

Italy – Country report

Objectives of the project

The aim of our project is to improve expertise in industrial relations in the higher education sector and to promote the exchange of information and experience among EFEE and ETUCE members. More specifically, the project aims to:

- Reach a shared understanding, and possibly a ESSDE outcome, about the specific challenges facing early career researchers in Europe incorporating the perspectives and roles of trade unions and employers and the available options for responding to these challenges.
- Provide insight to the European Social Partners in Education on what we can do to improve social dialogue on industrial relations and employment relations issues pertaining to early career researchers.
- Explore where dialogue between national social partners improves support for early career researchers.
- Improve awareness of the existing work in the area of early career researchers (among others European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers (2005), the HR Strategy on Researchers (2008) and the “HR Excellence in Research logo of the EC”, The UNESCO Recommendation (1997), the ETUCE report (2011)) their implementation and benefits in improving research quality through the provision of high quality support for early career researchers.
- To understand the trends in the career progression of female researchers, including areas of progress, and identify initiatives that have been successful in improving equality in career progression, particularly those initiatives that provide support to early career researchers.
- To produce a set of resources including case studies and practitioner-oriented research and policy guidance to complement the existing international work in this area.
- To facilitate peer learning between national social partners in the education sector, especially in the higher education sector; to exchange best practices and learning experiences.
- To contribute to the European social dialogue between employers’ organisations and trade unions in the education sector, more specifically to continue the current work of the Working Group 3 on Higher Education & Research and to improve the coordination, functioning and effectiveness of the European Sectoral Social Dialogue for Education.

This case study is one of six case study reports from this research project. The case study countries are Cyprus, Finland, Germany, Italy, Romania and the United Kingdom. The final project report, due to be published in December 2014, will draw on the findings from each country. The in-depth case studies will be published as appendices to the main report.

Project partners

Leading applicant is: Universities and Colleges’ Employers Association (UCEA) of the UK.

Co-applicants are: European Federation of Education Employers (EFEE) and European Trade Union Committee for Education (ETUCE).

Affiliated entities are: Association of Finnish Independent Education Employers, Ministry of Education and Culture of Cyprus.



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1 Country context

By GDP, Italy has the fourth largest economy in Europe and it is also fourth largest by population. The Italian economy is characterised by the industrialised and prosperous north and the agriculture-intensive and highly-subsidised south. The economy is driven largely by small and medium size enterprises (SMEs), many of which are family owned, that produce high quality consumer goods.

The financial crisis had a major impact on the economy and Italy's GDP is currently 8% below its level in 2007. In August 2014 it was reported that Italy had registered two consecutive quarters of contraction signalling its third recession since 2008.¹ At 12.3%, unemployment is moderately higher than the EU average of 10.2% but youth unemployment is particularly high at 43.7% (third highest after Greece and Spain) compared to an EU average of 22% (June, 2014).²

2 Research and innovation

The Ministry for Education Universities and Research (MiUR) co-ordinates national and international scientific activities. MiUR also coordinates the preparation of the triennial National Research Programme (NRP), the main governmental document for R&D planning that sets the strategic lines for the national system. The National Research Council (CNR) is the most significant research organisation in Italy both performing and supporting research financially in all scientific areas. The CNR's mission is to:

to perform research in its own Institutes, to promote innovation and competitiveness of the national industrial system, to promote the internationalization of the national research system, to provide technologies and solutions to emerging public and private needs, to advise Government and other public bodies, and to contribute to the qualification of human resources.”³

Italian R&D intensity is well below the EU average with 1.25% of GDP invested in R&D in 2011 compared to an average 2.03% across the EU28. Italy suffers from a lack of business investment in R&D and innovation largely due to the large number of SMEs and the dominance of low knowledge-intensity sectors. Reflecting the broader economic geography, there is a disparity between the R&D performance of the north and the underperformance of the south. Other challenges include the insufficient performance of the higher education sector in some regions and a mismatch between the education system and the needs of industry.

Italy has been successful in accessing EU research funding and structural funds. Italian research organisations have received almost €2.2 billion under the 7th Framework Programme (8.27% of total FP7 funding) and three universities (Bologna, Milan and Rome) among the top 50 participant organisations. Italy was allocated €27 billion via EU structural funds (2007-2013) for research, innovation, and support for SMEs, information technologies and other measures to stimulate innovation and entrepreneurship.

¹ <http://www.istat.it/en/>

² http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/3-31072014-BP/EN/3-31072014-BP-EN.PDF

