



Irish Research Staff Association (IrishRSA) submission to the Oireachtas Joint Committee on Education, Further and Higher Education, Research, Innovation and Science on Future Funding of Higher Education

Ref: JCES-I-2022-[062]

Date of submission: 16th March 2022

Executive summary:

Investment in research in higher education institutions (HEI) yields substantial returns to the Irish economy and wider society. Despite substantial funding to the HEI sector in general, and increasing numbers of PhD students and postdoctoral researchers, the number of academic staff positions and secure, full-time posts for research staff has only increased by a fraction, leading to heightened precarity for research staff. There also is currently a lack of good quality and regularly updated data on research staff numbers within the HEI sector.

We are making the following recommendations:

- (1) The creation of dual or triple track career path options for researchers: research-focused, teaching-focused and administrative career tracks, with funded research staff progression.
- (2) Staff researcher positions
- (3) Systematic data collection about number of research staff across Ireland to enable monitoring and evaluation of the career path of researchers, assess precarity, and support strategic planning.

We hope this consultation will be part of an ongoing dialogue with the Irish Research Staff Association.

Brief introduction:

Irish research supports economic and social development in myriad ways, from understanding the challenges of chronic disease, to developing cutting edge digital technologies, to deepening our cultural understandings, and not least to supporting further and higher education by translating state of the art research for the classroom. Economically, research in Ireland consistently generates substantial returns on investment, well in excess of the principal investments by the State and public funding bodies.

Research staff play an essential role in the research and education sector, from securing funding — national and international, public and private — to undertaking and leading programmes of world class research, as well as teaching and mentorship. The OECD have pointed out that “Researchers are the most important resource of research systems”¹. However, research careers in higher education institutions (HEIs) are currently characterised by precarity, with research staff generally being employed on short, fixed-term contracts tied to specific research grants. The high turnover of research staff in the HEI sector results in continuous loss of experience, expertise and talent from this sector, including continuity of service and contextual experience. This in turn results in missed opportunity for society and the economy and a loss of return on investment, in addition to a loss of

¹ OECD. (n.d.) Research Precariat. *oecd.org* Available at <https://www.oecd.org/sti/science-technology-innovation-outlook/research-precariat/>

future potential research capacity and leadership. Furthermore, we don't have accurate figures to quantify this issue.

Strategic investment in research and the research staff that are integral to any research and education ecosystem benefits various regions across Ireland, and investing in research capacity across our universities, new technological universities, IoTs, and other HEIs across all regions will generate local, regional, and national economic stimulus, support balanced social and economic development, and support a sustainable, resilient, and internationally-competitive research and education sector. To this end, we are making a series of recommendations to improve retention of talent within the HEI system.

We hope this consultation will be the beginning of ongoing dialogue between the Oireachtas and the Irish Research Staff Association.

Factual information

Cumulatively, universities spent almost €650 million on research in 2017²; approximately 20% of the annual spend on research and development (R&D) in the economy. This research spend produces traditional, core research outputs such as knowledge production (including research literature and dissemination), research capacity (including professional expertise and experience), consultation (including policy and product development), and social benefits (e.g., higher quality healthcare) and economic efficiencies. It also produces non-traditional outputs, such as 611 university-owned 'patent families', 584 jointly-operated research projects or collaborative research agreements between universities and major companies, 93 active spin-out enterprises, and 188 enterprises being supported in university 'incubators' (as of 2017, per the Indecon assessment). Based on these figures, Indecon estimated that the overall contribution to the economy of university led research – direct, indirect, induced – stood at just over €1.5 billion, in 2017. Indeed, studies from Science Foundation Ireland, Indecon, and University College Cork estimate that for every €1 invested in research, society reaps a benefit of €3 to €5 back to the economy³. In 2016/7, for every €1 of all research funding disbursed by the Health Research Board (HRB), researchers were able to leverage €1.2 additional funding from other sources⁴. Indeed, research evidence points to publicly-funded research being crucial for innovation, and being relied upon by the private sector too⁵. A 2008 HRB report outlined the wider social and economic benefits of HRB-funded health research⁶.

