



European Economic and Social Committee

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Research and innovation

Brussels, 5 July 2006

OPINION

of the

European Economic and Social Committee

on

Implementing the Community Lisbon Programme: Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions - More Research and Innovation - Investing for Growth and Employment: A Common Approach

COM(2005) 488 final

On 12 October 2005 the European Commission decided to consult the European Economic and Social Committee, under Article 262 of the Treaty establishing the European Community, on

Implementing the Community Lisbon Programme: Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions - More Research and Innovation - Investing for Growth and Employment: A Common Approach
COM(2005) 488 final.

The Section for the Single Market, Production and Consumption, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 31 May 2006. The rapporteur was Ms Fusco.

At its 428th plenary session, held on 5 and 6 July 2006 (meeting of 5 July), the European Economic and Social Committee adopted the following opinion with 152 votes in favour and three abstentions.

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1. **Background and gist of the Commission communication**

- 1.1 The Commission communication aims to **offer a common approach**¹ to research and innovation in the context of the implementation of the Lisbon programme, which was written into the decisions taken by the Lisbon European Council in March 2000, and which set the EU the goal of becoming *"the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion"* by 2010. That Council endorsed the plan set out by the Commission in its Communication entitled "Towards a European research area"².
- 1.2 In its resolution of March 2002, the Barcelona European Council set the objective of increasing EU investment in research and development (R&D) to 3% by 2010 and raising the proportion of private funding to two thirds. The Brussels European Council in March 2003, meanwhile, called for practical measures.
- 1.3 In its Communication of 30 April 2003 *"Investing in research: an action plan for Europe"* the Commission outlined the measures required at national and European level, in accordance with an earlier Communication of September 2002 entitled "More research for Europe –

¹ SEC(2005) 1289, Annex to COM(2005) 488 final, Impact Assessment, in which the Commission chooses the third option - a common approach.

² OJ C 204 of 18.7.2000.

Towards 3% of GDP³. The first official figures for R&D show that in 2003 "*the R&D intensity was almost stagnant at 1.93% of EU-25 GDP*"⁴. Only Finland and Sweden achieved the objective⁵.

- 1.4 In March 2005, the European Council relaunched the Lisbon Strategy⁶. The joint political will to do this had been reaffirmed in October 2005 in Hampton Court at an informal meeting of European heads of state and government, in response to the considerable need for greater competitiveness in the face of global competition.
- 1.5 The Commission's first initiative since signing up to the relaunched Lisbon Strategy was on the European Information Society 2010⁷. It required Member States to define their national information society priorities in their National Reform Programmes by mid-October 2005 with a view to contributing to the objectives set out in the communication on i2010.
- 1.6 Justification for the options and activities proposed stems from the contrast between external and internal factors: fierce global competition on the one hand; and rigidity and fragmentation in national markets faced with the need to build a single European area and promote the mobility of highly skilled workers, on the other. Accepting its limited expertise in this area, the Commission is seeking above all to act as a *catalyst*⁸.
- 1.7 The Commission is seeking to strengthen the links between research and innovation, by means of a **research policy** centred on the production of new knowledge and its applications and on the provision of a structure for research and an **innovation policy** that focuses on translating knowledge into economic value and commercial success. In the bid to improve regulation, all measures with a potential impact on competitiveness are to undergo an **impact assessment**.

3 COM(2002) 499 final.

4 Key Figures 2005, ftp://ftp.cordis.europa.eu/pub/indicators/docs/2004_1857_en_web.pdf, page 5.

5 See Science and technology in Europe Statistical pocketbook Data 1993-2003 at: http://epp.eurostat.cec.eu.int/cache/ITY_OFFPUB/KS-EA-05-001/EN/KS-EA-05-001-EN.PDF#search=Science%20and%20technology%20in%20Europe%20Statistical%20pocketbook'.

6 "Working together for growth and jobs - A new start for the Lisbon Strategy" [COM(2005) 24 final] of 2.2.2005 and "Common Actions for Growth and Employment: The Community Lisbon Programme" [COM(2005) 330 final] of 20.7.2005.