³ http://www.cnr.it/sitocnr/Englishversion/brochureCNR_ENG.pdf

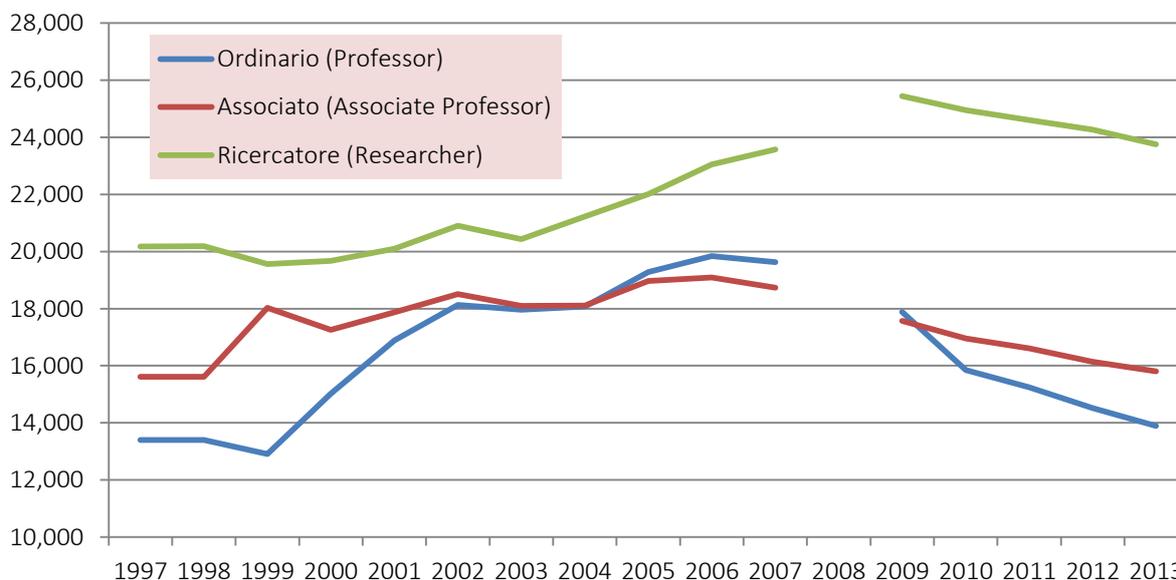
The government has taken steps to support R&D including grants for industrial research and simplification of the Intellectual Property Rights system. They have also made steps to increase the number of graduates in science and engineering as well as increasing rates of female participation in these subjects. The 2009-2013 National Research Programme is particularly focused on public-private partnerships as a means to develop the countries competitiveness. To increase the level of private investment in R&D, the government has introduced tax incentives to encourage the recruitment of highly skilled young people.

3 Higher education – funding and employment

The HE system in Italy consists of a university (state and private universities, polytechnics, universities for foreigners, schools of advanced studies and on-line/distance learning universities) and a non-university sector (inter alia national academies in the Fine Arts, Cinema, Dance and Drama, Music Conservatories, schools and institutes for the education and training of professionals in various fields, such as language mediation, design, etc.).⁴ Universities act autonomously within a national regulatory framework. There were 95 universities in 2007/08, 17 of which were private and 11 of which were online⁴. In terms of research, the majority of research is done in public universities with the exception of a few private not-for-profit universities such as Bocconi University in Milan.

The global recession and its effects on the Italian economy have led to significant funding reductions for public universities which has led institutions to increasingly seek alternative sources of revenue. The reductions in funding have led to significant reductions in academic staff since 2009 as shown in Figure 1; these reductions coincided with a pay freeze on all academic salaries between 2010 and 2013.

Figure 1: Academic staff by grade, 1997 - 2012



Source: MiUR. Data not provided for 2008.

⁴ http://www.dehems-project.eu/static/uploaded/files/files/deliverables/national_reports/HE_system_review_Italy.pdf

The MiUR provides financial support to PhD/Postdoc students but this is not linked to specific fellowships. Government budget cuts have reduced the amount of money available for fellowships and it was reported that some universities are therefore compensating more individuals from centrally held funds than had previously been the case. For example, Bologna currently has 316 PhD candidates – 205 of these are funded by the university and the ministry and 106 are funded direct from departments.

4 Trade unions and social dialogue

Italian industrial relations is typically categorised as exhibiting a voluntaristic approach with high autonomy granted to the parties involved and limited legislative involvement.⁵ However, two important legal frameworks include the Workers' Statute (Statuto dei Lavoratori), approved in 1970, which identifies a set of basic individual and trade union rights, and a legal code for strike action in essential public services (approved in 1990 and partially reformed in 2000). An important source of rules on industrial relations in the private sector was the tripartite⁶ Agreement of 23 July 1993, which introduced a new institutional framework for incomes policy, a restructuring of bargaining procedures, modification of forms of workplace union representation, policies on employment and measures to support the production system. According to Eurofound, this agreement was the first effort to create a systematic framework for workplace-level representation and bargaining. There is a two-tier system for collective pay bargaining with industry-wide agreements covering minimum pay increases and company-level agreements that can include variable wage elements; the latter provide accommodation for the differences between the economic performance of the North and South and between large and small enterprises. In the public sector, legislation introduced in 1992 established procedures for collective bargaining to regulate contracts of employment and work organisation with ARAN (Agenzia per la rappresentanza contrattuale delle pubbliche amministrazioni) assuming responsibility for the representation of public administration across the 12 national bargaining units.

Italy has three main trade union confederations historically based on political affiliation - CGIL, CISL and UIL. CGIL is the largest and has around 6 million members organised by sector. The main employer confederation is the General Confederation of Italian Industry (Confederazione Generale dell'Industria Italiana, Confindustria) which had 149,288 members in 2012 from all industrial sectors.

Industrial relations in higher education are not typical of those in the public or the private sector in Italy. The FLC (Federation of Labour in Knowledge), part of CGIL, represents school teachers, administrative workers and university lecturers as well as staff within research institutes. University academic staff in public universities are employees of the state and are covered by a national pay structure outlined in national regulations – unlike other parts of the public sector, there is no collective pay bargaining and no formal flexibility for pay variation. Academic staff receive the average pay rise for all public sector employees the year before.⁷ Up until 2010 salary progression was determined primarily by seniority, but the 'Gelmini reform' has introduced measures to link this more

⁵ For more detail see: www.eurofound.europa.eu/eiro/country/italy.pdf

⁶ There are no formal arrangements for tripartitism, but tripartite agreements have been reached on an ad hoc basis in response to economic issues.

