The Researchers Report 2012

Country Profile: Ireland

Deloitte.

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1. Key data

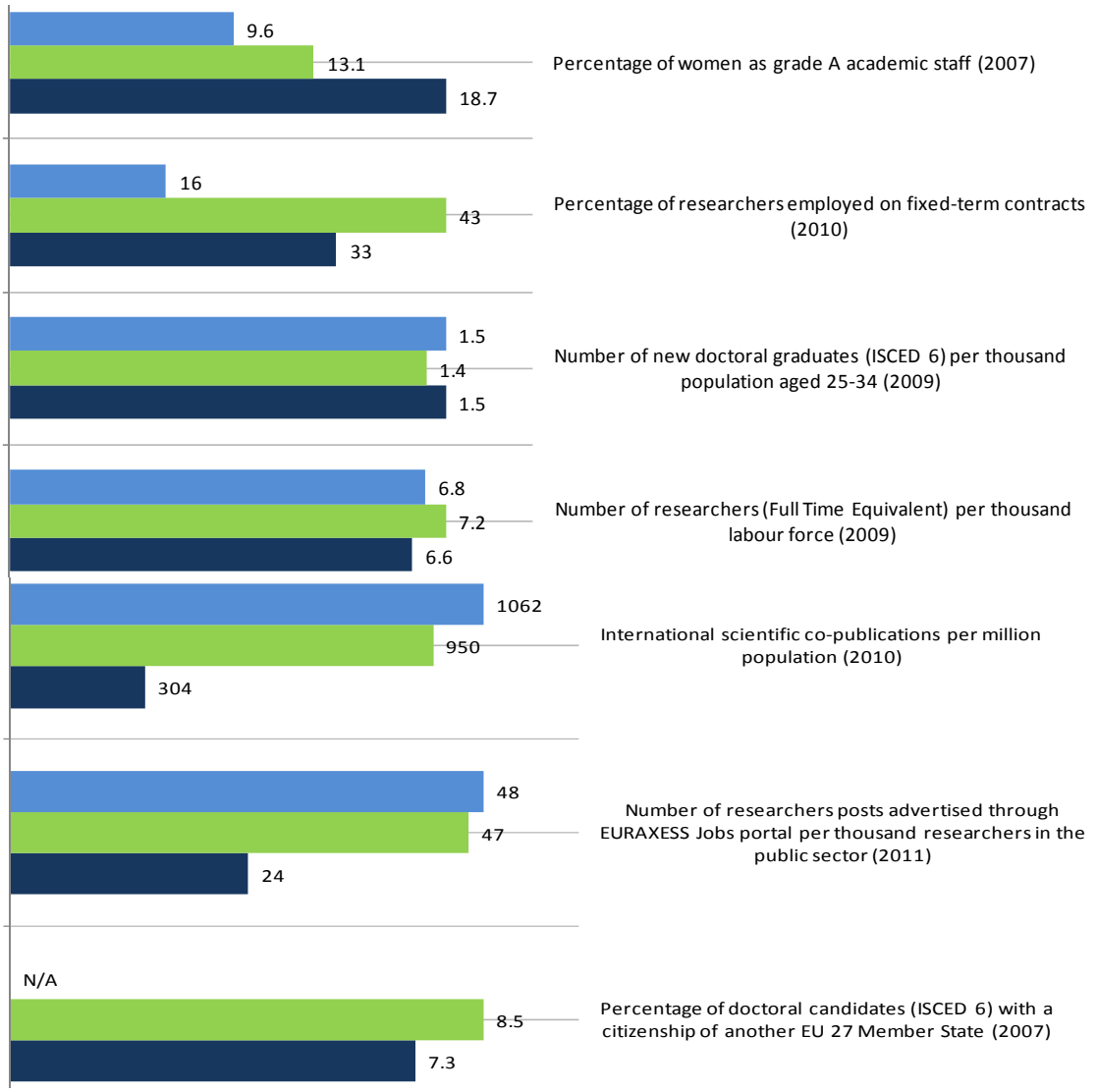
National R&D intensity target

"In the last decade, overall R&D investment grew strong in real terms, and despite the relatively important GDP growth, R&D intensity in Ireland increased from 1.12% in 2000, to 1.45% in 2008 and up to 1.77% in 2009. However, the sharp acceleration of R&D intensity over the last two years can be largely attributed to the sharp drop in GDP in 2008 and 2009, when Ireland was particularly hit by the international economic and financial crisis. The current financial difficulties that the country is experiencing can cast some doubts about the capacity of both the public and private sectors to maintain and increase their R&D investments in the short term, but R&D investment still remains a high priority for the country in order to boost its productivity and maintain its economic competitiveness and social progress."[1]