7 COM(2005) 229 final and SEC (2005) 717 of 1 June 2005 on "i2010 – A European Information Society for growth and employment" promoting growth and employment in information society industries and the media. This sector of the EU economy accounts for 40% of the EU's productivity growth and 25% of GDP growth.

8 Sapir et al, 2003, pages 136, 143, 157 and 163. "An agenda for a growing Europe, Making the EU Economic System Deliver; Report of an Independent High-Level Study Group established on the initiative of the President of the European Commission".

- 1.8 The assessment that accompanies the present communication chooses the last of three considered policy options⁹:
- do nothing;
 - policy integration;
 - a common approach.
- 1.9 The action plan set out in the communication is divided into four parts:
- Research and innovation at the heart of EU policies
 - Research and innovation at the heart of EU funding
 - Research and innovation at the heart of business
 - Improved research and innovation policies
- 1.10 There are 19 actions covering three main fields: public policy and regulation¹⁰, finance and taxation¹¹ and the role of the private sector¹².
- 1.11 Although the present communication appears to continue along the path traced out by its predecessor in 2003, the Commission now makes research and innovation a firm priority of the National Reform Programmes (NRP). The NRP are thus supported by Community funding targeting activities of European interest, by advice on coordinated policy development, and by improved platforms for mutual learning, in all regions where transnational cooperation offers high value added. R&D efforts are recognised in the stability pact, in which spending on R&D is authorised in excess of the 3% deficit limit.
- 1.12 The EESC would also refer to the Esko Aho Report, despite it not being the subject of this consultation, noting in particular that the Commission mentions it in point 3.1 of its communication to the 2006 Spring European Council (Investing more in knowledge and innovation) but does not mention COM(2005) 488 final. The EESC regrets not having been consulted on that report and not having been able to make a prior assessment of it, and therefore includes it in the present debate.
- 1.13 In October 2005, in Hampton Court, a group of four people were appointed, with Mr Esko Aho acting as coordinator. The January 2006 report, which was submitted to the

⁹ SEC(2005) 1289, Impact Assessment.

¹⁰ Better regulation for new technology; State aid and public procurement; intellectual property; National Reform Programmes for growth and jobs; establishment of a European industrial research and innovation monitoring system and improvement of intellectual capital reporting; improvement of policy analysis instruments; support to European platforms for policy learning and cooperation, with a view to sharing and validating good practice; an attractive single market for researchers.

¹¹ Mobilisation of public and private resources; tax incentives; European Structural Funds; SME access to finance.

¹² University-industry partnerships; poles and clusters; pro-active business support services; innovative services.

Commission with a view to the 2006 Spring European Council, made recommendations on accelerating the implementation of European and national initiatives for research and innovation. The report is based on the present communication but recommends greater integration [option 2, SEC(2005) 1289]¹³. The report was presented to the Competitiveness Council and the Brussels European Council in March 2006. The European Council stressed the report's importance, and asked the Commission to assess it by September 2006¹⁴.

2. General comments

- 2.1 The EESC welcomes the communication, whose starting point is the *partnership for growth and jobs*, as it seeks to cover the complete gamut of research and innovation, including non-technological innovation. It outlines initiatives that would exceed the Barcelona 3% objective¹⁵ and describes in general terms the commitments made by the Community, detailing current and future measures to support research and innovation¹⁶.
- 2.2 As the communication mentions, global competition to attract investment in research and innovation is constantly on the increase, not least in emerging economies such as China, India and Brazil. "*The gap in research investment between the European Union and the United States is already in excess of EUR 120 billion per year and widening fast*"¹⁷. The level of competition is such that in Europe no one country can succeed alone. Transnational synergy is the only way to promote research and innovation and to convert them into growth and jobs¹⁸. In addition, research and innovation are needed to make the EU economy more sustainable, by finding solutions for economic growth, social development and environmental protection.
- 2.3 Under the Action Plan, the majority of Member States have begun to introduce national measures to stimulate R&D in the private sector and have set targets to raise investment in

