



# The impact of doctoral careers

*Summary of key findings*

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This paper provides a summary of the key findings from the Doctoral impact and career tracking study. With little known about the medium term career paths and destinations of doctoral graduates the study provides new insight into the impact they have when working outside of higher education.

The research examines their current role and career history, value to employers, contribution to innovation and wider socio-economic impact.

## Doctoral graduates' value to employers

For those businesses that employ staff with PhDs, such is the value placed on their specialist knowledge, research skills and problem-solving ability, that three quarters of employers taking part in the research said their loss would have either a business critical or significant impact on operations. One in five employers said that doctoral graduates were business critical – without them their business could not function. This was particularly the case in the research and development and manufacturing and engineering sectors and in businesses that are built on science and technology.

Employers value doctoral graduates' deep specialist subject knowledge, excellent research and analytical skills, their capacity for critical thinking, as well as their ability to bring fresh perspectives to problems or the organisation. These skills enable doctoral graduates to innovate, developing new or

improved goods, services, processes and ways of working. The full report provides examples of a multitude of ways in which doctoral graduates have contributed to innovation: from improved telecommunications products to the detection of cybercrime; from creating new flavours for the food industry to reducing the multiple births resulting from fertility treatment; and from an iPad app allowing users to explore exhibits in a museum to speeding up the assessment of financial claims.

## Badge of quality

The evidence shows how doctoral graduates can boost the profile and credibility of an organisation, with the doctorate acting as a mark of quality and authority. When it is important for outputs to be innovative, rigorous or evidence based, having a PhD on board can help to provide this reassurance. Some employers in the study talked about winning new clients due to the expertise of doctoral graduates or gaining recognition through awards or high profile projects where doctoral graduates played a role.

Employers also reported that doctoral graduates help them to acquire new clients, markets and income streams, which contribute to improved profitability or sustainability. They also gave examples of how doctoral graduates help to increase productivity, make processes more efficient and generate savings, which in turn enhance competitiveness.

## Connecting ideas to industry

Recent government analysis of UK innovation sets out the importance of 'absorptive capacity'. This is a firm's ability to identify, adapt and integrate new technologies and ideas. Doctoral graduates help to foster innovation by contributing to their employer's

absorptive capacity through collaboration and engagement with universities. 75 per cent of doctoral graduates responding to the survey stated that they had been engaged in collaborative projects, promoting knowledge exchange between universities and industry. Employers explained how doctoral graduates bring with them the cutting edge knowledge and ideas which can then be applied for commercial benefit.

## Raising the game of those they work alongside

The benefits don't just stop with the individual with the PhD. The research also demonstrates the different ways in which the skills and attitudes of doctoral graduates can 'spillover' to other employees. The vast majority of graduates responding to the research said they had been involved in improving the problem solving skills of others or helping them to think more creatively. This was corroborated by their employers, who described how doctoral graduates encourage, support and inspire those they work alongside to achieve more and better. Doctoral graduates ask questions, bring new ideas and knowledge to a company and offer fresh perspectives on old problems.

## Find out more

The doctoral impact and career tracking study was commissioned by Research Councils UK (RCUK) and the higher education funding bodies for England and Wales (HEFCE and HEFCW). The aim was to explore the career paths and impact generated by doctoral graduates in the medium term, with a particular focus on those working outside of academia. The study surveyed 1,839 people who had graduated with a doctorate from a UK institution between 2003-04 and 2005-06 (four per cent of the total

population of doctoral graduates for these years). The researchers also interviewed 268 of those who completed the survey and 96 employers of doctoral graduates.

A copy of the full report, along with shorter briefings targeted at policy makers, employers and current and potential doctoral student can be found at:

[www.rcuk.ac.uk/skills/impact](http://www.rcuk.ac.uk/skills/impact)

Survey data from the study will be deposited with the UK Data Archive for other researchers to use:

<http://www.data-archive.ac.uk/>