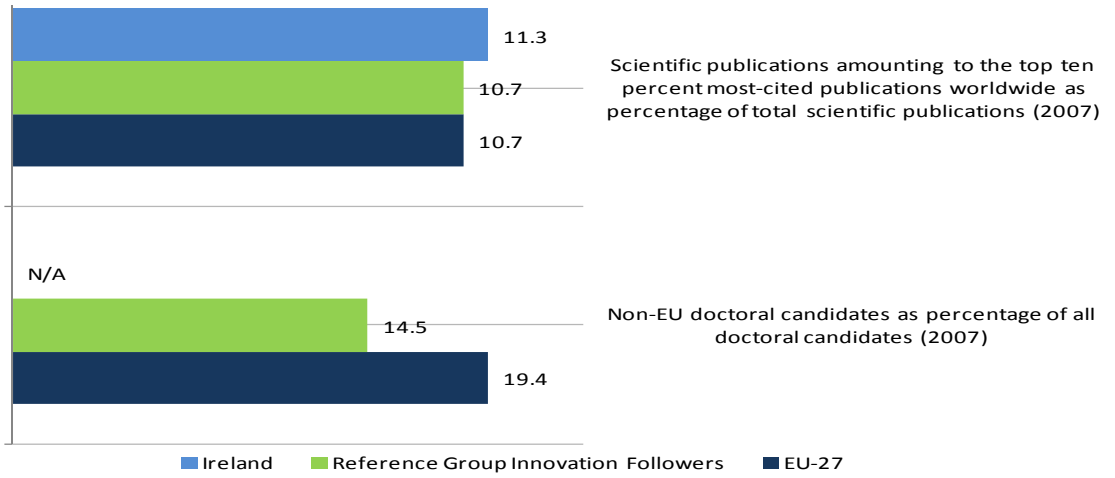
Key indicators measuring the country's research performance

The figure below presents key indicators measuring Ireland's research performance against a reference group and the EU-27 average[2].

Figure 1: Key indicators – Ireland



[1] European Commission (2011), "Innovation Union Competitiveness Report 2011".
[2] The values refer to 2011 or the latest year available.



Source: Deloitte
Data: Eurostat, SHE Figures, EURAXESS Jobs Portal, Science Metrix/Scopus (Elsevier), Innovation Union Scoreboard 2010
Notes: Based on their average innovation performance across 24 indicators, Austria, Belgium, Cyprus, Estonia, France, Ireland, Luxembourg, Netherlands, Slovenia and the UK show a performance close to that of the EU-27. These countries are the Innovation followers[3].

Stock of researchers

The table below presents the stock of researchers by Head Count (HC) and Full Time Equivalent (FTE) and in relation to the active labour force.

Table 1: Human resources – Stock of researchers

Indicator	Ireland	EU Average
Head Count per 1 000 active labour force (2008)	9.40	9.45
Head Count (2008)	21 080	-
FTE per 1 000 active labour force (2009)	6.84	6.63
Full time equivalent (FTE) (2009)	14 880	-

Source: Deloitte
Data: Eurostat

2. National strategies

The government of Ireland has adopted a package of measures aimed at training enough researchers to meet its R&D targets and at promoting attractive employment conditions in public research institutions. The table below presents key programmes and initiatives intended to implement the strategic objectives to train enough researchers to reach Ireland's R&D targets, to promote attractive working conditions, and to address gender and dual career issues.

Table 2: National strategies

Measure	Description
National Development Plan 2007-2013 Transforming Ireland — A Better Quality of Life for All	Under this Plan, researchers are encouraged to develop collaborative cross-border relationships, to have up-to-date training as well as to go and work abroad. The Plan intends to grow the stock of researchers quantitatively and qualitatively by increasing the funding, recruiting top-level researchers from home and overseas, developing career paths and promoting mobility mechanisms.
National Strategy for Higher Education to 2030 (2011)	The National Strategy for Higher Education provides for better researcher mobility, increased career opportunities and strong collaboration between higher education researchers and the business sector. The Strategy also encourages researchers in Ireland to be connected with leading researchers internationally and become involved in projects which are demonstrably world class.
Programme for Government - Government for National Recovery 2011-2016	The Programme for Government states that the Government will promote Ireland's full engagement in the 'Innovation Union'. It focuses on supporting investments in technology research, development and commercialisation beyond basic research

[3] European Commission (2011), "Innovation Union Scoreboard 2010".