13 It recommends a harmonised regulatory environment, the broad use of standards, the use of public procurement to drive demand and a competitive European intellectual property system. It suggests a strategic choice of themes at European level: e-Health, Pharmaceuticals, Energy, Environment, Transport and Logistics, Security, and Digital Content, with a European coordinator for each sector to orchestrate action across Member States, the various stakeholders in governments and the Commission, business, the academic world and other stakeholders. It also calls for integrated European centres of excellence, such as the European Institute of Technology proposed recently in February 2006. As far as the EU budget is concerned, it calls for a least 20% of the Structural Funds to be spent on R&D and a transfer of resources from "low priority" sectors or "sub-standard" groups to those considered to be excellent, while also recognising the importance of companies with more than 250 employees as key vectors for innovation. The report also calls for recognition of the role of large companies in the "natural ecology of industry" and for cooperation between large and small companies. Lastly, it calls for greater flexibility and adaptability for human resources and also for existing organisational structures.

14 Presidency conclusions of the Brussels European Council of 23-24 March 2006.

15 INI/2006/2005: European Parliament analysis of COM(2005) 488 final.

16 SEC(2005) 1253 Annex to COM(2005) 488 final, "Steps to the implementation".

17 COM(2003) 226 final, point 2.

18 See the analysis by Frédérique Sachwald, "From Maastricht to Lisbon: EU strategy in the Global Knowledge Economy", IFRI.

research to 2.6% of GDP by 2010. This is where tax incentives come into their own¹⁹. However, the level of research in the EU appears to be more or less stagnant, including in the private sector. The situation is a matter for concern.

2.4 The justification for the measures opens the debate on comparison of productivity between EU Member States and other countries.

2.4.1 First, there are various definitions of productivity (the ratio between the quantity of a good or service produced and the number of production factor units used). The most commonly used measure employs a single factor, labour, with hourly output per worker in the industrial sector as an indicator. This is the easiest figure to obtain, but it gives an incomplete picture and excludes capital from the production process.

2.4.2 Second, it is important not to make generalisations when comparing Europe and the USA but rather to pinpoint the main differences by sector and State²⁰, even within a country such as the USA²¹. There are competitive European sectors and countries that are making considerable progress in their productivity²². According to O'Mahony and van Ark (2003)²³, calculations of unit labour costs in the manufacturing sector for the EU as a whole suggest that the EU is not competitive vis à vis the USA in high-tech sectors, but is elsewhere. However, it is the low wages in third countries, not the United States, that are the main source of competition in the traditional industries and that are putting real pressure on the EU. Dosi, Llerena and Labini (2005) are more critical and feel that the need for a European industrial policy should not be treated as taboo²⁴.

19 In the eight Member States that have already introduced them, they account for 13% of direct investment in research.

20 For SMEs, see OECD Science, Technology and Industry Scoreboard 2005 - Towards a knowledge-based economy, A.13. Innovation in small and medium-sized firms. See also, Monitoring industrial research: the 2005 EU industrial R&D investment SCOREBOARD, Vol I Analysis, Joint Research Centre (DG-JRC) and Research (DG-RTD) Directorates-General of the European Commission.

21 See article "EU vs US innovation: strengths on both sides", in European Innovation, February 2006, page 24 et seq., ftp://ftp.cordis.lu/pub/itt/docs/ei06_2_en.pdf.

22 France for instance made much higher per capita productivity gains between 1982 and 1990 than the United States (2.5% as opposed to 1.2%). But its progress slowed down in the 1990s owing to the reduction in working hours (definition of productivity in "Problèmes économiques", La Documentation Française, 2 March 2005, page 8). For the same period, Blanchard, an economist at the Massachusetts Institute of Technology, states that "labour productivity in the French car industry rose from 55% of American levels in 1990 to 75% in 2000", with the same phenomenon in the road freight sector, increasing from 61 to 85% of US productivity levels ("A productivity primer", The Economist, 6 November 2004).

