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CEA COMMENTS ON THE CONSULTATION DOCUMENT ON STATE AID FOR INNOVATION

CEA welcomes the EC initiative to support innovation and economic activity in Europe. CEA understands that this document will be followed by a specific document targeting State Aid for R&D. CEA would like to take the opportunity of this consultation to put forward its practice of technology based innovation within the framework of partnerships between private and public actors. Based on this experience, CEA would favour a general Framework clearly supporting partnership between private and public actors in Europe.

The document on State Aid for Innovation explicitly mentions the necessity of preserving competition in a globalised economy. Competition in a functioning market creates incentives for companies to invest in knowledge and innovation, since this helps them generate competitive advantage and profits. Nonetheless, State aid can in some cases effectively and efficiently contribute to foster innovation, when it addresses market failures that hamper the innovation process without excessively distorting competition.

CEA recognises that European State Aid for Innovation can play a key role in fostering growth and tomorrow's employment in Europe and endorses the principle to redirect State aid towards horizontal objectives of common interest to reach the Lisbon goals.

CEA welcomes the opportunity to take part in discussing the appropriateness of the proposed 20 measures. To begin with, CEA would underline the following two principles:

non discrimination between private actors

CEA believes that State Aid for innovation should be given to private organisations for a true technologically innovative project which aims at answering national or European industrial priorities.

The size of the private actors should not be a criterion for segregation among private actors. If correction mechanisms should be proposed in term of access to public aid between private actors, CEA would favour a percentage of the projects kept for SMEs.

CEA acknowledges that the Framework should be developed around the size of the projects to be supported, and not the size of the private actors to be aided. To simplify the Innovation Framework in Europe, it could be envisaged a notification project by project for big projects, but a block of exemption regulations for innovation projects with a size of around 3-5 millions euros. We believe that a general block of exemption regulations for an agreed-upon size of projects would ensure the involvement of SMEs. Such a size of projects would prevent distortion in competition between large companies and SMEs. Therefore, CEA would favour a global notification by each Member States rather than a notification project by project for these specific size innovative projects.

maximum level of public aid intensity granted to European private actors

The maximum level of public aid intensity should be directed to European private actors. The specific constraint of European public support should then be associated to the granting of State aid in Europe and the effects of this granting. Private actors shall be entitled to receive for their short-medium term innovative projects of around 3-5 millions euros a State aid of 60% of the project provided the following conditions are respected: the private actor is European, uses the technology in European factories and keeps the ownership of the Intellectual Property or sells the IPR to other European private actors only.

1 - GENERAL FRAMEWORK

Question 1) Do you think that it is appropriate not to create a separate Framework for Innovation and that the new possibilities for State aid target selected innovation-related activities?

CEA would favour simplification and consolidation of the existing state aids rules and would support the creation of a general block of exemption regulations which would comprise the existing exemption regulations for innovation-related activities.

Before creating a separate Framework for Innovation, CEA believes that the goal of such a Framework should be clearly emphasised. Two options may guide the elaboration of such a Framework:

- ☞ If the purpose of the Commission is to harmonise, adopting a regulatory approach, CEA would not support such a Framework. We do not see innovation as a field to be regulated since it is not a uniform product.
- ☞ If the purpose of the Commission is to act in order to give directions for Europe in the global economy, CEA would support it provided a clear and strong strategic agenda.

CEA urges the Commission to ensure European innovation stakeholders are not suffering from a competitive disadvantage vis-à-vis actors outside the European Union. Competition in RD&I that are between private actors are now global as well as the competition between public R&D laboratories. The externalities shall be taken into account when drafting a policy.

CEA believes it is essential to preserve the attractiveness of European R&D and to facilitate the links between industrial innovations in Europe. CEA identified a need for coordination between Member States in terms of technological innovation policy. This coordination in its view should lean against European industrial common policies.