⁷ Giliberto Capano and Gianfranco Rebori, 'Italy - From Bureaucratic Legacy to Reform of the Profession', Chapter 16 in Altbach et al (2012), *Paying the Professoriate – A global comparison of compensation and contracts*, New York: Routledge.

closely to merit and achievement. Non-permanent research positions – *assegnisti di ricerca* (equivalent to postdoc/research fellow) – are regulated by a national agreement in research institutes but within HE they are defined by law and employed directly by the institution. The minimum salary for postdocs/research fellows in universities is set nationally according to Law 240/2010, but institutions decide on how much they wish to pay above this. This Law also sets a minimum one year period for research fellows with the possibility of renewal for up to four years in total while the duration of research grants and the contracts for temporary researchers cannot exceed a total of 12 years. This legislation provides for social security (including sickness and maternity benefits) through registration in *Gestione Separata INPS* (Separate management of the National Institute for pension rights and sickness). Furthermore universities must supplement the maternity allowance paid by the INPS up to the amount of the grant.

Support staff, including researchers within research institutes (including the National Centre for Research), are covered by the collective agreement for administrative staff in HE. This agreement is drafted through social partnership between the FLC and ARAN, the agency with responsibility for representing public sector employers. In the non-HE research sector there are several other unions representing research staff including CISL Research, UIL as well as a range of autonomous organisations which are independent from the large confederations. In the private sector the collective agreements are usually set up in line with the sector business activity and many do not include a research profile – this is viewed as an issue for career development and training.

The absence of collective bargaining for academic staff in Italy means that there is no formal platform for social dialogue and the FLC reports that it therefore plays a lobbying role rather than a negotiating role. While the union can be effective in representing workers' interests to government, the absence of a formal structure typically limits the scope and quality of dialogue. The lack of negotiating machinery also limits trade union membership among academic staff and, according to the trade union, academics tend to join the trade union for ideological reasons. However, the FLC provides other services and plays an important role in maintaining professional standards but this is not enough to guarantee high membership.

5 Researcher careers in Italy

Reforms to the academic career path in 2010 have made a significant impact on career trajectories within higher education and opportunities for research careers outside of the sector are limited, partly due to the prevalence of small and micro enterprises in Italy. According to recent estimates, there are just over 150,000 researchers in Italy across all sectors of the economy.⁸ On a per 1,000 FTE labour force basis (4.2), Italy is well below the EU average (6.8).

According to interviewees, the definition of early career researcher varies by university and could refer to both doctoral candidates or postdocs (*assegnisti di ricerca*). The trade union sees the PhD as the first step in the career but noted that in Italy the PhD is primarily seen by employers and the wider public as the last stage of higher education (Bologna stage three). PhD candidates have access to social benefits and around half receive a stipend and pay into a pension scheme⁹, but they are not

⁸ http://ec.europa.eu/euraxess/pdf/research_policies/country_files/Italy_Country_Profile_RR2014_FINAL.pdf

⁹ Those without a grant do not have access to the pension scheme but can have the time recognised as service retrospectively.

employees as such and are paid a stipend rather than a salary. The Polytecnica di Tornio's HR Excellence in Research gap analysis, for example, states the following position:

With regard to professional recognition, it should be noted that the Bologna Process and subsequent laws (DM 469/99 and DM 270/04) establishes PhD level studies as third level of higher education. The candidate is thus considered a student, not as an early-stage researcher, as recommended by the European Community. This status can make less effective a direct relationship of the candidate in relation to European partners as well as his/her participation in international projects.¹⁰

According to one interviewee, there is difficulty in defining the ECR stage as researchers can start as an *assegnisti di ricerca* before achieving their PhD and will seek employment where there are opportunities. It was also noted by one interviewee that some researchers undertake more than one PhD to remain in the system because of the way in which the career structure is currently calibrated. It is therefore difficult to separate the postdoc phase from the PhD stage and reach a clear ECR definition within this context.

5.1 Gelmini reform

Up until 2010, there were three tenured academic positions within Italian universities – researcher, associate professor and full professor. However, the General Reform of University Education, or 'Gelmini Reform', in 2010 (Law 240/2010) made important changes to the academic career system introducing a new career ladder system in state-funded universities with only the latter two stages providing tenure. The reform also introduced a triennial assessment of research performance which can now affect individual academic salaries and is managed by the National Agency for the Evaluation of the University and Research Systems (Agenzia Nazionale di Valutazione del sistema Universitario e della Ricerca). The reform was a topic of significant comment from all interviewees.

Under the Gelmini reform, the postdoc stage (*assegnisti de ricerca*) is fixed at four years at which point the individual can apply for a *ricercatore tipo A* (researcher type A) contract which is for three years with the possibility of a two year extension or a *ricercatore tipo B* (type B) which is for three years with no extension.¹¹ The major difference, apart from the inability to extend after three years, is that the type B allows for progression to the associate professor position on completion of the 'abilitazione' and universities are required to set aside money for this advancement. To be selected for either a type A or B contract PhD holders must pass an open competition following public calls on the website of the University (as well as on the MiUR website and EURAXESS). Full-time researchers' workload should not exceed 350 hours per year and their main activity is independent scientific research. There are also temporary teaching only positions, *professore a contratto*.

On one hand this legislation is acknowledged by some as being positive for introducing the concept of tenure track but both universities and trade unions raised concerns about the current format. The purpose of the introduction of the new researcher contracts was that traditionally research positions could be renewed without end yet the new system allows for a second successive fixed-term research position (type A).

¹⁰ http://www.polito.it/ricerca/carta_europea/gap_analysis.pdf

¹¹

<http://www.eui.eu/ProgrammesAndFellowships/AcademicCareersObservatory/AcademicCareersbyCountry/Italy.aspx>

The problem, as outlined by interviewees, is that the type A contracts finish and then the individual may wait a long period before they receive another contract. With an uncertain economic climate and funding cuts to universities there are also very few Type B positions being made available – according to one interviewee fewer than one hundred calls had been published since 2010. It is also easier for universities to create post-doc/research fellow posts and there has been a growth in this group of staff. This means that the majority of research staff moving into research contracts are doing so on a time-limited basis and that this group of staff is growing in number relative to permanent academic positions within HEIs.