23 "EU productivity and competitiveness: An industry perspective. Can Europe resume the catching-up process?" Mary O'Mahony and Bart van Ark (ed.), European Commission 2003. Report for DG Enterprise, October 2003.

24 Dosi, Llerena and Sylos Labini, 29 June, 2005, "Evaluating and comparing the innovation performance of the United States and the European Union", Expert report for the TrendChart Policy Workshop 2005. <http://trendchart.cordis.lu/scoreboards/scoreboard2005/pdf/EIS%202005%20EU%20versus%20US.pdf>.

- 2.4.3 Third, the best measure is *total factor productivity* (TFP), "achieved by adjusting GDP for differences in all the inputs used" (Calderon, 2001)²⁵, which enables a better comparison between countries. To explain cross-country differences in productivity, empirical surveys have classified determinants of labour (and/or total) productivity growth into three groups²⁶. However, given the interdependence between countries, Calderón states that the differences in TFP between countries appear to be driven by the speed of technological diffusion (through trade, direct foreign investment or migration)²⁷.
- 2.4.4 If securing rapid diffusion makes all the difference, innovative SMEs must be key to dissemination while developing new markets. For the same reason, the choice of strategic priorities for research and innovation might favour the more speedy dissemination of knowledge.
- 2.4.5 Lastly, securing skilled personnel and company investment is a concern for the USA and Europe alike, especially vis à vis competition from China, itself short of the 75 000 highly skilled workers it needs to move into a service economy²⁸.
- 2.5 Meanwhile, there are two "macro" visions that influence policy choice. On the one hand, there is an urgent need for organisational innovation as a precondition for technical innovation (Lam 2005 and OECD 2005), and this also applies to the European institutions (Sachwald 2005, Sapir et al 2003, Esko Aho 2006); and on the other, the reason why companies do not invest enough in R&D and innovation in Europe is the absence of an innovation-friendly market on which to launch new products and services (Esko Aho 2006). However, the EESC points out that the spirit of enterprise and risk-taking remain essential.
- 2.6 The shortcomings of the market as a generator of innovation are widely recognised in literature on the subject, starting with Arrow (1962) and Dasgupta and Stiglitz (1980)²⁹. The

²⁵ Productivity in the OECD Countries: A Critical Appraisal of the Evidence, Cesar Calderón, IMF Working Paper, European I Department, June 2001, section III, page 8.

²⁶ Ibid Calderon, 2001, page 12: (1) the catching-up term (initial value of GDP per capita - or per hour worked - or initial TFP value) which is used as a proxy for the productivity and/or technology gap; (2) proxies for efforts to close the productivity gap, such as investment in physical and human capital, and resources devoted to output from innovation activities (e.g. R&D, patents scientists and engineers); and (3) policy-related variables and institutional factors (e.g. fiscal policy, trade policy, institutional quality, demographics).

²⁷ Ibid, Calderón 2001, page 19.

²⁸ On the USA: *Does globalisation of the scientific/engineering workforce threaten US economic leadership?* Richard B. Freeman Working Paper 11457, National Bureau of Economic Research. On China: *China's looming talent shortage*, Diana Farrell and Andrew J. Grant, 2005 Number 4, http://www.mckinseyquarterly.com/article_page.aspx?ar=1685&L2=7.

²⁹ "Economic Welfare and the Allocation of Resources for Invention", Arrow K. J. in *The Rate and Direction of Inventive Activity*, Nelson, R. editor, Princeton University Press, 1962.

Industrial Structure and the Nature of Innovative Activity, P. Dasgupta and J Stiglitz, *The Economic Journal*, 90 (358), 1980, pages 266-93.

Commission's framework programmes have been broadly based on a rationale of active support at micro level for company R&D, through a mixture of support for R&D and promotion of cooperation to overcome the most discouraging obstacles (facilitating the search for partners and promoting synergy-generating benefits in terms of market entry, downstreaming and economies of scale). However, these initiatives have not been sufficient to kick-start a sustainable innovation dynamic throughout the EU.