The European companies may, if they consider that they suffer from a competitive disadvantage vis-à-vis their competitors located outside the European Union who are not (or less) affected by RD&I subsidies control, externalise their RD&I activities outside Europe. Therefore, CEA would support a Framework for innovation that gives directions for Europe and positions it strongly in the global economy.

CEA believes that if Europe is willing to comply with the Lisbon Strategy it is necessary to draft rules to facilitate innovation for European private actors without any distinction but with a clearly marked European preference, if Europe wants to stimulate innovation as what exists in the USA with the US Framework for innovation gathering a complete set of rules (Advanced Technology Program, Small Business Innovation Research, the Bayh-Dole Act...).

CEA would like to underline that a European framework should be developed taking into account a benchmark analysis of the Innovation Frameworks in other regions of the World. As an example the US scheme is comprehensive, decentralised and based on a strong mutualisation between:

- ◆ Grants (Advanced Technology Program, DARPA, DOD, DOE...)
- ◆ Fiscal incentives (S-corporation, tax exemptions...)
- ◆ Privileges given to SMEs (Small Business Act, Small Business Innovation Research, bankruptcy law...)
- ◆ Patents regime (grace period, reduced fees for small entities, market size...)
- ◆ The existing rules are often WTO-incompatible...

At present, the European current scheme does not offer such a comprehensive set to support innovation. In Europe, we face:

- Difficulty with the IPR management and exploitation in the EU Framework programme (RTD FP)
- Constraints of non-distortion in competition preventing any reward for taking risks in doing business (e.g hindrance to the granting of exclusive licences resulting from partnerships between private and public actors within a European consortium)
- No truly European patent (i.e. legally enforceable at once on a European-wide scale)
- Lack of one European public organisation in charge of R&D exploitation or a European organisation set up to accelerate the development of innovative technologies for broad European benefit through partnerships with the private sector, such as Oséo-Anvar in France.

A Framework on state aid for Innovation, with rules that can be easily manageable and implemented, should then be supported to foster growth and tomorrow's employment in Europe. It seems that a lot of efforts should be done in order to reach the target of 3% of GDP in R&D. for instance, a European public policy could aim at creating outlets for R&D in Europe.

2 - PRINCIPLES GOVERNING CONTROL OF STATE AID FOR INNOVATION

Question 2) Do you think that the problems presented in Annex and the market failures identified by the Commission as hampering the innovation process are accurate? If so, why? If not, why not?

The Commission cited as a key factor in Europe for underperformance in productivity growth insufficient innovative activity. CEA endorses this factor.

CEA recognises with the Commission that the European Union has great untapped innovation potential and that performance in innovation shows a large degree of variance between the different sectors of industry. The Commission underlines that the European Union has success stories in terms of R&D and hosts a number of technical leaders in fields such as energy or transports. CEA shares this view and would like to remind that these sectors are used to being strongly protected by European public Authorities. These examples are therefore clear examples of success stories to foster state aid for innovation in Europe.

In the annex of the consultation document, the Commission found a series of problems, which affect innovation in the EU and prevent Europe from fulfilling its innovation potential. Although CEA could support the Commission categorisation, it would welcome the Commission's views on both the hierarchy and precision on these categories.

Question 3) The measures described in this Communication provide ex-ante criteria on the basis of which State aid for innovation would be approved. Do you think that such an approach is adequate?

CEA would support two criteria as selection criteria on the basis of which State aid for innovation would be approved: scientific and technological criteria (comprising Technical Innovation, Technical Risk With Evidence of Scientific Feasibility, and Technical Plan), economic criteria (comprising European Economic Benefits, Need for public Funding, and Pathway to Economic Benefits) – both accounting for 50% in the final decision.