Measure	Description
	supported by Science Foundation Ireland (SFI), as well as removing barriers to innovation. The Programme also aims to establish a network of Technology Research Centres focused on applied technological research in specific areas, to be linked to appropriate higher education institutions. Finally, the Programme points out the necessity to overhaul the student visa system and encourage high-value research students (together with their families) to come to Ireland to work.
Strategy for Science, Technology & Innovation (SSTI) 2006-2013	Since 2006, the Irish authorities have been implementing the Irish Government's Strategy for Science, Technology & Innovation (SSTI). The objective of the Strategy is to make Ireland internationally renowned for the excellence of its research and to develop a knowledge economy to contribute to national economic and social progress. The SSTI also takes account of developments at EU level, in particular the ERA targets, the European Partnership for Researchers, the Europe 2020 Strategy as well as the Innovation Union. According to a recent progress report on implementation of the SSTI, good progress has been made in achieving the key targets and objectives in the SSTI. The Strategy aims to double postgraduate researchers by 2013, with significant numbers of these going on to take up employment in the enterprise sector. It has also facilitated flows of researchers into and out of the country and from academia to enterprise. Total University Masters graduates in SET (Science, Engineering and Technology) and HSS (Humanities and Social Sciences) increased from 6 193 in 2005 to 8 714 in 2010. There was also an additional 1 705 Master graduates from the Institute of Technology sector in 2010. PhD graduates increased from 774 in 2005 to 1 153 in 2010 from the university sector (+48%). SET PhD graduates increased by 34% over the period in line with the target in the SSTI from 576 in 2005 to 776 in 2010 (96.8% of SSTI target of 801) with an additional 56 SET PhD graduates from the Institute of Technology sector. The number of researchers in the higher education system increased from 10 072 in 2006 to 11 900 (estimate +18%) in 2009. Of these researchers, the number with PhD's increased from 5 684 in 2006 to 7 906 (+39%) in 2009, reflecting the overall drive to increase excellence in the research system over the period. It should be noted, however, that the original intention of doubling the number of PhD graduates by 2013 has had to be tempered by the consequences of the economic downturn which has occurred in the interim, and is no longer a realistic target.
The National Recovery Plan 2011-2014	Ireland's National Recovery Plan takes account of the need for focus on collaboration between industry and research providers, and the need to bring the outputs of research and innovation activity to the marketplace. The Plan requires research investments to be concentrated in areas where Ireland secures the greatest economic and social returns and it provides for the number of industry-led research competence centres to be doubled to ensure that industry drives research agendas. There are currently nine industry-led researcher competence centres and this number will increase to 16 by the end of 2013.

Source: Deloitte

3. Women in the research profession

Measures supporting women researchers in top-level positions

In 2007, the percentage of women grade A academic staff was 9.6% in Ireland compared with 13.1% among the Innovation Union reference group and an EU average of 18.7%[4].

National legislation[5] prohibits any discrimination based on gender. However, each University/Institute of Technology applies its own procedures for promoting gender equality, including the 'European Charter for Researchers' & the 'Code of Conduct for the Recruitment of Researchers' principles.

As part of gaining the 'HR Excellence in Research' label, all institutions will have to plan progress towards gender equality in all aspects of research life, and consider how dual career couples can be accommodated to build a research career in Ireland.

[4] See Figure 1 "Key indicators – Ireland".
[5] Employment Equality Act of 1998, Equal Status Act of 2000, Equality Act of 2004.

The Irish Equality Authority has the over-arching role in promoting equality in the workplace, including the promotion of gender equality for researchers.

Women have since 2006 been encouraged to take science to an advanced (doctoral) level by the initiatives of the Centre for Women in Science & Engineering Research (WiSER)[6]. WiSER aims to recruit, retain, return and advance women in academic science, engineering and technology by developing sustainable practices to ensure that women's scientific expertise, knowledge and potential are nationally recognised. In addition, the Women in Technology and Science Programme (WITS) has since 2008 aimed to facilitate and support women in returning to a career in science and technology.

Quotas to ensure a representative gender balance

Institutions have full autonomy in setting quotas to ensure a representative gender balance for researchers. However, a general government commitment requires the institutions to increase female participation on State Boards up to 40%.

Maternity leave

As employees of a university, maternity leave is automatically provided for. Usually the person may return from maternity leave to complete the project, but it is up the research funder to decide on any replacement or not.

The SFI has adopted the Principal Investigator Career Advancement (PICA) scheme (catering for researchers returning from maternity leave) which is now incorporated into all its grant schemes. The PICA scheme supports outstanding researchers returning to active research after a prolonged absence including maternity, paternity, parental, adoptive leave.

Female researchers funded by the Programme for Research in Third-Level Institutions (PRTLI) as well as by the Irish Research Councils are allowed to interrupt and extend their contract to go on maternity leave. Payment in addition to welfare payments during maternity leave is at the discretion of the host institution.