The issues with this career system have been exacerbated by the implementation of the career ladder and the existing workforce profile. When the new system was introduced, all contracts were assumed to have started with zero years – this meant that some individuals who had completed several years of a postdoc were now at the beginning point of a three-year contract. Secondly, there were already ‘researchers’ (ricercatore), a type of contract now discontinued and replaced with the type A and B contracts, who had permanent contracts (after three years) and would be expecting promotion into the associate professor grade.

It was noted by interviewees that there is not a separation between teaching and research in Italy and that academics are expected to achieve a balance between the two. Research-focused careers are only found in the research institutes while teaching-focused positions are largely temporary and hourly-paid rather than salaried positions.

5.2 Careers outside higher education

Outside of higher education there are research careers, particularly in the automotive industries as well as in public and private research institutes. The CNR has 108 institutes coordinated by 11 National Departments across Italy and employs more than 8,000 people of which more than half are researchers. While the institutes receive around half a billion euros in government funding, around 30% of income is from other sources such as regional government, international sources and the private sector. The majority of the institutes’ work is collaborative.

Other significant research centres include the Italian Space Agency (NSI) and the National Institute for Nuclear Physics (INFN). There are several large science parks across Italy including those in Trieste (Area Science Park), Cesena (Centura-Rit), Udine (Environment Park), Ascoli-Piceno (Pst Tecnomarche), and Venice (Vega PST di Venezia). The main centres undertaking industrial research and development are the Centro Ricerche Fiat, established in 1978, Telecom Italia Lab and Centro Sviluppo Materiali, an initiative of the steel and mechanical industries established in 1963. Italy also boasts a number of technological ‘meta-districts’ such as Torino Wireless and Etna Valley.

There are many private research institutes such as Elettra, Fondazione Bruno Kessler, Fondazione Edmund Mach (FEM) and the Istituto Italiano di Tecnologia (IIT). These organisations are based on a centre of international excellence model and have independence over HR and management decisions. A representative from one of these institutes reported that there is difficulty in recruiting researchers away from public universities as pay and conditions are relatively better. Careers in the private sector were said to differ from those in universities as there is less bureaucracy in the management of human resources so progression is more closely connected to results with the possibility to move more quickly into senior positions. These organisations have also been active in European researcher initiatives such as RESAVER and the Charter and Code.

Italy has witnessed growth in the number of ‘spinoff’ companies that have been established from knowledge generated through universities and research centres and these provide additional opportunities for Italian researchers in specific disciplines.¹² According to the spinoff network NETVAL, more than 700 spinoffs were established between 2000 and 2009, mostly in northern-central regions. Established spinoffs include Aresys from the *Politecnico di Milano*, Tydockpharma from *Università degli Studi di Modena e Reggio Emilia*, and ES.TEC.O from the *Università degli Studi di Trieste*.

6 Charter and Code

The Gelmini Reform incorporated aspects of the Charter and Code which is also explicitly referred to in the Law with an ‘encouragement to comply’. The Law requires an open and transparent recruitment system in line with the Charter and Code. According to interviewees all Rectors have signed the Charter and Code but there has not been consistent activity since then. Interviewees suggested that the Charter and Code is not widely known beyond senior administrative networks and that the lack of visibility and awareness was problematic. It was noted that in some cases there is not a priority on the HR Excellence award as there is a focus on dealing with the current funding challenges.

The FLC is positive about the Charter and Code and uses the document when making political representations. There is a concern that some universities have only aligned to the principles and are not putting these into action. For example, freedom of research is sometimes restricted as researchers are linked to the professor in submitting grant proposals and therefore not autonomous. There are also issues with transparency in recruitment according to the trade union.

There is no systematic approach at national level to implement the Charter and Code and six universities have received the HR Excellence award in addition to one public research organisation¹³:

- Istituto Nazionale di Oceanografia e Geofisica Sperimentale (OGS)
- Politecnico di Torino
- University of Bologna
- University of Camerino
- University of Foggia
- University of Palermo
- Università degli Studi di Padova

For the institutions that have achieved the HR Excellence badge, the motivations are typically about improving the attractiveness of the university as a destination for international and local talent. For example the University of Camerino states:

This decision was based on the confidence that this can improve the attractiveness of UNICAM for the best research talents from anywhere in the world. Indeed, the HRS4R qualifies this public Research Institution as a stimulating and creative working environment, which favours

¹² <http://www.netval.it/>

¹³ <http://ec.europa.eu/euraxess/index.cfm/rights/strategy4ResearcherOrgs>

the researchers' independence at any stage of their careers, including of course First Stage Researchers (FSR).¹⁴

The gap analysis required for the HR Excellence in Research award is usually done through a bottom-up process involving staff from all levels and research-related functions. All award holders have published their action plans while the reporting on gap analyses is less consistent. Universities in Italy have used focus groups and surveys to capture a wide range of views on the current practice as set against the principles of the Charter. In the case of Camerino University, 'special attention' was given to First Stage Researchers in this process while the University of Palermo produced a specific action plan for young researchers¹⁵. Palermo's survey also helped identify the priority issues for researchers at the university which were¹⁶:

- Appropriate and attractive conditions and incentives, in terms of salary, for researchers at all stages of their career
- Proper plans for increasing researchers' skills and competence
- The need for measures and internal regulations guarantying researchers adequate training for teaching activities

