INDUSTRIAL STRATEGY: POSTGRADUATE EDUCATION’S ROLE IN DELIVERING THE RESEARCH AND DEVELOPMENT TARGET

On the 20th November 2017 the UK Government published its Industrial Strategy white paper. This had the aim of boosting productivity, creating jobs and increasing people’s earning power through investment in skills, industries and infrastructure. The objectives of the Industrial Strategy have a direct impact on the UK research community both in private sector and higher education institutions.

This UKCGE Policy Briefing presents the strands most relevant to postgraduate education and provides an overview of its potential impact on the sector.

THE RESEARCH AIMS OF THE INDUSTRIAL STRATEGY WHITE PAPER
A key strand of the Industrial Strategy will be to boost spending on R&D to 2.4% of GDP by 2027, an increase of 43.7% against the current GDP spend of 1.67%.

In his speech on 31st January 2019 the Universities Minister, Chris Skidmore MP, acknowledged that meeting the target set by the Industrial Strategy will depend on growing the number of PhD enrolments:

“As part of the Industrial Strategy, the government has committed to achieving 2.4% investment in R&D by 2027. But this money is not going to make a difference without a strong talent base. That is why we need to be thinking now about how we can get more people staying on for PhDs in the future.”

HOW MANY POSTGRADUATE RESEARCHERS WILL IT TAKE TO INCREASE THE UK’s R&D EXPENDITURE?
According to Office for National Statistics data relating to 2016, Higher Education accounts for 24% – approximately £8 billion – of the UK’s gross domestic expenditure on R&D. This figure rises to 31% when combined with the contribution made by Research Councils.

In addition to providing a strong talent base for R&D within business and industry, postgraduate researchers make a direct impact on a country’s R&D profile during their course of study. Their research activities therefore accounts for a proportion of the 31% R&D contribution from Higher Education and Research Council.
According to the international standards laid out by the Frascati Manual (2015, Section 9.34, p.266), doctoral students should be counted in a country’s R&D expenditure, along with ‘some’ research master’s programmes. However, the manual notes that some of the expenditure on postgraduate research should be excluded, on the grounds that it involves ‘highly structured study schemes, set courses and compulsory laboratory work’, which fail to meet the criterion of ‘novelty’ set out in the definition of R&D

Assuming three-quarters of postgraduate research time is spent on R&D, to meet the Government’s target would require a 10.16% rise in postgraduate researcher enrolments.

IS A 10.16% RISE IN POSTGRADUATE RESEARCHER ENROLMENTS ACHIEVABLE BY 2027?

Over the last 10 years, there has been a 22% increase in postgraduate researcher enrolments: from 28,905 in 2007/8 to 35,340 in 2016/17. To meet the 10.16% increase by 2027, there will need to be 38,931 enrolments, or an additional 3,591 enrolments compared to 2016/17.

HESA data shows, however, that between 2012/13 and 2016/17, there were 3 years in which there was a year-on-year decline in enrolments in postgraduate research programmes. The high-water mark was 2014/15, when 36,320 students were enrolled.

THE NEED FOR A POSTGRADUATE RESEARCH GROWTH STRATEGY

In addition, to these broader trends, a major countervailing pressure will be the impact of Brexit on EU postgraduate researchers. The Russell Group issued a statement on 4th January 2019 which indicates that among their members there has been a -9% drop in EU postgraduate researchers in both 2017/18 and 2018/19.

This trend is replicated among all non-UK enrolments across all HE providers: down -9% to 15,115 in 2016/17 from the high point of 16,590 in 2013/14.

These trends in postgraduate research enrolments shows that a 10.16% growth by 2027 will not happen by itself. The Industrial Strategy will depend on the strategic development of the postgraduate researcher pipeline.

If you would like to comment on or suggest amendments to this Policy Briefing, please write to the UKCGE’s Director at owen.gower@ukcge.ac.uk
References


v 43.7% rise in R&D expenditure would require a 13.54% increase in Higher Education and Research Council contribution (that is, 31% of 43.7). This in turn would require a 10.16% rise in postgraduate researcher enrolments (that is, ¾ of 13.54%).

vi https://russellgroup.ac.uk/news/fall-in-eu-student-numbers/

vii HESA SFR247 Figure 8 - https://www.hesa.ac.uk/news/11-01-2018/sfr247-higher-education-student-statistics/location