Opinion of the European Economic and Social Committee on ‘Concerted action to improve the career and mobility of researchers in the EU’

(2010/C 255/03)

Rapporteur working without a study group: Pedro ALMEIDA FREIRE

On 16 July 2009, the European Economic and Social Committee, acting under Rule 29(2) of its Rules of Procedure, decided to draw up an own-initiative opinion on

Concerted action to improve the career and mobility of researchers in the EU.

The Section for Employment, Social Affairs and Citizenship, which was responsible for preparing the Committee’s work on the subject, adopted its opinion on 10 November 2009. The rapporteur (working without a study group) was Mr Almeida Freire.

At its 458th plenary session, held on 16 and 17 December 2009 (meeting of 16 December 2009), the European Economic and Social Committee adopted the following opinion by 174 votes, with 8 abstentions:

1. Recommendations

— Boosting human resources in science and technology in Europe and promoting mobility are key factors in making the European Research Area (ERA) a reality and in ensuring that the EU remains competitive globally and is able to meet the main challenges it will face in future.

— Urgent measures are needed to improve coordination between policies on education, research, labour and social security, to ensure that educational, scientific and social policy instruments are developed in a coordinated manner, so that Europe can achieve its goals in this field.

— The European Economic and Social Committee proposes that existing programmes in the field of human resources be strengthened and better coordinated and also that mobility be promoted, and specifically that the opportunity provided by the debate concerning the EU’s Eighth Framework Programme for Research and Technological Development be taken, in conjunction with other measures, to boost the human capital component and promote the creation of a platform for advanced training in research activities.

— The EESC also proposes that a monitoring centre for human resources in science and technology in Europe be set up, that can gather, analyse and provide consistent and comparable information on developments in this field and on national human resources policies both in Europe and worldwide.

— The EESC calls for coordinated action to improve the career and mobility of researchers in the EU, in terms of employment conditions and personal career development, especially in recruitment, career progression and social rights.

— Lastly, the EESC calls for both the new European Innovation Pact that the EU is preparing to draw up and the future revision of the Lisbon Strategy to take due account of the need to increase human resources in the field of science and technology and ensure that they are properly qualified.

2. Introduction

2.1 Policies on research, technological development and innovation are playing an increasingly important role in the context of the Lisbon Strategy, at both the Community and national levels.

2.2 The new boost for the European Research Area and, in this regard, for the development of human capital under the European strategy for competitiveness, growth and employment, are evidence that increasing human resources in science and technology in Europe and mobility are central to the success of this strategy.

2.3 The European Union is preparing to draw up a new strategy for innovation; one that is more integrated and socially-minded, in which the triangle of knowledge should be a central concern. People are thus crucial to ensuring that the EU remains competitive globally and is able to meet the main challenges it will face in the coming decades.

2.4 The free movement of knowledge and mobility are gradually being recognised by the heads of state and government as key factors in EU education and research policies and in European cooperation. A number of different European programmes endeavour, within their sphere of activity, to respond to these challenges, specifically: — the Erasmus programme concerning the mobility of young people in higher education; — the Erasmus Mundus programme for improving cooperation with third countries through joint masters degrees and doctorates and partnerships between higher education institutions; — the Framework Programme for Research and Technological Development, within which a key role is played by the specific programme named
People, aimed at promoting researcher mobility, and best known for its Marie Curie activities. The Bologna process in the field of higher education is intended to promote the European dimension of higher education, mobility and cooperation. Nevertheless, despite the existing programmes and the efforts that have been made, it is universally acknowledged that much remains to be done.

2.5 Following up the opinion on the Commission Communication entitled ‘Better careers and more mobility: a European partnership for researchers’ (1), the European Economic and Social Committee decided to draw up this own-initiative opinion, to contribute once again to a strategy aimed at boosting human capital in the European Union and committing to a new research policy and innovation strategy that take account of human resources in the context of integration policies – something that the Committee has always advocated - and in the context of a social policy agenda.

2.6 In 2010, the Lisbon Strategy will be renewed and the new European plan for innovation will be launched, in tandem with the European Research Area renewing its Vision for 2020.

2.7 Against the backdrop of the economic crisis, the commitment to ensuring higher investment – both public and private - in research and development, and increased human resources in science and technology should remain priorities on national and EU policy agendas.

2.8 There is, therefore, a pressing need to set common objectives at the EU level and encourage measures aimed at securing the level of human resources in science and technology that are required to achieve the ambitious goals that the EU has set for itself.

2.9 These objectives include ensuring a steady growth in the flow of young people studying sciences and technologies (from mathematics to natural sciences and from engineering to social sciences and humanities) and an increase in doctorates in these areas, stimulating growth in the proportion of women scientists and guaranteeing that Europe remains an attractive prospect and that it has the necessary human resources qualified in science and technology, in order to remedy the current imbalance in transatlantic relations and ensure positive flows between Europe and the rest of the world. These are new objectives, which should update the Lisbon agenda in this field.