Some of the gap analyses comment that the recent legislative changes restrict universities' ability to independently manage their workforces with limitations on staff recruitment and fixed quotas on recruitment.¹⁷ One university's gap analysis suggests that these restrictions 'may significantly affect the placement of young researchers in the coming years'.¹⁸ The situation facing temporary research staff is also a common focus and the Politecnico di Torino found through their focus groups that temporary staff felt undervalued compared to permanent staff and that they did not receive the same level of information on funding and career opportunities.¹⁹

7 ECR challenges

The economic backdrop in Italy is challenging and there is particularly high youth unemployment. This was seen as important context in the current situation of ECRs in Italy as some of the challenges facing ECRs (e.g. high-level of competition for jobs) are not unique to higher education. The other result of the financial crisis has been a significant drop in university funding which has reduced immediate opportunities for employment within the sector, particularly affecting those at the early stages of their career. This situation has, according to some interviewees, been exacerbated by the 2010 reforms which introduced further challenges to the early stage of the academic career path.

¹⁴ http://www.unicam.it/sgq/hrs/Progress_on_the_UNICAM%20_HRS4R.pdf

¹⁵ http://portale.unipa.it/amministrazione/area2/set15/.content/documenti/cartaeuropearicercatori/EN_5_Table_3.pdf

¹⁶ http://portale.unipa.it/amministrazione/area2/set15/.content/documenti/cartaeuropearicercatori/EN_3_Final_Report_merged.pdf

¹⁷ For example, Law 112/2008 provided that for the three-year period 2009-11, 50% of the resources for new hires should be allocated for Researcher's positions, while Leg. Decree 49/2012 provides for the period 2013-15 that Universities with a percentage of First-segment professors higher than 30% of the total number of professors must recruit temporary researchers in a number not less than those of First-segment professors.

¹⁸ http://www.polito.it/ricerca/carta_europea/gap_analysis.pdf

¹⁹ Ibid.

Supporting Early Career Researchers in Higher Education in Europe

EU DGV Project VS/2013/0399 financed under budget heading Industrial Relations and Social Dialogue

There is limited literature or evidence on the challenges facing ECRs in Italy, but interviewees highlighted a recent FLC-funded survey which was carried out to understand the profile of ECRs in Italy and identify the main challenges regarding working conditions for these staff. The findings of the survey, based on 1,861 respondents and 40 interviews, were published in June 2014 and provide a detailed picture of research staff views and perceptions in Italy. The survey found that:

- 65% studied for their doctorate at the same university where they were employed
- 45% have not worked in the last five years and 16% have worked outside of HE in jobs unlinked to their competencies
- 36% had no teaching duties, 20% had more than 46 hours (but with full recognition) while 35% had teaching duties without recognition.
- In addition to research and teaching 44% reported marking and dissertation supervision, 22% PhD thesis supervision and 22% administrative duties.
- The fixed-term nature of work reduces continuity of research (44% of respondents) and reduces concentration on work due to the need to plan next steps (31%).
- 55% of respondents said that they can't imagine their professional future
- The majority of researchers do work without being paid for it with 28% saying that this happens all the time and 31% saying that this happens often.
- 40% said they were sure they would need to leave Italy to progress their career including 60% of PhD candidates
- Current situation for those outside HE – 45% have a job linked with a high level profession, while 35% are unemployed
- The main adjectives chosen to describe their career were: 'stimulating', 'interesting', 'precarious', 'challenging', 'tiring'.

For the FLC the lack of recognition of the early career stage is problematic as there is an unclear transition from PhD to the first permanent position. According to the trade union, the *assegnisti di ricerca* and *ricercatore type A* contracts are a form of precarious employment – this does not just refer to the fixed-term nature of the contracts but the uncertain career path. The stage between PhD and *ricercatore* is characterised by short-term contracts as an *assegnisti* and then there is the possibility of a further five years of fixed-term employment on a type A researcher contract without any opportunity for progression. This can mean that researchers can find themselves almost a decade in to the profession without a permanent post. A similar point is made by the University of Torino in its HR Excellence in Research commentary which notes that national legislation prevents the adoption of strategies for the individual development of the researcher's career due to the constitutional principle that public administration is 'carried out exclusively by competition'. This statement implies that the need for open competition at the *ricercatore* level prevents institutions developing promotion pathways for *assegnisti* (research fellows). Despite the challenges, Torino notes that it has developed an active policy for the career development of research fellows which involves constant dialogue with fixed-term research staff.

In considering research pathways outside higher education, interviewees expressed concerns about the gap between the world of academia and private industry and suggested this gap needs to be addressed. The issue is not just that industry does not value the skills of individuals with PhDs, but also that commercial industry is often viewed with scepticism by ECRs. According to interviewees, there are some good examples of collaboration between higher education and industry but many of

these examples are found in polytechnics (e.g. Milan, Turin) rather than publicly-funded institutions. The University of Bologna is a notable exception as noted in section 11.

In addition to the situation facing researchers on temporary contracts, it was also noted that there is another large group of casual staff performing academic duties on an hourly-paid basis (*professore a contratto*) and that these individuals report exploitation of their position. Many of these individuals are delivering teaching but it was reported that it was common for them to continue doing academic research on a contract or ad hoc basis while awaiting opportunities for a more permanent role.

Workload is cited as an issue by the FLC and was noted as a common problem across the EU for this group and for academic faculty more widely. Workload issues are evident in the results of the FLC-funded survey and this can affect the amount of time devoted to research as well as the effectiveness of the time that is available. Among ricercatori, it was reported that there is more teaching being done by type A contracts than type B even though the latter are the ones who should be developing teaching skills to move to the next career stage.