4. Open, transparent and merit-based recruitment

Recruitment system

The Universities Act (1997) provides that Universities are allowed to appoint staff 'having regard to available resources and accountability for use of public funds'. The Fixed Term Workers Act (2003) ensures that researchers employed on fixed term contracts are eligible for the same entitlements as comparable permanent employees.

Across the seven universities, positions are advertised internationally and recruitment is based on the quality of the candidates. For example, nearly 40% of PhD students are foreigners (with about 15% non EU-nationals of the total) and 35% of researchers are foreigners (half coming from another EU country and the other half from third countries). In 2011, the ratio of international academic staff ranges from 26% to 42% across the universities.

Open recruitment in institutions

The table below presents information on open recruitment in higher education and public research institutions.

Table 3: Open recruitment in higher education and public research institutions

Do institutions in the country currently have policies to …?	Yes/No	Description
– **publish job vacancies on relevant national online platforms**	Yes	Institutions as well as some funding schemes have policies to publish job vacancies on relevant national online platforms.
– **publish job vacancies on relevant Europe-wide online platforms (e.g. EURAXESS)**	Yes	Institutions have policies to publish job vacancies on relevant Europe-wide online platforms.

[6] http://www.tcd.ie/wiser/

Do institutions in the country currently have policies to …?	Yes/No	Description
– **publish job vacancies in English**	Yes	English in the main language for publishing job vacancies.
– **systematically establish selection panels**	Yes	Institutions have policies to systematically establish selection panels.
– **establish clear rules for the composition of selection panels (e.g. number and role of members, inclusion of foreign experts, gender balance, etc.)**	Yes	Institutions are obliged by law to establish clear rules for the composition of selection panels.
– **publish the composition of a selection panel (obliging the recruiting institution)**	Yes	Institutions have policies to publish the composition of a selection panel.
– **publish the selection criteria together with job advert**	Yes	Institutions are obliged by law to publish the selection criteria together with the job advert.
– **regulate a minimum time period between vacancy publication and the deadline for applying**	Yes	Institutions have policies to regulate a minimum time period between vacancy publication and the deadline for applying.
– **place the burden of proof on the employer to prove that the recruitment procedure was open and transparent**	Yes	The burden of proof to prove that the recruitment procedure was open and transparent is by law placed on the institutions.
– **offer applicants the right to receive adequate feedback**	Yes	Institutions are obliged by law to offer applicants the right to receive adequate feedback.
– **offer applicants the right to appeal**	Yes	Institutions are obliged by law to offer applicants the right to appeal.

Source: Deloitte

EURAXESS Services Network

In 2011, the number of researcher posts advertised through the EURAXESS Jobs portal per thousand researchers in the public sector was 48 in Ireland compared with 47 among the Innovation Union reference group and an EU average of 24[7].

All publicly funded jobs are published on the EURAXESS Ireland portal. Information on entry conditions, transfer of social security and pension contributions, accommodation and administrative assistance is available at EURAXESS Ireland. EURAXESS Ireland provides a range of information services for researchers wishing to enter the country or to go abroad. SFI jobs are published on the SFI website and on the EURAXESS Jobs portal.

Although Ireland is not in the Schengen area, it opted in to the Third Country Directive and has put in place a 'Hosting Agreement' to fast track non-EU researchers and their families wanting to come to Ireland with the support of the EURAXESS Ireland Office.

5. Education and training

Measures to attract and train people to become researchers

As part of the implementation of the revised primary school curriculum, science was introduced to all primary schools from September 2003 to help children develop scientific skills.

In the same year, the Irish government introduced Discover Science and Engineering (DSE) as its national science awareness programme at the primary and secondary level, which in the longer term will feed into the third level, (i.e. universities and Institutes of Technology) and also the PhD level. The programme promotes an awareness and understanding of the importance of science and engineering in a modern knowledge-based economy and develops effective ways of engaging students, teachers and the public in science, technology and innovation[8].

In addition, the government in 2003 launched a revised syllabus in Junior Certificate science. The revised syllabus was supported by a comprehensive programme of professional development for teachers, and

[7] See Figure 1 "Key indicators – Ireland".

[8] An independent evaluation of DSE in 2009 by an International Panel noted that DSE represents very good value for money and plays an important role in encouraging young people to study science and technology. Following specific recommendations, Maths has been included in the scope of DSE and it has been refocused on second level education, as a support for Project Maths.

investment of some EUR 16 million in 2004 in resources and laboratory facilities. As a result, in 2011, 89% of students sat 'Science' in the Junior Certificate examination[9].

The STEPS Engineers Ireland Programme (2005) encourages primary and post-primary students to explore the world of science and engineering through various initiatives, including an extensive Champions Programme, Engineers Week, student seminars, scholarships, summer camps, videos and career profiles, mathematics tutorials, and a Maths and Music show.