2.10 Achieving these objectives will require Europe to develop exceptional centres and networks of knowledge that can attract the best international talent and extend the social base of education and the culture of science and technology, which is greatly needed.

3. Need for strong European and national policies for human resources in science and technology

3.1 The EESC recognises the opportunity provided by the Green Paper on the European Research Area (ERA) (2), which states that one of the ERA’s main priorities is a European partnership for researchers, with better careers and more mobility, and by the Commission communication referred to above, which warranted an opinion from this Committee. With this opinion, the EESC seeks to go further and support the proposals contained in the document entitled ‘A European partnership to improve the attractiveness of RTD careers and the conditions for mobility of researchers in Europe, Proposed Priority Actions’, drawn up by José Mariano Gago and François Bilgen, respectively the Portuguese and Luxembourgish Ministers, on 30 April 2009 (3), in conjunction with their fellow ministers, thus helping, by means of practical measures, to make progress on an EU policy in the field of human resources in science and technology.

3.2 The EESC acknowledges the considerable work that has been done in this area at the EU level. The EESC itself has drawn up a number of own-initiative opinions in areas linked to this theme.

3.3 Human resources in science and technology have formed an integral part of the EU’s strategy in this area since March 2000. In 2002, the Barcelona Summit set the European target of increasing the percentage of GDP dedicated to research and development (R&D) to 3% by 2010. This target was estimated to involve an increase of around half a million additional researchers (4).

3.4 These figures support the need for a common European policy in this area, going far beyond what is known as the open method of coordination for national policies, and which even involves making changes to the employment conditions and career development of the researchers themselves, including young researchers, in the areas of recruitment, career progression and social rights.

3.5 Despite the target for investment in R&D meaning that 2 of the 3% of GDP will come from the private sector, industry cannot be expected to shoulder this burden alone, and governments have considerable responsibility in this area. Since most job opportunities for researchers are created by industry, better conditions for carrying out research in and by the private sector, including small and medium-sized enterprises, must be generated in Europe in order to meet the targets that have been set by means of, for example, incentives to set up business networks and clusters in key sectors of the European economy.

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(1) OJ C 175, 28.7.2009, p. 81.
3.6 The level of public funding per researcher in Europe is still significantly lower than in the US and Japan. Employment conditions and prospects in the public sector should, therefore, form an integral part of European governments’ scientific policy objectives. There is also an enormous disparity as regards the number of researchers per total population in comparison with the US and Japan: around 6 researchers per 1,000 inhabitants in the EU, whilst in Japan and the US, the rate is between 9 and 10 researchers per 1,000 inhabitants.

3.7 As the bodies primarily responsible for training researchers, institutions of higher education must come up with new ways of better incorporating education and training into their curricula and of more successfully cooperating with industry, with a view to improving lifelong learning. In fact, these institutions have to change their outlook on this issue as part of their mission to train human resources for a knowledge-based society, by restructuring curricula, committing to training in conjunction with R&D in industry, offering new opportunities, including to people starting late in the research careers, improving access for women, ethnic minorities and disadvantaged groups, including people with special needs, who might view research and knowledge as an area offering social advancement and personal development in today’s society.

3.8 The involvement of students, including undergraduates and not only postgraduates, in research activities as a regular part of the curriculum, in the private sector too, is still inadequate, and should become more widespread.

3.9 There is also a need for measures making careers in science, engineering and technology more attractive to young people, without neglecting the social sciences and humanities. The difference between careers in industry and in universities or the public sector is enormous, but national governments and the European Commission should play a major and coordinated role in this area. This is a key factor in developing the ERA and in the EU’s future prosperity and competitiveness.

3.10 Science education is another important factor, as it can stimulate children’s and young people’s curiosity and interest in scientific careers. The need to demonstrate commitment to qualifications and the quality of education, starting at primary and secondary school, is essential to the ERA’s success, carrying out experimental work and establishing contacts with the scientific world and industry, in addition to ensuring that teachers themselves are properly qualified (5).

3.11 Strategies to popularise and promote science are already acknowledged to be essential to the public’s understanding of science and to bring science closer to society at large and especially to young people. Greater incentives should be provided, however, at the European level too, through support for joint initiatives, because of their importance, especially in a globalised world in which the need both to understand controversial issues and also to communicate science’s successes are crucial.

3.12 The issue of women in science is another extremely important factor. Whilst current figures are very different to those of 20 years ago, women are still under-represented in many areas of scientific research in many countries and above all, tend not to hold senior management positions. The European Commission and some Member States have made considerable efforts in this field, but much remains to be done. Women still represent the most obvious source to draw on for increasing human resources in science and technology in Europe, despite the fact that current incentive measures fail to successfully link scientific policies and policies offering women social and economic support.

3.13 Any discussion of human resources in the fields of science and technology should not overlook the international dimension of the ERA (6). The EU should compete internationally to attract the best-qualified human resources and ensure that they are able to stay in Europe, through better coordination between national and Community policies. Nevertheless, any initiative should be based on cooperation, in order to boost the movement and transfer of knowledge, as well as mobility, to ensure reciprocity and, especially for researchers from developing countries, should also help to improve qualifications in their country of origin.