National constraints on recruitment are highlighted as an issue by universities that have achieved the HR Excellence in research award, particularly in light of Italy's ageing academic population. One institution notes that these restrictions are 'to obstruct a generational change and the employment of young researchers and professors in Italian universities'.

According to interviewees, the PhD is considered to be a qualification for a university career and Italian industry and public administration do not value these qualifications. It was also explained that postdocs can often be viewed as the continuation of the PhD and not a job/career.

8 Mobility

Geographical mobility is seen as a positive part of the career development of a researcher by universities in Italy and at most universities international mobility is a pre-requisite for a PhD. Special indicators have been established by The National Agency for the Evaluation of the University and Research (ANVUR) to measure mobility of permanent staff of universities. One of the indicators of internationalisation in the VQR is the outgoing mobility of professors and researchers – measured by the number who performed research abroad continuously for more than three months in the previous seven years. Italian researchers, however, are less mobile than their EU counterparts with 25.2% of researchers reporting that they have been mobile for three months or more in the last ten years compared to an EU average of 31.0%.²⁰ The EURAXESS Researcher Report on Italy notes that publicly funded grants and fellowships are typically not portable which can be a barrier to the mobility of researchers – however, there is the potential for portability on a case-by-case basis.

At institutional level, the universities with the HR Excellence in Research award have noted the importance of mobility and how this is treated by their respective institutions. With regard to ECRs for example, Torino notes that:

²⁰ Deloitte, 2013.

The international experience of candidates for temporary researchers' positions is considered an important qualification. In particular, the relationships and research collaborations documented and established with foreign Universities are specifically taken into account.

Tornio has also established an Excellent Science and Researchers Mobility Office that assists with the financing of mobility of researchers.

Interviewees voiced concerns that the current Italian HE system is pushing researchers overseas and creating a significant brain drain. For example, Italian scientists won 46 ERC Consolidator Grants in the last round, second only to Germany (48), but more than half of these individuals are based outside Italy. The opportunities to progress careers and the inflexible HE labour market in Italy were quoted as pull and push factors respectively.

The FLC was positive about geographic mobility but argued that there is often too much focus on funding large research programmes which does not help short-term mobility. There are also immigration and emigration issues that have affected mobility while accommodation is a perennial issue in Italy. It was noted that there is however a difference between mobility at different stages of the career and spending six months abroad for a PhD is different from spending time abroad at the later stages of one's career.

According to the trade union, the lack of an HE labour market movement in Italy is problematic – this means that there are few openings and only a small proportion of these will be permanent positions. It is common for academic faculty to stay at the same university for their whole career. Living costs in the larger cities make short-term mobility difficult at the early stages of the career. The FLC said that young people want more mobility within Italy but this requires opportunities within institutions.

In the context of mobility, the new supplementary pension scheme, RESAVER²¹, was identified as an important development particularly if it receives widespread support across Europe.

9 Equality

The talent pipeline for female researchers in Italy is strong as women in Italy are increasingly more likely to participate in higher education than men. In 2012, 62% of new tertiary graduates were women, up from 56% in 2000. Despite this, women are underrepresented in some fields, such as computing (25% of graduates), engineering (40%), and physical sciences (42%). However, these rates compare favourably with other OECD countries. For example, the average percentage of women graduates in engineering across OECD countries is 28%, 22% in Germany and 23% in the UK.²²

There is a Memorandum of Understanding between the Ministry for Equal Opportunities and the MiUR which confirms the commitment to 'ensure the implementation of policies on rights and equal opportunities on all levels of science, technology and scientific research, for the concrete realization of the European Union Directives and Recommendations'.²³ It also makes a commitment to the 'diffusion of gender awareness through training activities and the provision of information within institutions of all levels and order, universities and research bodies' and established a consultation

²¹ http://ec.europa.eu/research/era/resaver_en.htm

²² <http://www.oecd.org/edu/Italy-EAG2014-Country-Note.pdf>

²³ http://www.ricercainternazionale.miur.it/media/2977/protocollo-miur-dpo_eng.pdf

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panel on equal opportunities in universities and research. The MoU cites the principles of the Charter and Code particularly with reference to recruitment procedures, career advancement and employment conditions. A 2011 working group of the consultation panel on gender balance in HORIZON 2020 identified several objectives in achieving gender balance including promoting cultural change with respect to gender in science, promoting structural change through diversity management, promoting women leadership in science and research and ensuring the effective application of the Charter and Code.

Equality within higher education is also protected and promoted by legislation such as Article 35 of Legislative Decree 165/01 which requires recruitment of public servants to comply with the principle of equal opportunity and Article 22 of Law 240/2010 which guarantees a full salary to maternity leaves for ECRs. The latter was incorporated into law based on an initiative of UNICAM following its adoption of the Charter and Code. For PhD candidates, Ministerial Decree 224/99 allows for the suspension of the doctorate for maternity and sickness and compensation is possible for those enrolled in the INPS (only PhD candidates with a scholarship).

There are no national programmes promoting equal opportunities within the research population but there is reported to be a strong commitment towards this at many individual universities, research organisations and departments. Since 2011 a specific budget of €3.5 million has been hypothecated in the state university budget to guarantee the salary of female postdocs who take maternity leave – universities can also provide benefits in addition to this. There are examples of networks of female research fellows including one at the University of Siena which was set up to improve recruitment policies and is supported by the university.