Undergraduate students in higher education generally undertake a research project during the final year of undergraduate study. They work with established research teams at their institutions and in this way they have the possibility of research as a viable career path. As part of structured PhD delivery, students undertake modules, such as advanced research and analytical techniques to assist in carrying out high level research.

In Ireland, higher education is referred to as third level education. To help coordinate the changes in Irish doctoral education, the seven Irish Universities[10] together with the Higher Education Authority (HEA) have formed a 'Fourth Level Ireland' Network, to mediate and help direct the changes in doctoral education. Consequently, graduate education is increasingly referred to as the 'Fourth Level Ireland' (University Graduate Education)[11]. Under this framework, the seven universities work together under the banner of the Fourth Level to provide graduate education opportunities in all disciplines, both taught and research degree programmes. Students have the opportunity to gain experience in relevant employment areas and there are often placements in companies for training or research.

All universities have school liaison programmes and open days to increase young peoples' interest in science, technology, engineering and mathematics (STEM) subjects. The Deans of Science have established a network promoting science (www.universityscience.ie), including science demonstrations at the Young Scientist Festival, school debating and other competitions, the Science Raps Challenge and Science Speak competitions. Moreover, a decision was taken by HEIs in 2010 to apply an additional award for attainment in mathematics in entrance criteria for higher education to encourage more students to take maths at a higher level in secondary education.

In Ireland, the major funding agencies focusing on STEM disciplines are Science Foundation Ireland (SFI)[12], Enterprise Ireland (EI), the Health Research Board (HRB), the Irish Research Council for Science, Engineering and Technology (IRCSET) and the Environmental Protection Agency.

Doctoral graduates by gender

The table below shows doctoral graduates in Ireland by gender as a ratio of the total population cohort.

Table 4: Doctoral graduates by gender

Indicator	Ireland	EU average
New doctoral graduates (ISCED 6) per 1 000 population aged 25-34 (total) (2009)	1.5	1.5
Female Graduates (ISCED 6) per 1 000 of the female population aged 25-34 (2009)	1.4	1.4
Male Graduates (ISCED 6) per 1 000 of the male population aged 25-34 (2009)	1.7	1.6

Source: Deloitte
Data: Eurostat

Funding of doctoral candidates

The table below summarises different funding opportunities for doctoral candidates.

Table 5: Funding schemes available to doctoral candidates

Funding scheme	Description
Fellowships	Over the period 2009-10, approximately 60% of PhD students in Science, Engineering and Technology and 19% of PhD students in the Humanities and Social Sciences were in receipt of

[9] http://www.examinations.ie/index.php?l=en&mc=ca&sc=sc
[10] Dublin City University, Trinity College Dublin, University College Dublin, University College Cork, University of Limerick, National University of Ireland Galway, National University of Ireland Maynooth.
[11] Fourth Level Ireland - University Graduate Education resource website: http://www.4thlevelireland.ie/.
[12] For example, SFI targets the areas of Biosciences, Information and Communications Technologies (ICT) and Sustainable Energy.

	fellowships from national funding agencies. Fellowships normally include a stipend and fee. The main funding options for doctoral candidates are: 1) Individual Scholarships/Fellowships - awarded by a number of bodies, including the two research councils (Irish Research Council for Humanities and Social Sciences-IRCHSS/Irish Research Council for Science, Engineering and Technology-IRCSET), and the Health Research Board (HRB) (e.g. clinical scholarships to enable medical practitioners to do a PhD); 2) Scholarships/Fellowships through structured PhD programmes - awarded through the HEA programme for Research in Third Level Institutions (PRTLI), IRCHSS/IRCSET Graduate Education Programmes (GREP's), the Health Research Board PhD Scholarship Programme, Marie Curie Initial Training Networks and ERASMUS MUNDUS; 3) Participation in funded research projects, e.g. Science Foundation Ireland and general FP7. According to the Irish Universities Study (IUS)[13], over 80% of PhD students receive funding from a sponsor (public or private). Key funders were IRCHSS (6%), IRCSET (15%), SFI (16%) and Universities (16%).
Stipends/grants	Fewer than 10% of PhD students receive a stipend/grant.
Employment contracts	More than 90% of PhD students sign an employment contract.

Source: Deloitte

Measures to increase the quality of doctoral training

To achieve the objective of developing PhD graduates with the skills necessary to develop and manage their careers across a broad range of employment sectors, including academia, universities are providing more structured support for students, incorporating research and generic skills development opportunities.