- 2.7 The EESC therefore welcomes the Commission's emphasis on the meso, sectoral and cross-border dimensions. Partnerships, networks, clusters, agglomerations, forums and dialogues highlight the importance of linkages, externalities and spillovers between companies and organisations, and in terms of geography, to facilitate innovation. Coordination of this kind can more easily identify factors impacting on levels of investment in innovation and bottlenecks³⁰.
- 2.8 However, although considerable resources and coordination potential will be required in order to see through the approach and measures proposed, no budgetary indications are provided. Furthermore, on the very page of its communication to the 2006 Spring Council where the Commission makes its only reference to the present communication, it mentions that *"legislative proposals will only produce practical effects once adopted by Council and Parliament. In addition, many of the financing actions depend on the finalisation and implementation of the financial perspectives 2007-2013"*³¹. The *"proposed actions are therefore only of an indicative nature"*³².
- 2.9 The EESC calls on the Commission to provide budget indications as soon as possible and to include a clear system setting a precise date for monitoring and evaluating this communication, for instance 2008³³. Furthermore, the EESC believes there is a need for a Commission report that brings together all the expert group reports relating directly to the

³⁰ For instance: Paxis, Innova, Gate to Growth, Innovation Relay Centres.

³¹ COM(2006) 30 final, Part 1, p. 10.

³² SEC(2005) 1253, page 2, footnote 1, omitted from the version received on 17 March 2006.

³³ In 2008, there will be a complete review of EU spending.

communication, accompanied by an evaluation of the recommendations made³⁴. These indications must be consistent with the option and actions chosen. Lastly, as part of the drive to overcome existing fragmentation, it would be useful to have a chart listing all the people responsible at all levels (in the regions, Member States and European institutions) for coordinating the actions proposed in COM(2005) 488. The Commission has made prodigious efforts with the country trendcharts. These describe research and innovation institutions³⁵ and could be used as the basis for such a chart. It would also be worthwhile looking into the experiences of US virtual agencies with regard to research and innovation³⁶.

- 2.10 The EESC would also note that the communication fails to define key concepts (research, innovation, knowledge³⁷ and technology). The Commission, however, has backed trans-European research to arrive at those definitions³⁸. Work has also been done by Eurostat and the OECD to define innovation. The latest European Innovation Scoreboard³⁹ on the ratio between innovation input and output develops the concept of innovation efficiency and views R&D as an innovation input. In addition, a clearer distinction must be drawn between actions targeting research and innovation as such and policies to promote the right conditions for innovation (such as: training, reception and support for worker mobility, support for SMEs and less-favoured regions during ICT uptake, where the costs⁴⁰ are proportionately higher

³⁴ Since 2003, the Commission has appointed a number of expert groups and set up several high-level bodies to make policy recommendations. Two examples are EURAB, a body with 45 experts, and CREST. The European Union Committee for Scientific and Technical Research (CREST) is a consultative body whose role is to assist the Council and the Commission in the implementation of tasks in the sphere of RTD. The European Council and the Competitiveness Council asked CREST to be the operational interface to define and monitor the implementation of the Open Method of Coordination (OMC) with respect to the Barcelona 3% objective. It issued its first report, which contained 30 recommendations in five areas, in 2005.

In 2003, the Commission appointed five groups with over 60 people, to produce five reports on public support policies, guarantees, risk capital, and direct and indirect measures. Also in 2003, an ad hoc group (ERCEG) set up after the European Research Council conference in Copenhagen on 7 and 8 October 2002, backed plans for a European Fund for Basic Research, managed by the European Research Council. To date there has been no report to monitor and evaluate all the recommendations made.

³⁵ For instance, for Italy see: http://trendchart.cordis.lu/reports/documents/Country_Report_Italy_2005.pdf, point 1.1.