At institutional levels there are numerous examples of policies and initiatives that promote equal opportunities among male and female researchers. For example, Politecnico Torino takes parental leave into account in the assessment of applications for temporary researchers while UNICAM has reached an agreement with the local municipality to guarantee a number of places for the children of researchers. Università degli Studi di Napoli Federico II operates a women in science network and was involved in GENOVATE²⁴, the FP7 funded action-research project on gender equality. The Politecnico di Torino has implemented a range of initiatives to support staff in balancing family and work time including a flexible work scheme, educational and recreation services for the children of permanent and temporary staff (including a nursery and baby-sitting service), and a female Councillor who 'listens, advises and assists in cases of moral or sexual harassment or discriminatory behaviour at all levels (staff, students) within the University'.

Despite the clear commitments at a national level and activity at institutional level, concerns were raised by interviewees about the prevailing culture in Italy which is still male-dominated and negative stereotypes about women and work are common. This makes career development, particularly into senior roles, difficult and this was also perceived by some to be a factor in early career level recruitment. In 2010, 20.1 per cent of 'grade A' (full professor) academics were female although this was marginally higher than the EU as a whole (19.8%). The lack of representation at senior academic levels was noted as a challenge for female researchers looking at the career path ahead of them.

²⁴ <http://www.genovate.eu/>

10 Supporting early career researchers in Italy

Interviewees did not identify any nationally run programmes to support the professional development of researchers but universities did report support at institutional level. Interviewees from the trade unions and ECR interviewees felt that there was sometimes limited support and guidance available and that the individual was often dependent on the quality of their immediate line manager in providing advice and guidance. The legislative nature of the career structure and the absence of collective bargaining over terms and conditions for these staff means that social dialogue is limited and the main academic union reported that it played a lobbying role rather than engaging directly with employers on these issues. There is however, much practice to commend in Italy and the transparency offered through the HR Excellence in Research award, whereby universities publish their action plans, helps demonstrate activity which may be underplayed.

There have also been changes to doctoral education to improve links with industry, mobility and the acquisition of transferable skills. Ministerial decree number 45 of 8 February 2013²⁵ establishes important procedures for the accreditation of PhD courses in Italy to improve quality and encourage industry-academia collaboration.²⁶ Universities are required to submit information on a range of course attributes including collaboration with industry, career opportunities, learning objectives and access to facilities and equipment. The ANVUR is responsible for assessing applications which receive formal accreditation from the MiUR. Following the initial accreditation, the required academic and administrative standards will be periodically verified. The initial ministerial accreditation is granted when the following requirements are met:

- number of members of the Faculty Board and standards in terms of academic status and in terms of high quality and internationally reputed research.
- average number of fellowships calculated on the total of PhDs and number of fellowships for each PhD program;
- availability of adequate and sustainable funding;
- availability of specific and first-class research facilities;
- disciplinary and interdisciplinary teaching.

Groups of researchers have also provided a bottom-up approach to supporting ECRs and putting issues on university and trade union agendas. Most prominently, a group of ECRs developed a network of 'precarious researchers' in 2004 and highlighted for the first time the issues associated with this group. The FLC had not ignored this group but it was noted that the low levels of ECR membership within the FLC at that time meant that the unique challenges facing these staff were not prioritised. As this group progressed in their careers they have continued to work on these issues as trade union members. This has been important as this group and the associated issues are now embedded as an important policy area within the trade union.

The Associazione Dottorandi e Dottori di Ricerca Italiani (ADI) was also noted as important network, primarily for PhD candidates, and provides a forum for discussion as well as an apparatus to lobby

²⁵ DM 94/2013 "*Regolamento recante modalità di accreditamento delle sedi e dei corsi di dottorato e criteri per la istituzione dei corsi di dottorato da parte degli enti accreditati*".

²⁶ [http://attiministeriali.miur.it/anno-2013/febbraio/dm-08022013-\(1\).aspx](http://attiministeriali.miur.it/anno-2013/febbraio/dm-08022013-(1).aspx)

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government on policy. The ADI has produced a comprehensive guide for PhD candidates.²⁷ One interviewee also noted other spontaneous networks that were created ahead of the 2010 reform which provided a critical voice for PhD candidates and young researchers that could be affected by the changes. Another ECR-led initiative was the production of a pamphlet on social security rights and regulations for ECRs which was financed by the ADI and is an important resource that assists ECRs in navigating this complex area.

Concerns about the value of the PhD outside of higher education have been noted, but recent developments in this area within universities should be acknowledged. This includes improving the links between doctoral education and industry and the emergence of interdepartmental/intersectoral research centres. According to the Euraxess Researchers Report on Italy, the majority of universities and doctoral schools now offer doctoral programmes between academia and industry on the basis of a memorandum of understanding and improvements are also reported in the provision of integrated training at PhD and postdoc level to improve competencies that can transfer into industry such as business planning, entrepreneurship communications skills, marketing, and market awareness.

The University of Bologna has seven interdepartmental centres for industrial research which employ 1,600 researchers and are integrated into the regional high-technology network of 45 industrial research laboratories and innovation centres. This model provides excellent opportunities for researchers to gain industry experience within a research environment and also enables small companies to hire researchers to undertake small scale projects to solve discrete problems. Another similar example is a collaborative doctoral programme launched by Confindustria Marche, the lead regional federation of industries, with the University of Camerino and four regional banks that has involved PhD students in collaborative projects between companies and the university. This was part of a MiUR call for doctoral fellowships in topics related to industrial research. The European Commission is taking a similar approach at the next stage with the Research and Innovation Staff Exchange (RISE)²⁸ which provides for 1-12 month exchange secondments with at least three partners.

Another example is the Cittadella Politecnica²⁹ at the Politecnico di Torino which operates as a hub for innovation and knowledge transfer. The Politecnico also operates an Internship and Job Placement Office for PhD candidates and research fellows to match individuals with opportunities in professional research and assist with transitions to the labour market. The objectives of the Office are to:

- provide the socio-economic system with highly qualified individuals capable of interpreting, guiding and responding to a need for advanced scientific and technological knowledge;
- encourage a more targeted placement of the high profiles leaving the University.