Fourth Level Ireland's skills training aims to:

- communicate to students, supervisors and employers the skills and attributes of a PhD graduate;
- aid students, graduate schools, graduate programmes and other advisory committees in establishing students' skills development needs;
- inform the development of further skills development opportunities for all PhD students.

The skills identified by the Irish Universities Association's Fourth Level Network of Deans of Graduate Studies as relevant to PhD student education are: personal effectiveness/development, team-working and leadership career management, and entrepreneurship and innovation.

In addition, the national funding agencies for research and innovation also provide support for human capital development. Science Foundation Ireland includes provision for training researchers in line with national targets in its funding programmes. The Irish Research Council for Science, Engineering and Technology and the Irish Research Council for the Humanities and Social Sciences identify and support excellent early career researchers throughout the research system across all disciplines, with a focus on career development. The National Academy for Integration of Research and Teaching and Learning (NAIRTL) provides training for academics to develop their supervising and mentoring skills.

Finally, the National Strategy for Higher Education to 2030 recommends that a consistent quality framework be developed for Irish PhD education, based on critical mass. The Higher Education Authority (HEA) and Research Councils will work with HEIs to ensure greater consolidation and collaboration among HEIs and funders. The HEA has a particular focus on supporting and enhancing human capital development mostly at the graduate level through policy drive and support for a doctoral education system characterised by a structured PhD model.

Skills agenda for researchers

To help develop and support consistent national skills agendas, the Fourth Level Ireland Network has compiled an 'Irish Universities' PhD Graduates' Skills Statement', which is consistent with national descriptors of PhD graduate attributes. Typical PhD programmes enable the students to identify a tailored set of relevant course modules to develop disciplinary, transferable and generic skills. The seven universities have a collaborative agreement that ensures that courses taken in one university are recognised in all others through the European Credit Transfer System (ECTS).

[13] Irish Universities Study (2009), Report on Undergraduate and Taught Postgraduate Students in Irish Universities, IUS 1/09.

6. Working conditions

Measures to improve researchers' funding opportunities

The Irish Research Council for Science, Engineering and Technology (IRCSET) offers funding opportunities for early-career researchers across science, engineering and technology disciplines. All funding competitions are open to all qualified candidates from anywhere in the world. Competitions are based on the merit of the individual applicants rather than allocating awards to specific research disciplines or areas.

IRCSET has also funded researchers via participation in transnational funding calls such as the EUROCORES programme administered by the European Science Foundation, and calls run by the members of ERA Networks.

Since 2006, IRCSET has participated in the Ulysses Programme for research visits between Ireland and France, which has opened up research collaborations between these two countries, and in many cases, has led to the creation of pan-European research networks which have received large-scale support from the Framework Programmes. In addition, in 2008 IRCSET successfully secured EUR 5 million from FP7 to co-fund a EUR 12 million international mobility fellowships programme for Experienced Researchers.

SFI also provides grants for researchers from around the world who wish to relocate to Ireland and those already based in Ireland, for outstanding investigators, for conferences and symposia, and for collaboration with industry. The majority of SFI awards are in the fields of science and engineering underpinning three Government-prioritised industrial sectors: biotechnology, information and communications technology, and sustainable energy and energy-efficient technologies. At a smaller scale, SFI also supports a broad range of disciplines in science, mathematics and engineering via its Research Frontiers Programme.

Apart from IRCSET and SFI funding schemes, the Irish government promotes international and bilateral cooperation programmes, greater EU FP involvement as well as participation in Joint Programming projects.

Remuneration

A process of standardising researcher salary scales is ongoing. Despite the general reduction recently in salary levels due to the downturn in economy, Irish researcher salaries remain competitive with private sector salaries[14].

For non-EU researchers entering Ireland, there are strict criteria on salary levels set out in the Hosting Agreement scheme (2007)[15] to ensure there is no discrimination.

Researchers' Statute

In Ireland, doctoral candidates have the same status as all other university students. Based on the Fixed Term Workers Act (FTWA) of 2003, all PhD researchers have employment contracts and enjoy the same rights (including social security entitlements) as permanent staff, and have full access to all opportunities for continuous professional development.

All national funding agencies provide full funding for research including entitlement to social security and pensions for those on employment contracts. A number of PhDs funded by some sources, including FP7 Marie Curie and industry, and part time, are on an employment contract (not more than 5% of the total). All other researchers hired are on employment contracts regardless of the source of funding.

'European Charter for Researchers' & the 'Code of Conduct for the Recruitment of Researchers'

All seven Irish Universities and some Institutes of Technology (IoT's) have voluntarily signed up to the EU 'Charter & Code' and thus, operate a policy of open recruitment. Science Foundation Ireland (SFI) also applies criteria for research grant funding based on the 'Charter & Code'.