³⁶ MIT Sloan School of Management, Sloan Working Paper 4174-01, August 2001, "Managing research and development across government departments: the 'virtual agency' concept in the United States", Miguel Castro, Roger Foster, Kevin Gunn and Edward Roberts.

³⁷ See for instance "The emerging global knowledge economy", Schwartz, Kelly and Boyer, in "The future of the global economy", OECD 1999.

³⁸ "Economic Growth, Innovation, Cultural Diversity, What are we all talking about? A critical survey of the state-of-the-art", by ENGIME Network, financed by the European Commission, Fifth RTD Framework Programme, Key Action Improving Socio-Economic Knowledge Base. 2003. See also OECD-Eurostat definitions, Oslo Manual, third edition, 2005.

³⁹ See <http://trendchart.cordis.lu/scoreboards/scoreboard2005/inoutput.cfm>

⁴⁰ This support could come from the Structural Funds and the Inno Relay Centres, when SME monitoring and support takes into account the ICT cost structure. "Most of the typical IT (information technology) budget pays for IT operations and maintenance, with only about 10 to 20 percent allocated to initiatives that improve overall business performance". Steven D. Carden, Lenny T. Mendonça and Tim Shavers, "What global executives think about growth and risk", The McKinsey Quarterly, 2005, Number 2, pp. 16-25.

than for other players). In other words, a distinction must be made between innovation in the form of new products and services on the market and innovation as a process. The first is a necessary but not sufficient condition for dynamic endogenous growth.

- 2.11 The EESC has been following this matter very closely and has issued a number of opinions on the vast field covered by COM(2005) 488, but there is only room for a brief mention of them here. They include in particular an opinion on the European research area (CESE 595/2000), which picks up on all the themes covered in COM 488, especially in point 7 on "Research and technological innovation" and point 8 on the need for "Staff exchanges between research centres and industry".
- 2.12 Opinion CESE 724/2001 on Science and society noted the role which fundamental research has played in most of the great discoveries⁴¹. The EESC's opinion on Europe and basic research⁴² looks at the link with applied research, and stresses the question of patents: point 2.5 mentions the urgent need for a system of European patents that includes a grace period between the publication of scientific findings and the patenting of its use, following the example of the USA. It must be possible to obtain the Community patent quickly and at low cost. The EESC regrets the delay on this, which has been caused by language issues.
- 2.13 The EESC opinion on researchers in the European Research Area⁴³ backed the European Researcher's Charter and in point 5.4 agreed on the imperative need for exchanges between academia and industry. Recommending that greater value be placed on experts with years of experience, the opinion stressed the need for a greater compatibility and recognition of the various aspects of social security and housing, all the while aiming to protect family cohesion (point 5.5.5). Another opinion of note looked at science and technology⁴⁴. In its opinion on the seventh framework programme for research⁴⁵, the Committee stressed the importance of the endeavour and commented on the funding and organisation into sub-programmes and nine research subjects, on which it issued separate opinions⁴⁶.

41 See Opinion CESE 724/2001 on the Commission's Working document SEC(2000) 1973 on *Science, society and the citizen in Europe*. Point 4.4.2 of the opinion states that "Most of the great discoveries - in physics, for example, electromagnetic force and induction, electromagnetic waves, x-rays, cathode ray tubes, transistors and lasers, and in biology, for example, DNA structure (double helix) - were the outcome of fundamental research not geared to particular applications." Point 4.4.1 also notes that "Ideas for promising new directions are as a rule suggested by - often unexpected - research findings and mostly come from researchers themselves who can then take them forward with the necessary expertise."

42 OJ C110 of 30.4.2004.

43 OJ C 110 of 30.4.2004.

44 OJ C 157 of 26.6.2005.

45 OJ C 65 of 17.3.2006.

46 Nanotechnology, biotechnology, health research, information technology, energy research (including fusion energy research), space and security research.