4. The need for practical policy measures aimed at achieving immediate progress on the European agenda for human resources in science and technology

4.1 The Committee wishes to emphasise the importance of a common European approach, with practical policy measures aimed at achieving immediate progress in the field of human resources in science and technology.

4.2 Reaffirming the content of the Commission Communication on the European Research Partnership, especially as regards the recruitment of researchers and the relevant employment conditions, the EESC considers that sustainable and steady development in the EU would be desirable and realistic and represents

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growth of around 5% per year for the next ten years. This would help to increase current levels of human resources in science and technology by over 50% in a decade. The Committee proposes that these measures be applied specifically in the following areas:

4.2.1 Increasing the number and proportion of young people choosing to study science- and technology-related subjects;

4.2.2 Increasing the number and proportion of graduates enrolling on doctorate courses, diversifying the profiles of doctorates and strengthening quality-control mechanisms;

4.2.3 European institutions attracting and retaining a higher percentage of science and technology students from Europe and the rest of the world and doubling the number of doctorates outside students’ country of origin;

4.2.4 Reiterating the importance of providing a legal, administrative and financial framework to encourage implementation of the measures described above in the field of coordinating research policies and employment and social policies.

4.3 The number of young people choosing to study science- and technology-related subjects has actually increased in most European countries, although the proportion in relation to the total number of students has not. There are a number of measures that can be taken to attract young people to science and technology, which include: – improving the teaching of science and technology and helping to develop science networks involving schools, science teachers and researchers, both nationally and internationally; – supporting measures to promote science and extending the social base of scientific and technological development, specifically in the form of science centres and science museums; – providing information services and academic and career guidance services that can meet social needs relating to science and technology courses.

4.4 Without discounting the quality guarantee, another immediate aim should be to put in place incentives to increase the number of doctorates and to expand the range of doctorates on offer, involving industry where appropriate. With this aim in mind, measures could be promoted to: – increase the proportion of grants for doctorates on the basis of national or international competitions; – attract third-country graduates to study for doctorates in Europe; – build on the importance that doctorates have gained recently to achieve high levels of professional competence in different areas, and not only in research careers.

4.5 Attracting international students should be a target to achieve, and would involve: – improving and encouraging the mobility of students, researchers and teachers between institutions and sectors and across borders, specifically between academia and industry; – promoting researcher recruitment that is open, competitive and transparent; – improving living conditions for researchers’ families and improving access to the labour market for researchers’ partners; – significantly reducing the red tape involved in public research funding.

4.6 Improving researchers’ working and employment conditions is a critical factor in increasing mobility and interest in scientific careers and in raising the proportion of women in research, ensuring adequate social protection. Making employment contracts easier to obtain, with a view to making careers competitive and attractive, as well as offering appropriate employment conditions for men and women, including maternity and parental leave and other social security measures to encourage researcher mobility are key factors in the success of any research and innovation policy.

4.7 The EESC supports the Member States’ efforts to consider the possibility of adopting measures making it easier for researchers to transfer supplementary pension rights, making use of the existing legal framework and through bilateral and multilateral agreements. The Committee looks forward to seeing the results of the feasibility study on a possible pan-European pension fund for EU researchers, which is being carried out with Community funding, supporting any measures that it deems urgent, to make it easier for researchers to transfer supplementary pension rights.

4.8 The EESC also supports and advocates urgent measures to facilitate coordination between policies on education, research, labour and social security to ensure the coordinated development of instruments for educational, scientific and social policy, in order to achieve Europe’s goals for human resources in the field of science and technology.

4.9 As practical EU-level measures to meet the aims and goals detailed above, the EESC wishes:

4.9.1 in the context of the discussions that will soon start on the future 8th Framework Programme (FP) for Research and Technological Development (RTD), to ensure that research activities supported by the FP automatically form a platform for advanced education, specifically for doctorates, on the basis of competitions open to students from any country;

4.9.2 propose that a monitoring centre for human resources in science and technology in Europe be set up, to provide consistent and comparable information on developments in this field and on national human resources policies both in Europe and worldwide (7);

(7) This is a proposal already put forward in 2004 by the High Level Group on Human Resources for Science and Technology in Europe (See footnote 4).
4.9.3 also in the context of the 8th RTD Framework Programme, to extend the Marie Curie measures, to support researcher mobility and related activities and boost international cooperation on human resources; further develop the Erasmus Mundus programme, as a means of encouraging cooperation with third countries in the field of advanced studies.

Lastly, the EESC calls for the future revision of the Lisbon Strategy to take due account of the importance of human resources in the field of science and technology and of ensuring that researchers are properly qualified and guarantee the long-term development of a common policy in this field at the European level.

Brussels, 16 December 2009.

The President
of the European Economic and Social Committee
Mario SEPİ