[14] According to Irish Universities Association (2010), Guidelines for Contract Researchers Salary Scales and EU funded study in 2008 (CARSA).

[15] The Hosting Agreement Scheme enables approved research active organisations to recruit researchers from outside the European Economic Area to carry out research in Ireland without the need for a Green Card or Work Permit: http://www.iua.ie/iua-activities/HostingAgreementScheme.html

In addition, IRCSET and the Irish Universities Association are spearheading an initiative to have all Irish Higher Education Institutions receive the Commission's endorsement of their recruitment policies and working conditions for researchers via permission to use the 'HR Excellence in Research' label. This initiative has so far put three of the Irish universities and one Institute of Technology on the path to receiving the label, in addition to IRCSET which already has it.

Autonomy of institutions

According to Universities Act (1997), Irish universities have full autonomy to appoint their employees, taking into account the resources available and accountability for use of public funds.

Universities may pay employees such remuneration, fees, allowances and expenses as approved from time to time by the Minister for Education and Skills. However, a university may depart from these levels of remuneration, fees, allowances and expenses in accordance with a framework agreed between the university and the Higher Education Authority in an effort to attract and retain key research staff.

Funding for salary top-ups can come from public or private sources.

Career development

Each university in Ireland has introduced its own research career structure (e.g. in some cases, post-doc phase is limited to 4-5 years in order to ensure the researcher's progress). Progression to a more senior role is dependent on the ability of individuals to compete for work and win research grants. Permanent academic positions are filled through open international recruitment.

Shift from core to project-based funding

In Ireland, research funding has been always project-based. Core funding exists only for teaching activities and not for research.

Social security benefits (sickness, unemployment, and old-age)

All academic staff, including researchers, has the same sick leave entitlements as permanent employees.

The issue of whether the employment is full time employment is critical for Ireland. The Fixed Term Workers Act ensures researchers employed on fixed term contracts are eligible for the same entitlements as comparable permanent employees in contrast to doctoral candidates who are regarded as students.

According to the Fixed Term Workers Act, post-doctorates (researchers) are treated as employees and therefore covered for Social Security purposes, whereas some pre-doctorates (PhD candidates) are treated as students and do not come under the Social (Welfare) Security code[16].

The Programme for Research in Third-Level Institutions (PRTLI), and IRCSET and IRCHSS grants for experienced researchers include provision for an employer's Pay Related Social Insurance (PRSI) contribution, which can entitle employees to benefits such as maternity and illness benefits, and jobseekers (unemployment) allowance.

All funding awards for fixed term researchers include an employer and employee pension contribution.

7. Collaboration between academia and industry

The Government places a strong focus on industry-academia collaboration. The national funding agencies for Research & Innovation promote collaboration between academia and industry.

[16] Approximately 90% of PhD candidates in Ireland are full-time registered students and not employees. Therefore, they are not covered by employment-related social security. Students are not entitled to receive social welfare payments such as unemployment, supplementary welfare or illness payments while attending a full-time course of study. "Entitlement to health services in Ireland is primarily based on residency and means, rather than on your payment of tax or pay-related social insurance (PRSI). Any person, regardless of nationality, who is accepted by the Health Service Executive (HSE) as being ordinarily resident in Ireland, is entitled to either full eligibility (Category 1; medical card holders) or limited eligibility (Category 2) for health services." More info available at: http://www.citizensinformation.ie/en/health/entitlement_to_health_services/entitlement_to_public_health_services.html

The following table summarises programmes designed to develop boost collaboration between academia and industry, and to foster doctoral training in cooperation with industry.

Table 6: Collaboration between academia and industry

Measure	Description
ELEVATE scheme (year)	The Irish Research Council for Science, Engineering and Technology (IRCSET) is seeking Commission co-funding to develop the Enterprise Partnership Scheme (ELEVATE scheme). This scheme will allow experienced researchers to spend two years at an enterprise/industry host laboratory outside Ireland, followed by a return year at an Irish Higher Education Institution. The Scheme offers researchers the opportunity to develop skills and gain additional beneficial experience and insight into the commercial arena while completing their research. It provides industry with flexible and easy access to an exceptional pool of competitively selected, high calibre researchers and the opportunity to build links with relevant academic research groups.
The Programme for Research in Third-Level Institutions (PRTLI) (ongoing)	The Programme for Research in Third-Level Institutions enhances PhD education and training, so as to enable the system to deliver PhDs with skills sets for working across the spectrum of the public and private sectors. In addition, many of the structural PhD programmes funded through PRTLI and other sources ensure that the PhD students are trained in a high quality research environment with opportunities for acquiring both transferable/generic skills and experience in a related employment sector. For example, the Bio AT (BioAnalysis and THERAPEUTICS) structured PhD is collaboration between three Universities and three institutes of Technology in partnership with hospitals and pharmaceutical companies.
The Research Centres Programme 2012 (ongoing)	The Science Foundation Ireland (SFI) runs the new Research Centres Programme 2012. As part of the Programme, scientists and engineers are linked in partnerships across academia and industry to address crucial research questions, foster the development of new and existing Irish-based technology companies, and expand educational and career opportunities in Ireland in science and engineering.

