

PARLIAMENTARY COMMITTEE FOR EDUCATION AND SCIENCE

SUMMARY OPINION

(to be submitted to the Parliamentary Committee for European Affairs)

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GREEN PAPER

From Challenges to Opportunities: Towards a Common Strategic Framework for EU research and innovation funding

Rapporteur: MP Pedro Saraiva (PSD)

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1. Procedure

Under Article 7(1) of Law No 43/2006 of 25 August 2006, the Green Paper Initiative 'From Challenges to Opportunities: Towards a Common Strategic Framework for EU research and innovation funding' was sent to the Committee for Education and Science on 11 February 2011 and distributed on the same day, for the purposes of issuing a possible opinion.

2. Framework

The aim of the Green Paper in question is to launch a public debate on the main issues relating to future EU research and innovation funding programmes.

The initiative follows on from the Europa 2020 strategy, which strives for smart, sustainable and inclusive growth, including amongst other things the aim of achieving a volume of investment in R&D of 3% of GDP by 2020.

The Council also called for *'future EU funding programmes to focus more on Europe 2020 priorities, address societal challenges and key technologies, facilitate collaborative and industry-driven research, streamline the instruments, radically simplify access, reduce time to market and further strengthen excellence'*.

The public consultation on the Green Paper lasts until 20 May 2011 and everyone is invited to submit their contributions using the website (<http://ec.europa.eu/research/innovation-union>).

3. Purpose of the initiative

This Green Paper focuses on the subject of research and innovation in the EU and aims to launch a public debate which involves all communities in this sector. To this end, a set of essential issues are analysed which should be taken into account in order for the targets proposed by the Europa 2020 Strategy to be achieved.

A stock-taking exercise should be undertaken of the programmes operating in this area and objectives laid down for the future, with a view to increasing investment and cooperation by the Member States.

The challenges which Europe is facing at the moment are vast and require concerted action in terms of R&D by the Member States.

The traditional approaches where each State has its own compartmentalised vision in this area are inimical to the pursuit of objectives which are as ambitious as those proposed in the Innovation Union, for which it is necessary to have more integration and connections in this field.

The financial restrictions which the Member States are facing at the moment are an even greater reason to work towards a common strategy, creating synergies and avoiding duplication and fragmentation of resources with regard to R&D.

Innovation and development programmes at EU level are important in order to make up for the lack of investment, in particular by the private sector. These programmes will also serve as a lever for investment, making Europe more attractive in this sector. These measures are designed to transform knowledge into innovation in a more effective way.

There are various lessons to be learned from the EU research and innovation programmes, which already represent a significant part of the EU budget. The mid-term evaluation of the 7th Framework Programme enabled some conclusions to be drawn about what has been done and, despite progress made, there are still some problems which remain unresolved. There is a need to:

- clarify objectives, so that there is greater reflection about the activities supported.
- reduce complexity, in order to focus investment and allocate resources where it is essential.
- increase added value and the leverage effect and avoid duplication and fragmentation.
- simplify participation by reducing bureaucracy.
- broaden participation in EU programmes, by promoting the participation of women and the involvement of industry, in particular SMEs.
- increase competitiveness and the societal impact of EU support, with the objective of establishing a link between the results obtained in the programmes and their practical application by businesses, investors, public authorities, other researchers and policy makers.

With a view to pursuing the objectives laid down in the Europa 2020 Strategy, it has become necessary to develop a Common Strategic Framework, in order to cover all EU investment

which already exists in the field of research and innovation, in particular that linked to the FP7, the CIP or the EIT.

This framework aims to make funding more attractive and flexible, with less bureaucracy and easier access, thus making significant improvements in research and innovation at EU level and in each Member State.

It is also designed to respond to the societal challenges which are occurring, and the *'Innovation Union called for linking future EU funding programmes more closely to these objectives by putting a stronger focus on tackling societal challenges'*.

With regard to strengthening competitiveness, it is essential that the funding of research and innovation translates into concrete results for society. There is also a number of obstacles which arise in-between the R&D process and the practical application of new knowledge managed within companies, and *'a strong position in enabling technologies (...) is of vital importance to Europe's competitiveness and enables the development of the innovative goods and services required'*.