However, commercial considerations should not determine which research is funded, particularly at early stages in degree programmes where foundational knowledge is imparted to large cohorts of degree and general studies students. One example of successful, publicly funded research is the development of COVID-19 vaccines. Their rapid development and production was made possible by the foundation of over 20 years of public research funding, personnel, and resources, with much of the research being 'blue skies' at the time with no obvious commercial endpoint⁷.

Research staff attract and secure research funding for universities and other HEIs, contribute to internationalisation of higher education, help to inform evidence-based policy and, although this is often under-recognised, contribute to teaching as well.

² Indecon. (2019). *Indecon Independent Assessment of the Economic and Social Impact of Irish Universities*. Dublin: Indecon. Available at:

https://www.indecon.ie/assets/files/pdf/indecon_report_and_economic_and_social_impact_of_irish_universities.pdf

³ Science Foundation Ireland. (2019). *Annual Report and Accounts 2019*. Dublin: Science Foundation Ireland. Available at [https://www.sfi.ie/research-news/publications/annual-reports/SFI-2019-Annual-Report-\(English\).pdf](https://www.sfi.ie/research-news/publications/annual-reports/SFI-2019-Annual-Report-(English).pdf)

⁴ Health Research Board. (2019). *Outputs, Outcomes and Emerging Impacts: Results from HRB awards Completed in 2016/2017*. Dublin: Health Research Board

⁵ See, for example, Fleming, L., Greene, H., Li, G., Marx, M., & Yao, D. (2019). Government-funded research increasingly fuels innovation. *Science*, 364, pp. 1139-1141. Available at: <https://doi.org/10.1126/science.aaw2373>

⁶ Nason, E., et al. (2008). *Health Research – Making an Impact: The Economic and Social Benefits of HRB-Funded Research*. Dublin: Health Research Board.

⁷ See, for example, Cross, S., et al. (2021). Who funded the research behind the Oxford–AstraZeneca COVID-19 vaccine? *BMJ Global Health*, 6, pp. e007321, Available at <http://dx.doi.org/10.1136/bmjgh-2021-007321>.

Between 2006 and 2016 Irish Central Statistics Office (CSO) data showed that the number of PhD holders in Ireland doubled, reaching 28,759 people. Doctoral enrolments rose from 5,156 in 2006/07 to 8,225 in 2015. Data is available from the Higher Education Authority for the 10 years from 2008/9 to 2017/18 shows that there were **14,313 graduate researchers** in that time frame. In contrast, the number of **academic staff posts in Irish HEIs has increased by 686 (8%)** totalling 9686 between 2013 – 2017. It is clear that there is not sufficient funding or capacity in the academic system to absorb or offer opportunities to the numbers of doctoral-qualified, professional researchers exiting from HEIs. It should also be borne in mind that the few secure academic positions in the HEI sector are heavily teaching-focused, whereas many researchers may prefer to continue to perform within a research-intensive role.

Insufficient funding, precarity or insecurity of employment, and hypercompetition are major barriers to sustainable careers that are often experienced by research staff such as postdoctoral researchers^{8,9}. However, little institution-level or national data even exist on the career outcomes or trajectories of PhD-holders, and the information that does exist is almost completely lacking in detailed specifics. Standard exit-interviews are not afforded to postdocs when they leave employment with most HEIs. At the most fundamental level of data gathering, the Royal Irish Academy in 2018¹⁰ noted the difficulty in determining the number of postdoctoral researchers working in Ireland:

“Despite extensive reach out by the Working Group, the study was not able to determine with certainty the exact population size of ECRs (Early Career Researchers) in Ireland or Northern Ireland, the discipline spread of ECRs or male:female ratios. It is striking that even with the increased and welcomed set of national actions in support of ECRs it is not yet possible to determine the size of the relevant population. Ongoing efforts by the HEIs and funding agencies north, and south, to address this lacuna are to be welcomed.” (p. 1)

Meaningful information is required for policymakers, and for postdocs to be able to make informed decisions when evaluating career prospects or planning research funding applications and programmes of work.

