

# The impact of EU membership on UK physics

Membership of the European Union (EU) affects UK physics in a variety of ways. This briefing contains information on areas in which EU membership impacts physics in the UK – including on funding, collaboration and people.

- The UK receives around 12% of all EU R&D budget appropriations, a proportion only behind that of Germany and France (2013 figures).<sup>1</sup>
- The UK was seventh in terms of its success rate for research proposals to the Seventh Framework Programme (2007–2013), with a success rate of 22.6%.<sup>2</sup> Belgium was the top performer with a success rate of 26.3%. The UK's successful applications represented around £500m per year (or around 10% of the UK's national science budget). The UK leveraged an average of around 15–20% of all budgets across the previous three previous Framework Programmes (5–7).<sup>3</sup> The UK also receives around 25% of all European Research Council (ERC) grants.<sup>4</sup>
- The total research grant income that UK physics departments received from all sources in 2013/14 was just over £285m.<sup>5</sup> Of this, £226m came from UK sources, representing around 79% of all income. Physics departments' funding from EU sources (including government, charity and industry sources based in the EU) amounted to just under £50m, of which nearly 95% came from EU government bodies. This represents around 18% of the total funding received by physics departments in 2013/2014. This is a slightly greater figure than the average across the sector, where around 16% of funds came from EU sources. The difference is slightly greater when only looking at EU government sources: in physics around 17% of total funding was from this source, against around 13% for the sector as a whole. A relatively small amount of funding is available from countries outside the EU for UK researchers compared to EU and UK funding sources.<sup>6</sup>
- Member states' contribution to the EU budget is determined by their share of GDP in the EU. The UK contribution to the budget between 2007 and 2013 was just under 11% of all funds.<sup>7</sup>
- UK science is extremely collaborative, and UK researchers are among the most collaborative of all EU countries. Nearly one in five publications submitted to the Research Excellence Framework in 2014 in physical sciences had an EU collaborator.<sup>8</sup> More than 55% of UK publications between 2008 and 2014 had foreign co-authors, with four of the top five collaborative countries being EU countries.<sup>9</sup>

- Approximately 14% of all research and teaching staff in all UK higher education departments are from other EU countries, and around 11% of all staff are from non-EU countries (2013/14 data).<sup>10</sup> Within UK physics departments however, nearly a quarter, 24%, of all research and teaching staff are from other EU countries, with 16% of staff being from other non-EU countries.
- In 2013, non-UK EU students made up around 5% of all students at UK universities.<sup>11</sup> In physics departments the situation is similar, with non-UK EU students making up 5.4% of all students in undergraduate departments. This has however fallen slightly since the introduction of the new fees regime in 2012.
- Of the relatively small number of taught master's students in physics (compared to the sector average), 12.3% of all students were from non-UK EU countries, compared to 9.7% across the sector. With increasing numbers of UK students taking up four-year enhanced undergraduate courses with an additional master's year<sup>12</sup>, taught master's courses in physics tend to be more attractive to non-UK students. EU students were an even more significant group in terms of doctoral study, with 17.2% of all physics doctoral students coming from non-UK EU countries, compared to 13.1% in the sector as a whole.

For a full assessment of the impact of EU membership on UK science, see **the Institute's response** to the House of Lords Science and Technology Committee's inquiry.

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<sup>1</sup> UNESCO. Science Report 2015: Towards 2030, 2015: <http://unesdoc.unesco.org/images/0023/002354/235406e.pdf>

<sup>2</sup> UNESCO, 2015

<sup>3</sup> European Commission Joint Research Centre. European university funding and financial autonomy: A study on the degree of diversification of university budget and the share of competitive funding, 2011: <http://ftp.jrc.es/EURdoc/JRC63682.pdf>

<sup>4</sup> Technopolis Group, carried out on behalf of the International Science and Innovation Unit within the Department for Business, Innovation and Skills (BIS). The impact of the EU RTD Framework Programme on the UK, May 2010: [https://ec.europa.eu/research/evaluations/pdf/archive/fp7-evidence-base/national\\_impact\\_studies/impact\\_of\\_the\\_eu\\_rtd\\_framework\\_programme\\_on\\_the\\_uk.pdf](https://ec.europa.eu/research/evaluations/pdf/archive/fp7-evidence-base/national_impact_studies/impact_of_the_eu_rtd_framework_programme_on_the_uk.pdf)

<sup>5</sup> HESA data

<sup>6</sup> Vitae. Where to find sources of academic research funding: [www.vitae.ac.uk/researcher-careers/pursuing-an-academic-career/research-funding/where-to-find-sources-of-academic-research-funding](http://www.vitae.ac.uk/researcher-careers/pursuing-an-academic-career/research-funding/where-to-find-sources-of-academic-research-funding)

<sup>7</sup> Gabriele Cipriani. Funding the EU Budget: Moving Forward or Backwards?, 2014: [www.ceps.eu/system/files/Financing%20the%20EU%20budget\\_Final\\_Colour.pdf](http://www.ceps.eu/system/files/Financing%20the%20EU%20budget_Final_Colour.pdf)

<sup>8</sup> EPSRC. Investing in excellence, delivering impact for the UK: Insights from the Research Excellence Framework 2014, 2015: [www.epsrc.ac.uk/newsevents/pubs/refreport2015/](http://www.epsrc.ac.uk/newsevents/pubs/refreport2015/)

<sup>9</sup> UNESCO, 2015

<sup>10</sup> HESA data

<sup>11</sup> HESA data

<sup>12</sup> UCAS data

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