2.14 In its opinion on competitiveness and innovation 2007-2013⁴⁷, the EESC noted the importance of participation by SMEs and the social partners in innovation⁴⁸: for innovation to be successful, they have to be closely involved. In its recent opinion on a policy framework to strengthen EU manufacturing, the EESC welcomed the sectoral emphasis, but pointed out that coordination requires resources, whereas there is no budget. It hoped that workers' skills, which remain a cross-sectoral issue, would receive the necessary attention. A more integrated industrial policy is very important: the EU manufacturing industry "*employs over 34 million people*" and "*over 80% of EU private sector R&D expenditures are spent in manufacturing*"⁴⁹.

3. Specific comments

3.1 The EESC especially welcomes the Commission's efforts to promote a competitive European system for intellectual property⁵⁰ and to lay down rules for disseminating research results (2007-2013)⁵¹, and recommends paying special attention to the management of innovative patents in the context of the instruments mentioned in point 2.7⁵².

3.2 A better system for disseminating knowledge is key to competitiveness. Attention should be given to the Innovation Relay Centres initiative⁵³ and the Commission's idea of providing SMEs with vouchers for innovation-strategy consultancy services as part of the CIP. Cross-border clusters would facilitate dissemination, and their importance will be recognised in a forthcoming communication on clusters in Europe. Work on a clusters database is due to start in 2006.

3.3 The EESC stresses the importance of the social dimension of innovation, and of actions to raise the value of human and social resources as generators of research and innovation. It

47 OJ C 65 of 17.3.2006.

48 "98% of businesses in Europe are small and medium-sized enterprises (SMEs). They provide 55% of private-sector jobs. In terms of production processes, products and services SMEs have considerable innovative potential." (point 1.2).

49 CESE 595/2006, 20.4.2006.

50 Public consultation by the Commission until 31 March on the thrust of EU patent policy. http://europa.eu.int/comm/internal_market/indprop/patent/consultation_en.htm. The EESC notes that whereas patents cost approximately EUR 10 000 in the USA, in the EU the cost varies between EUR 37 000 and EUR 57 000.

51 "This proposal for a Regulation of the European Council and Parliament is based on Article 167 of Chapter XVIII of the European Community Treaty that foresees the adoption of rules for participation of undertakings, research centres and universities and rules for the dissemination of results to implement the Community multi-annual framework programme for research. These rules define the rights and obligations of legal entities wishing to take part in the framework programme and establish the principles for the use and dissemination of their work resulting from that participation." COM(2005) 705 final, 23.12.2005, page 2.

52 ProTon Europe provides a recent example of the route to take.

53 See <http://irc.cordis.lu/>.

hopes that the next version of the Oslo Manual (OECD-Eurostat) will include statistics to take account of this, including indicators for qualified human capital and for other places that spawn innovation: universities and other educational institutions and joint industry/State body/university platforms⁵⁴.

- 3.4 As regards State aid for innovation, which can have a major leverage effect on company spending on research, the EESC welcomes the attention given to SMEs and asks the Commission to view job creation as an investment in research and innovation, if the jobs are specifically targeted on these two areas. The EESC also underlines the need to promote innovative SME start-ups using instruments such as venture capital funds including the involvement of the European Investment Fund.
- 3.5 Given the global competition mentioned in point 2.4.5 above, an important factor in innovation is having the right human resources at all levels. The communication focuses on scientific resources. However, non-scientific skilled jobs are also worthy of attention. Supply and demand for specific skills and expertise should be more closely matched according to sectoral needs. With a view to finding swift and effective solutions, it would be useful to involve all the social partners and stakeholders concerned. The EESC asks the Commission to launch a debate on this subject.
- 3.6 In addition, in order to offer mobility, progress is needed on joint European skill charts, necessary for each sector or theme, not forgetting the qualitative dimension of education (values, equal opportunities). As the Employment and Education and Culture DGs also deal with the subject of "human resources", their research and innovation initiatives should also be included in the present communication in order to cover the entire gamut.
- 3.7 The EESC invites the Commission to promote research and innovation in all possible sectors: competitiveness problems are not exclusive to the hi-tech sector. The proposed measures could include the strategic management of change following a massive uptake of new technologies in SMEs. The involvement of social partners and other stakeholders would be essential here.
- 3.8 The EESC agrees with the Esko Aho report that companies with more than 250 workers are not given proper attention, probably because the definition of SME is too restrictive compared with those of the United States and Japan. In the EESC's view, the special attention given to funding innovative SMEs is necessary for creating a European economy of innovation with social cohesion. It is no surprise that the Emilia Romagna Paxis region is one of the most active despite the fact that other innovation indicators in Italy are less favourable⁵⁵. Similarly,