Source: Deloitte

8. Mobility and international attractiveness

Measures aimed at attracting and retaining 'leading' national, EU and third country researchers

Ireland has implemented the Hosting Agreement (the Scientific Visa) scheme, which facilitates the inward migration of Third Country researchers to the State.

The table below summarises key measures implemented by SFI to attract and retain leading national, EU and third-country researchers.

Table 7: SFI measures to attract and retain leading national, EU, and third-country researchers

Measure	Objectives
E.T.S. Walton Visitor Awards Programme (Science Foundation Ireland) (ongoing)	The E.T.S. Walton Visitor Awards Programme enables high-profile international academic and industrial researchers to visit and collaborate with Irish research groups for a fixed period of time. The programme also aims to support the transfer of skills and knowledge to Irish research groups, develop international networks as well as facilitate links with industry. SFI is strategically enhancing research links – apart from EU and the USA – with other countries such as Australia, Brazil, Canada, China, India, Japan, Russia, Singapore and South Korea.
Research Professor Programme (Science Foundation Ireland) (ongoing)	The Research Professor Programme aims to attract outstanding research talent from abroad to Ireland. The Programme is intended to support national strategic priorities by assisting research bodies in their recruitment of world-leading researchers for professorial chairs, or similar research leadership positions in targeted scientific areas within the life sciences, information and communication technology, and energy sectors. Funding of up to EUR 5 million is being provided in total to successful applicants for a five-year programme of work. This also includes a contribution towards the SFI Research Professor's remuneration package for each year of the award.

Source: Deloitte

Inward mobility (funding)

The table below summarises the funding measures to support researchers' inward mobility.

Table 8: Measures supporting researchers' inward mobility

Measure	Description
President of Ireland Young Research Award (PIYRA) (Science Foundation Ireland) (ongoing)	The President of Ireland Young Researcher Award recruits young researchers currently based around the world to carry out their research in third level institutions in Ireland. The award recognises outstanding engineers and scientists who, early in their careers, have already demonstrated or shown exceptional potential for leadership at the frontiers of knowledge. Awardees are selected on the basis of exceptional accomplishments in science and engineering that underpin biotechnology, information and communications technology, and energy, and on the basis of creative research plans that are built on work that has attracted international attention. The PIYRA award may be used to make a contribution of up to a maximum of 50% towards the salary of the successful candidate while the remainder of the salary is provided by the host institution.
Starting Investigator Research Grant (SIRG) (Science Foundation Ireland) (ongoing)	The Starting Investigator Research Grant targets researchers with three to eight years of relevant experience beyond the award of their doctoral degree, who will be responsible for the scientific and technical direction of the research programme, the supervision of the postgraduate student and the submission of reports to SFI. In the framework of the grant, internationally recognised world class research is funded in those fields of science and engineering that underpin biotechnology, information and communications technology, and sustainable energy and energy efficient technologies.

Source: Deloitte

Outbound mobility

SFI programmes (short-term travel fellowships, Walton scholarship scheme) and IRCSET's ELEVATE Programme aim to encourage researchers to spend some time as a researcher in another country. See also chapter 7 "Collaboration between academia and industry" as well as chapter 8 "Mobility and international attractiveness".

Promotion of 'dual careers'

The Hosting Agreement scheme, as implemented by Ireland, allows for the spouse of a Hosting Agreement holder to accompany the researcher and to seek work without obligation to satisfy a 'Labour market Needs Test'[17]. Similar exemptions apply in the case of the spouse of a 'Green Card' holder (special categories of skilled workers).

Portability of national grants

In Ireland, publicly funded grants or fellowships are not portable to other EU countries, with the exception of IRCSET/IRCHSS EU Marie Curie co-funded grants.

Access to cross-border grants

In Ireland, national grants or fellowships are open to non-residents, but research must be carried out in Ireland.

Measures encouraging inter-sectoral mobility

Inter-sectoral mobility is a Government policy objective. Fourth Level Ireland equips researchers with the necessary skills to make the transition from academia to the industry sector. See also chapter 7 "Collaboration between academia and industry" for the IRCSET Enterprise Partnership Scheme (ELEVATE Scheme).

[17] http://www.djei.ie/labour/workpermits/labourmarketneedstest.htm