SMEs play a pivotal role here, through their flexibility and agility, since *'outstanding and fast growing SMEs have the potential to transform the structure of Europe's economy by growing into tomorrow's multinational companies'*. Open funding schemes which are easy to implement will enable SMEs in particular to have the capacity to explore new ideas and new opportunities, thus enabling them to increase their global competitiveness.

With regard to intellectual property rights, it is important to take account of the fact that *'intellectual property rights governing EU research and innovation funding are decisive for efficient exploitation and technology transfer, while at the same time they need to ensure access to and rapid dissemination of scientific results. They are also of relevance for international cooperation in areas of strategic interest'*.

The low level of private investment in research and innovation is also a bottleneck in Europe. The FP7 Risk Sharing Finance Facilities have demonstrated how the EU budget, together with the European Investment Bank, can be essential in overcoming market gaps in this area.

Building on this experience, the next EU research and innovation programmes should make full use of the financial instruments available with the aim of supporting the *'commercialisation of research results, the growth of innovative businesses and investments in major infrastructures'*.

Europe's science base is one of the most productive in the world, but it has not been able to produce the results to drive structural change.

With a view to strengthening the European science base and that of the European Research Area, the Member States should continue to modernise their public research base and sustain funding levels in this area, and the same must happen at EU level, in particular through the cohesion policy funds. Promoting the mobility of researchers, *'a major achievement in training and transfer of knowledge are the EU Marie Curie actions, which have boosted cross-border mobility and research collaboration for many thousands of researchers.'*

4. Regulatory context

Does not apply to this EU initiative.

5. Compliance with the principle of subsidiarity

Does not apply to this EU initiative.

6. Compliance with the principle of proportionality

Does not apply to this EU initiative.

7. Rapporteur's opinion

The appearance of this Green Paper is very relevant and timely, both for the European Union and specifically for Portugal, in particular because of all the following:

- As shown, for example, by the recently published results of the 'Innovation Union Scoreboard 2010 - The Innovation Union's performance scoreboard for Research and Innovation', illustrated below, the European Union is still far below both the USA and Japan in terms of performance in the area of innovation. It should also be noted that China is gradually getting closer to the EU average in this area. This tendency of Asia will continue in the future, as the tests of the PISA study relating to 2009 also show, where various Asian countries or regions lead the world for the performance of fifteen-year-olds in mathematics and science skills (Shanghai, Singapore, Hong Kong, Korea and Taiwan are in the top five places in mathematics);

FIGURE 2: EU27 INNOVATION PERFORMANCE COMPARED TO MAIN COMPETITORS

[See original document for tables]

- The gaps in the European Union are not only in its capacity for scientific production or for new knowledge, i.e. in the strict field of R&D, but also in the efficient conversion of this new knowledge into economic or social value by means of innovation;
- Rather than considering the fields of R&D and innovation separately, as different worlds, there is an urgent need to undertake integrated management of creative environments for RDI (research, development and innovation), in particular by implementing holistic systems, which are capable of supporting the smooth and coordinated operation of the whole 'pipeline' of the conversion of knowledge into economic and social value, in accordance with models such as the one set out below:

Figure 4.6 – Different inputs/outputs, states and successive transformation stages in the pipeline converting knowledge into economic value.

[See original document for Figure 4.6]

- It is therefore urgent to fight against the typically detached methods which the European Union and its Member States have adopted for managing – in a separate and sometimes disconnected way – the different stages and sub-stages related on the one hand to R&D and on the other hand to Innovation. Some issues are mentioned in this Green Paper which are in fact vital for better coordination of efforts and integrated management of initiatives and resources available through a genuine Common Strategic Framework for research and innovation funding. This has been very much lacking, and would be capable of providing an effective and integrated approach to the whole chain for creating value based on knowledge;
- The SMEs have tremendous potential to contribute to innovation, in particular with regard to the creation and development of 'gazelle' type businesses, with high growth rates, based on technology-based entrepreneurship. However, in the context of the European Union such potential is far from being fully exploited and it is crucial to strengthen the

intervention of SMEs in the creation of new products and services, internationalisation, and active and appropriate involvement in RDI activities;

- At a time when key decisions are being discussed and taken with regard to the next multiannual financial framework of the European Union (to be presented in June and approved by the end of 2011), as well as with regard to the National Reform Plans of the various Member States (to be finalised by April), it is important that the relevance of these issues is taken into account. It is also important that they are subsequently translated into an adequate allocation of resources which can lead, depending on how they are applied, to the results which should be achieved in this area, which is decisive for the future of the EU.

