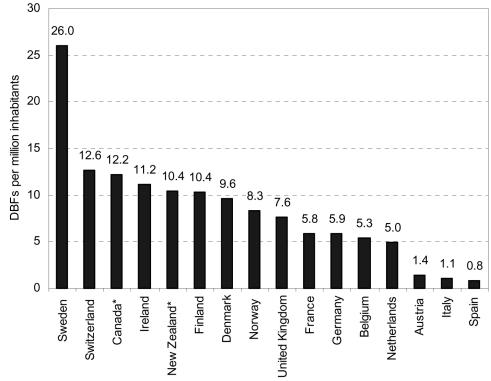
* Based on Devlin, Andrew (2003). "An Overview of Biotechnology Statistics in Selected Countries." *STI Working Paper 13*, OECD.

1 Dedicated biotechnology firms are defined as "core biotechnology firms". These firms specialise in biotechnology products and process development, or are specialised suppliers ("Innovation and Competitiveness in European Biotechnology", European Commission 2002.)

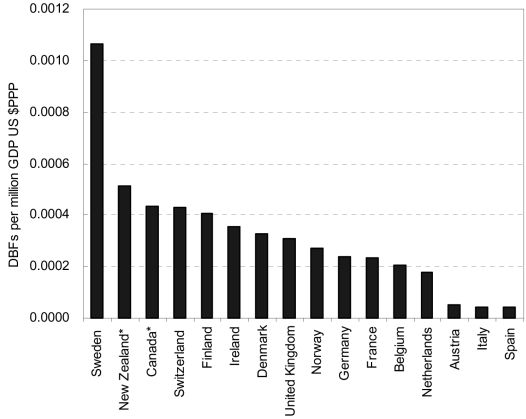
Figure 1. Dedicated biotechnology firms per million inhabitants, 2000



Notes: New Zealand reports data for 1998-99 for firms identifying at least one biotechnology process. All other country data are for December 2000. Biotechnology definitions have not been harmonised across countries so some differences may be due to definitional differences.

Source: Biotechnology Industry database, University of Siena, Statistics Canada, Statistics New Zealand. *The University of Siena is the source for all countries except for Canada and New Zealand.

Figure 2. Dedicated biotechnology firms per million GDP USD PPP, 2000



Notes: New Zealand reports data for 1998/99 for firms which identified at least one biotechnology process. Canada reports data for 2001. All other country data are for December 2000. Biotechnology definitions have not been harmonised across all countries, so some differences may be due to definitional differences.

Sources: Biotechnology Industry Database, University of Siena, Statistics Canada, Statistics New Zealand. *The source is University of Siena for all countries except for Canada and New Zealand.

Table 1. Country shares of dedicated biotechnology firms by technological fields

	France	Germany	Italy	Sweden	Switzerland	United Kingdom	EU 15	Other
Cell and tissue culture and engineering	16.9	14.0	21.2	26.3	22.3	22.9	18.7	21.1
Sub-cellular organisms	8.5	9.0	14.2	3.9	4.5	5.9	8.1	5.3
DNA	17.6	17.2	11.5	11.2	9.8	11.7	15.0	17.1
Proteins and molecules	22.1	25.6	15.9	13.4	15.2	17.0	21.6	25.0
Process biotechnology	12.6	5.7	14.2	7.8	9.8	10.4	9.4	10.5
Chemical synthesis	7.4	9.4	7.1	11.2	3.6	6.7	7.6	5.3
Bioinformatics	6.2	6.6	2.7	6.7	6.3	4.9	5.4	6.6
Other devices	5.0	7.5	12.4	10.6	24.1	17.2	10.0	6.6
Analysis	3.7	4.8	0.9	8.9	4.5	3.3	4.2	2.6

Note: The column sums for each country may not add to 100% due to rounding.

The data refer to the numbers of firms and so have not been weighted by size of firm.

Other countries are the Czech Republic, Estonia, Hungary, Iceland, Lithuania, Norway, Poland, Portugal, Romania, Russia and the Slovak Republic.

Source: Biotechnology Industry Database, University of Siena.