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## Denmark

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## DENMARK

Denmark is one of the stronger OECD members on a number of science and innovation indicators. It has a modern open market economy featuring a high-technology agricultural sector and a sophisticated manufacturing industry, with world leaders in pharmaceuticals, maritime shipping and renewable energy. It has a large government R&D budget and high expenditure on biotechnology and pharmaceutical R&D. In 2008, Denmark's gross domestic expenditure on R&D (GERD) was 2.7% of GDP, firmly above the OECD average of 2.3%. Industry-financed GERD increased to 61%, while government-funded GERD declined to 25%. Business expenditure on R&D (BERD) was a comparatively high 1.9% of GDP in 2008; as a percentage of industry value added, this was almost double the OECD average. In that year, Denmark also had a high venture capital intensity of 0.16%, well above the average.

Denmark's R&D inputs translate into solid outcomes. It has a comparatively high 60 triadic patents per million population and its 1 359 scientific articles per million population are well above the average. During 2004-06 an above-average 16% of firms introduced new-to-market product innovations, while a close-to-average 47% of firms undertook non-technological innovation.

Innovation linkages are strong: in 2005-07, a relatively high 16% of firms collaborated on innovation activities, and a

noteworthy 19% of patents were developed with foreign co-inventors. In 2008, 9.7% of GERD was financed from abroad, above the OECD average.

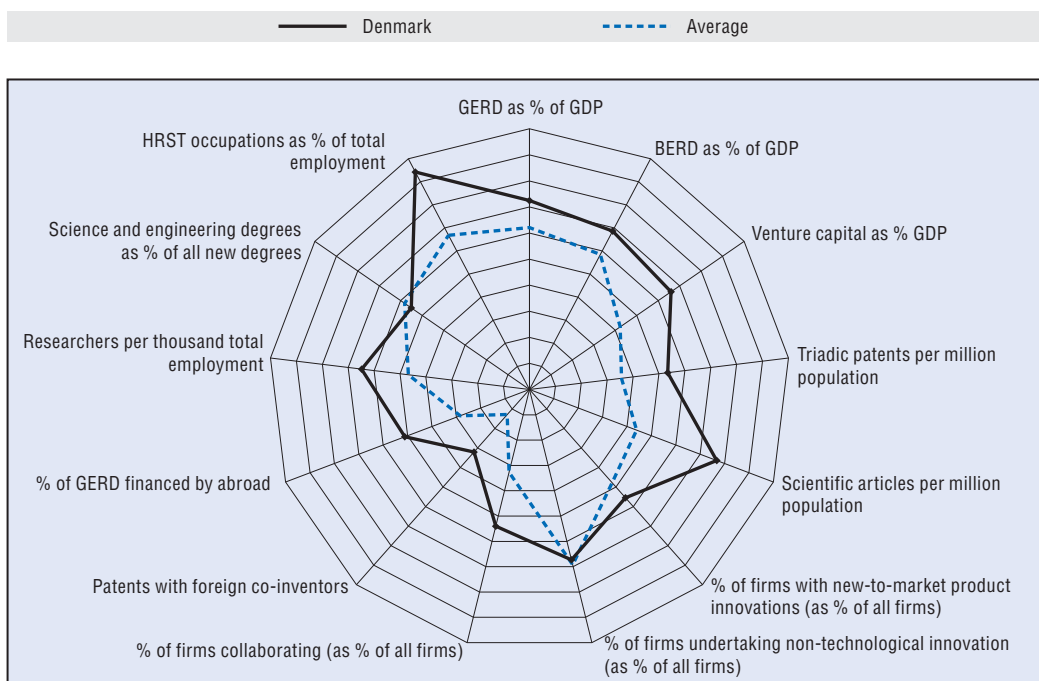
Denmark's indicators on human resources in science and technology (HRST) are quite robust. With ten researchers per thousand employment, it ranks fifth in the OECD area. Science and engineering degrees account for 20% of all new degrees, slightly below the OECD average, but the 39% of HRST occupations in total employment is the third highest in the OECD area.

During 2001-08, average annual growth of GDP eased compared to previous periods. The global financial crisis severely affected the economy, with GDP contracting by 1% in 2008 and by 5% in 2009. The historically low unemployment rate doubled to 6.5% in 2009.

GDP per capita was 78% relative to the United States in 2008. Denmark's labour productivity growth has been declining since the 1980s, and its average annual growth rate of 0.5% between 2001 and 2008 is well below the OECD average of 1.7%.

Denmark's Globalisation Strategy aims to invest more than DKK 40 billion by 2012 in research, education, innovation and entrepreneurship. R&D and innovation policies in Denmark have been broad-based. A period of co-ordination and evaluation is now under way.

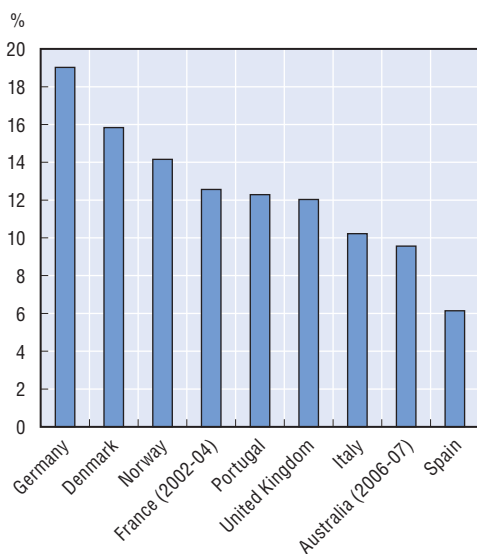
### Science and innovation profile of Denmark



StatLink <http://dx.doi.org/10.1787/88893233519>

#### Firms with new-to-market product innovations

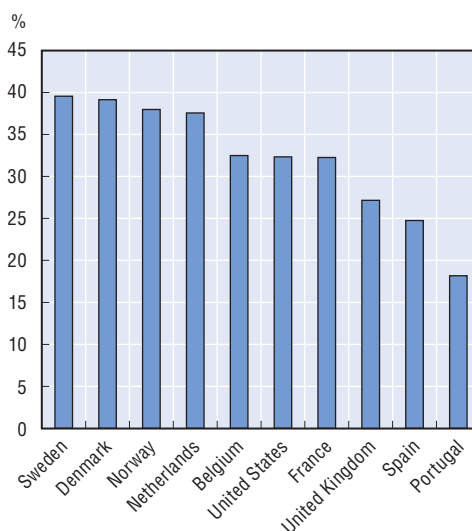
As a percentage of all firms, 2004-06



StatLink <http://dx.doi.org/10.1787/88893233538>

#### HRST occupations in total employment

As a percentage of total employment, 2008



StatLink <http://dx.doi.org/10.1787/88893233557>