Career precarity also has significant consequences for individual researchers’ health, finances, family life, and quality of life. The effects of precarity are also disproportionately felt by researchers who are women, have disabilities, have care responsibilities, are from ethnic or racial minority backgrounds, or live and work in rural or regional settings¹¹.

Under Innovation 2020, the Irish Government committed to increasing the science budget from €2.9 billion to €5 billion within 5 years, including a 30% increase in the number of Science Foundation Ireland funded postdoctoral research places.

Recommendations:

1. Research Staff Progression

Increased core funding must be made available for research staff to progress to higher grades, comparable to the system currently in place for academic staff who can progress from Lecturer to Senior Lecturer to Professor (or Assistant Professor to Associate Professor to Full Professor, etc.). See Figure 1 below. France, Germany, and Japan are among the countries that have recently introduced tenure-track models for research career progression. Funding should be increased to SFI and IRC to fund senior positions with contracts of indefinite duration, similar to long-term Charles Parson awards issued 15 years ago. Contracts of indefinite duration

⁸ Hardy, M.C., Carter, A., & Bowden, N. (2016). What do postdocs need to succeed? A survey of current standing and future directions for Australian researchers. *Palgrave Communications*, 2, 16093. Available at <http://dx.doi.org/10.1057/palcomms.2016.93>

⁹ Alberts, B., Kirschner, M.W., Tilghman, S., & Varmus, H. (2014). Rescuing US biomedical research from its systemic flaws. *PNAS*, 111, 5773-5777. Available at <https://doi.org/10.1073/pnas.1404402111>

¹⁰ Carey, D., Guiry, P., Maher, J., Ní Shúilleabháin, A., Norton, B., & Skerrit, C.. (2018). *Scoping the current system of support for early career researchers in Ireland*. Dublin: Royal Irish Academy. Available at <http://hdl.handle.net/10197/10641>

¹¹ For example, Courtois, A.D.M. & O’Keefe, T. (2015) Precarity in the ivory cage: Neoliberalism and casualisation of work in the Irish higher education sector. *Journal for Critical Education Policy Studies*, 13. Avail. at <http://www.jceps.com/archives/2458>

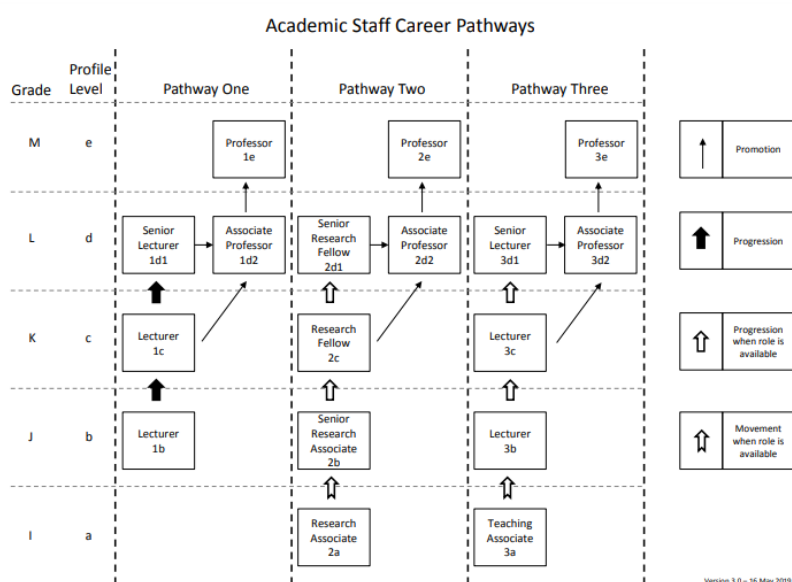
respect the rights of research staff to long-term job security, particularly after already working for a HEI for a number of years.