⁵⁴ OECD-Eurostat, Oslo Manual, third edition, 2005.

⁵⁵ TrendChart 2004 on innovation policy in Europe.

business support services must be specialised to cater for the specific characteristics of SMEs in their various forms (cooperatives, other third sector undertakings, etc.).

- 3.9 The EESC would like the Commission to mention research and innovation measures involving other regions. The Commission already takes a world view in the Trendcharts and a number of other initiatives. Following Communication 346 of 25 June 2001 on "The International dimension of the European Research Area", the INCO section of the FP6 made a point of encouraging the involvement of third countries, and this is set to continue in the FP7⁵⁶. These measures could be highlighted in a special section. The role which urban and metropolitan areas play in innovation also deserves greater study.
- 3.10 The EESC recommends that the Commission evaluate the timing of technological investment, liberalisation and restructuring, given that companies, especially large ones, have to consider changes in management at the same time as research and innovation investment needs (for instance in the field of energy, transport and network industries).
- 3.11 Furthermore, the EESC would point out that it may be necessary to strike the right balance between promoting innovation, focusing on the joint marketing and licensing of new products and services by companies, and competition law.
- 3.12 The EESC considers innovation to be an input for a competitive economy with social cohesion and not as an end in itself. While accepting that this will be a challenge, the EESC would call on the Commission to collate statistics and promote studies in order to gauge the links between innovation, competitiveness and social cohesion more effectively, with a view to evaluating results clearly and effectively and putting them across to the European public in a convincing way⁵⁷. As others have said: "build ambitious, technologically daring missions justifiable for their intrinsic social and political value" (Dosi et al, 2005)⁵⁸.
- 3.13 In addition, viewing innovation as a system, the EESC asks the Commission to coordinate its work with the European Investment Bank (EIB) in order to secure a synergistic relationship between EIB programmes, the European Investment Fund, the seventh research framework

⁵⁶ See interview of 27 March 2006 by the INCO Director, Mr Siegler, "András Siegler looks forward to increased international collaboration in FP7", http://icadc.cordis.lu/fep-cgi/srchidadb?CALLER=FP6_NEWS&ACTION=D&RCN=25404. See also the INCO web page http://cordis.europa.eu.int/inco/home_en.html. For INCO in the FP6, see <http://cordis.europa.eu.int/fp6/inco.htm>. For INCO in FP7, see <http://cordis.europa.eu.int/fp7/home.html>. The presentation on "The International Dimension of FP6: International Scientific Cooperation and the INCO Programme" by Paul Harding is very useful for understanding the Commission's international cooperation initiatives for research and development, http://www.essex.ac.uk/rbdo/research/UKRO_I.

⁵⁷ Examples picked out by the Commission show the links between innovation, competitiveness and social cohesion, but there has yet to be any systematic monitoring.

⁵⁸ Dosi, Llerena and Sylos Labini, 29 June, 2005, page 35, "Evaluating and comparing the innovation performance of the United States and the European Union", Expert report for the TrendChart Policy Workshop 2005, <http://trendchart.cordis.lu/scoreboards/scoreboard2005/pdf/EIS%202005%20EU%20versus%20US.pdf>.

programme and the framework programme for competitiveness and innovation (CIP), and thus ensure that innovation becomes a dynamic and well structured system.

Brussels, 5 July 2006

The President
of the
European Economic and Social Committee

The Secretary-General
of the
European Economic and Social Committee

Anne-Marie Sigmund

Patrick Venturini