There are also national initiatives to improve the recruitment of researchers into industry but the success of these to date has been modest. For example, private employers can recruit a PhD student under the age of 29 under a fixed-term contact with subsidy from local/regional government (this rarely happens) and under Decree 297/1999 there is the possibility for SMEs to receive financial contributions where a researcher from a university or public research centre is employed by the company for a period of at most four years, renewable once. While the uptake of these schemes is

²⁷ <http://www.dottorato.it/documenti/speciali/GuidaDottorato.pdf>

²⁸ http://ec.europa.eu/research/mariecurieactions/about-msca/actions/rise/index_en.htm

²⁹ <http://www.cittadellapolitecnica.polito.it/>

minimal, there are good examples of private R&D centres providing early career opportunities for researchers. For example FEM offers PhD scholarships of €20,000 a year with studies carried out at FEM in collaboration with various partners.³⁰ FEM also hosts international and international students that are developing their PhD thesis. The IIT is also working in collaboration with the University of Genoa and others to finance over 300 doctoral scholarships for researchers which are carried out by the foundation.

It is clear from the six universities that have achieved the HR Excellence award that the gap analysis template provides a comprehensive framework for identifying key areas that need strengthening vis-à-vis ECRs and therefore can tightly focus institutional support in specific areas. For example, at Palermo the most relevant actions that were identified for ECRs were:

- creating consciousness about the new situation in which the new generations of researchers are growing;
- giving them tools to cope with the new challenges;
- increasing the sense of belonging to the institution;
- increasing the possibility to communicate with external actors (industry, EC etc);
- promoting incoming and outgoing mobility.

Examples of support aimed at ECRs that feature in university action plans include:

- **Targeted recognition and reward** – The UNICAM School of Science and Technology provides an honorarium (€300) to the top five early stage researchers' posters in an annual exhibition based on the quality of the research and the effectiveness of their communication. Politecnico di Torino awards annual prizes for young researchers presenting research results to international conferences. Researchers are evaluated on the basis of the classification of their publications, for the three years preceding the competition year, according to evaluation criteria provided by Politecnico.
- **Career development plans** at PhD and research fellow stage including the identification of actions to improve transferable skills. UNIPD (Padua) provides support and guidance for the personal and professional development of researchers.
- **Mentoring** – UNICAM provides mentoring to ECRs to 'boost their autonomy and creativity' in line with the principles of the Charter and Code.
- **Increasing the visibility of funding and job opportunities** – following its gap analysis for its HR Excellence in Research badge, the University of Foggia improved the visibility of the EURAXESS portal on its website. Politecnico di Torino has piloted initiatives to better inform researchers about funding opportunities.
- **Improving representation** – The University of Foggia has introduced representation of postgraduate students and researchers in collegial bodies.

11 Reflections from trade unions and universities

Top down messages from the EU are helpful in Italy, although it is acknowledged that attitudes differ across Member States and northern countries are less enamoured of European directives and favour

³⁰ <http://cri.fmach.eu/education/FEM-PhD-scholarship>

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soft communications. This is important for schemes such as the HR Excellence in Research scheme and RESAVER which require national coordination and promotion.

The Charter and Code are important and need constant pushing at European and national level. Open recruitment is fundamental and there should be incentives to comply with this (e.g. research funding requirements). Publicly publishing strategies in this area is important as it opens it up to scrutiny by funders and researchers.

European Framework for Research Careers – Italy aligned to this framework through the 2010 reform but a framework for careers needs to be more than defining four stages – the framework needs to encompass required competencies and this should drive the recruitment and progression of researchers.

Professional development of researchers is important – support needs are much higher in the first phases of a research career than in later stages – although at the later stages the needs are different – e.g. managerial skills, leadership.

The FLC feels that **lack of a negotiating framework for researchers is problematic** as it limits social dialogue about this group. The trade union noted that representation within institutions could be enhanced through specific researcher representation in the Senate and cited Pisa as a positive example where this has happened.

Workforce planning needs to be improved and needs to account of career paths, not just intake. This planning is increasingly important with Italy's ageing academic workforce – in 2009, 72 per cent of professors and 42 per cent of all associate professors were older than 55 years (MiUR). Universities in Italy need assistance with this and there are already some examples of dialogue with staff representatives taking place. For example at Federico Secondo in Naples the university worked with Senate representatives to shape the distribution of the academic workforce.

Changing perceptions and expectations in the private sector and in academia – it was commented that there is a widespread feeling is that if you don't secure a career in academia then this is failure. There are also misunderstandings about working in the private sector and this could be reduced by exposing researchers at the early stage to industry. This could also help improve the perception of researchers within industry and introduce more culture and knowledge to private sector businesses. The FLC recommends more interaction between research institutes and universities, which is currently limited (with the exception of physics).

Improving the relationship between universities, research institutes and the private sector. This is viewed as important with regard to the development of the Italian R&D system as a whole but also in the context of creating better research career pathways. It was noted that the model of research funded by public money, but managed under "private" law, has been able to increase the level of integration between research and the business world. For example, the IIT in 2011-2013 managed 44 industrial projects (including some within the European Graphene Flagship and 2 with INAIL) and 10 start-ups.

The European project for a supplementary pension for researchers is an opportunity but will only work if a lot of organisations join it. Movement on pensions within Italy has become easier.

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Increase recognition for ECRs for teaching and supervision

Review the operation and impact of the career ladder system and the type A and type B division.