In the case of Portugal, the issues raised by the Green Paper have even greater relevance, and it would be desirable for them to provoke sufficient domestic debate and lead to decisions focussed on eliminating Portugal's obvious weaknesses in some of the aspects covered by the Green Paper, in particular with regard to the following:

- Despite the progress achieved by Portugal, the figures in the 'Innovation Union Scoreboard 2010 - The Innovation Union's performance scoreboard for Research and Innovation', as illustrated below, show that Portugal's position is in the third division of the 'European Innovation Championship', even if it is at the top of the division. It is a fragile position in terms of more specific criteria which focus on actual capacity to convert knowledge into new economic realities, business opportunities, products, services or entries into new markets, as shown by the 'depressing' economic growth figures which characterise the first decade of the 21st Century in Portugal:

[See original document for Figure 1]

- The number of SMEs with strong growth dynamics, based on technology, has increased steadily in Portugal, but it is still very small. For example it is estimated that in 2007 there were 363 'gazelle' businesses in Portugal;
- To a large extent, the increased lack of results, efficiency and effectiveness in these areas has to do precisely with the lack of resources, structures and coordination measures to facilitate better integrated management of the RDI 'pipeline'. It is known that the players tend to be different, with reduced mechanisms for interaction between them, and initiatives which do not link together properly, leading to inefficiencies of various kinds, with a clear loss in competitiveness in the management of RDI in Portugal. To this end, the questions raised are particularly relevant in the case of Portugal, where the prevailing working practices fail – because of obvious difficulties – to overcome isolationist thinking, small cells closed in on themselves and minds that are too restricted to their own fields of interest. This is something that can unfortunately be seen at multiple levels and in different contexts, but particularly in contexts that relate to the interfaces which are essential in claiming value in today's world, blocking these interfaces or hindering their effective operation (e.g. failures of cooperation between ministries, agencies, public institutions, public and private partnerships);
- It would therefore be desirable and exciting if the Green Paper, through the relevant issues that it raises, were also to lead to reflections and conclusions at national level, so that Portugal moves closer to the options that are being taken both in the EU and in

several other countries. These options concern in particular the adoption – at the highest level of governance – of organic solutions where R&D is made to converge with Innovation, Entrepreneurship and Human Capital, as well as of mechanisms, measures and specific initiatives where projects, partnerships and broad activities are tackled and managed in an integrated manner, and which are stimulated by genuine ecosystems that support RDI. These may result in a redefinition of government responsibilities or in mechanisms for interaction between different relevant bodies, in particular by supporting development based on the Triple Helix model.

8. Conclusions

This Green Paper suggests that there should be more cooperation and investment by the Member States in Research and Innovation, combining efforts and creating synergies, which are capable of resulting in benefits for the different communities involved.

It raises a set of questions which are of great relevance, and at the same time states the need to strengthen the mechanisms for cooperation between the processes of research and innovation. It includes the final and useful application of knowledge, translated mainly into competitive products and services.

It considers that the need to make full use of the financial instruments available is essential, as these can be decisive in helping to strengthen the investments of the private sector in research and innovation.

It also proposes to strengthen the European science base and that of the European Research Area, which must start with the Member States.

The Green Paper is in public consultation until 20 May and may lead to future European initiatives on this subject.

9. Opinion

In view of these conclusions and having no objections, the Parliamentary Committee for Education and Science hereby submits this report to the Parliamentary Committee for European Affairs for its assessment, in accordance with Law No 43/2006 of 25 August 2006.

Palácio de São Bento, 1 March 2011

Rapporteur

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