We welcome, in principle, the development of the Irish Universities Association (IUA) Researcher Career Development Framework. However, IrishRSA do not believe that the current IUA framework is fit for purpose. This is largely due to the lack of consultation during the drafting stages of the document with research staff members in Ireland. A career framework needs to adhere to the European Charter & Code for Researchers¹² and the **European Commission ‘HR Strategy for Researchers’ (HRS4R)** framework, so that it does not negatively impact on the ability of Irish researchers to apply for future Horizon Europe funding and to attract researcher talent. A framework that is not fit-for-purpose will also prevent Irish HEIs from attaining/maintaining a 'HR Excellence in Research Award'.

We recommend that a set of principles that addresses research culture, employment and career progression of research staff is developed in Ireland. Such a document needs to have teeth in order to end those practices embedded in parts of our research culture that are inhibitory to individuals careers, discourage under-represented groups in any discipline, and fail to make the investment in research careers that Ireland needs to go one level up. We therefore recommend that funding bodies should require all HEIs, who receive public funds, to implement these principles in support of research staff. Employers and/or funders should ensure that the performance of researchers is not undermined by instability of employment contracts, and should therefore commit themselves as far as possible to improving the stability of employment conditions for researchers, thus implementing and abiding by the principles and terms laid down in the *EU Directive on Fixed-Term Work* (<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31999L0070:EN:HTML>).

It is also important to recognise that the European Commission clearly states that researchers are professionals and should be treated as such. Postdoctoral research should therefore not be considering as “training”.

Doctoral (PhD) training candidate and postdoctoral researcher numbers should not be increased without understanding where the researchers will go. Mobility should be a choice and not a necessity related to insufficient employment opportunities nationally. Alternative career paths, where research staff segue into roles more focused on other areas such as teaching or professional services are to be encouraged, but they should not be seen as an optimal or necessary goal of all research staff.



¹² European Commission. (2005). *The European Charter for Researchers & The Code of Conduct for the Recruitment of Researchers*. Brussels: European Commission. Available at <https://euraxess.ec.europa.eu/jobs/charter-code-researchers>

Figure 1. Bristol University model of academic staff career pathways.¹³

2. Staff Researcher Posts

A possible solution to enable research staff to continue contributing to academic research is for funding agencies and HEIs to put in place staff researcher posts, thereby creating alternative, attractive career progression routes within academia. Research staff should be able to remain in post at a given level if they wish, rather than having an “up or out” system of forced progression or departure from HEIs, particularly in the context of progression opportunities being limited and hyper competitive.

A report from the National Research Council (2014)¹⁴ recommends raising the salaries of research staff to “appropriately reflect their value and contribution to research”. Unless the career prospects for early career researchers are improved, we risk losing the talent that will be essential for our future progress across all areas of research.

3. Systematic data collection

In order to inform any policy making decisions regarding research and innovation, it is firstly important to develop an accurate method of data collection regarding the numbers of research staff that is universal across all HEIs on the island of Ireland.

Data on gender, disability, ethnicity, international/national status, level of seniority and contract type must be tracked over time and should include career outcomes of the researcher. Where there is aggregated data, it should be made easily available, to the greatest extent permitted by data protection law. Research staff should be able to communicate with large numbers of their peers quickly and easily, in order to maximise the potential for collaboration and avoid duplication of research effort.

¹³ Bristol University. (2019). Academic Staff Career Pathways (v3.0). *bristol.ac.uk* Available at <http://www.bristol.ac.uk/media-library/sites/hr/documents/academic-progression/diagram.pdf>

¹⁴ National Research Council, Committee on Science, Engineering, and Public Policy, Committee to Review the State of Postdoctoral Experience in Scientists and Engineers (2014) *The Postdoctoral Experience Revisited*. The National Academies Press, Washington, DC