Question 4) Stakeholders are invited to provide empirical evidence about the appropriateness of authorising State aid to large companies, in particular in connection with the objective of developing clusters around poles of excellence in the EU. Do you think that the Commission should develop ex-ante rules allowing State aid for Innovation to the benefit of large companies, or that such type of aid should always be subject to a case-by-case stricter analysis on the basis of a notification to the Commission? As far as support to innovation (or other state aid) is concerned, would it be appropriate to distinguish between different categories of large companies? If so, on the basis of which criteria? And for which purpose?

CEA urges the European Commission not to make distinction between types of actors. The treatment of restrictions should be the same for all the private actors in Europe. Nevertheless, the rules for public support could be different.

CEA would support that the maximum limit for public aid of 100% for fundamental R&D, 75% for industrial R&D and 50% for pre-competitive research be maintained.

In France, CEA takes an active role in the "Pôles de compétitivité", one of the new tools set up and supported by the French government in order to stimulate innovation supported by. In these Pôles, which gather SMEs, large companies, universities, research centres... on a given domain, large companies are one of the key drivers to stimulate innovation.

Question 5) Stakeholders are invited to provide empirical evidence about the appropriateness of authorising State aid to non-technological innovation, notably in services sectors

CEA would support an equal treatment of all sectors. **Innovation should be defined by two primary criteria: technological breakthrough and financial risk.**

This is why CEA would support two criteria as selection criteria on the basis of which State aid for innovation would be approved: scientific and technological criteria (comprising Technical Innovation, Technical Risk With Evidence of Scientific Feasibility, and Technical Plan), economic criteria (comprising European Economic Benefits, Need for public Funding, and Pathway to Economic Benefits) – both accounting for 50% in the final decision.

Compared to the US, there is a factor 10 with equal market size between the cost of IP in Europe and the USA. This fact is detrimental for the European start-ups. The State should then be authorised to aid all IPR related spending in Europe.

Question 6) Should the rules on State aid for innovation include regional bonuses for cohesion purposes? Should they differ according to the geographical situation of the region, irrespective of cohesion issues?

CEA would ask the Commission not to include regional bonuses for cohesion purposes in State aid for innovation. CEA recognises innovation as a marked out activity, involving risk management. This activity accounts for a rather small percentage of GDP. Innovation should not then be considered as an element to foster cohesion in Europe. CEA would favour economy, culture, transports as cohesion criteria within Europe and urges the Commission not to add innovation.

Question 7) Are some types of aid more suited to specific situations and specific innovation activities (ex: tax rebates, secured loans, repayable advances)?

CEA agrees that secured loans and repayable advances could present an interest for innovation activities since they provide cash to the private actors. CEA does not see tax rebates as suited to innovation activities as it implies that the private actors are able to pay taxes in a framework of a risky activity.

3 - SUPPORTING RISK-TAKING AND EXPERIMENTATION

3.1. Supporting the creation and growth of innovative start-ups

Question 8) Do you agree with the proposed criteria to define innovative start-ups, with the approach of not defining eligible costs, with the amounts of aid and cumulation rules? Do you think that different eligibility criteria should be established for high-tech sectors like biotech and pharmaceuticals which have long time-to-market and product development cycles?

The Commission proposes to define 'innovative start-ups' with the following two criteria

- ♦ *must have less than [5 years] of existence; must be small companies (see SME-definition, notably independence of large companies not more than [50 employees]);*
- ♦ *either i) proof that the beneficiary will produce products and processes which are technologically new or substantially improved compared to the state of the art in its industry in the Community, and which carry a risk of technological or industrial failure or ii) R&D expenses represent minimum [15%] of the beneficiary's overall expenditure*

CEA disagrees with the proposed approach of sub-segments between the stakeholders. All the actors should be treated on an equal basis for their innovation activities. As innovation should be defined by a risk and a breakthrough, CEA would support State aid for innovation going to any European private actor in any sector.

Besides, we question the establishment of specific criteria for some sectors. Contrarily, CEA would agree on an equal treatment of all the sectors to avoid management difficulties for topics addressing cross-sectorial or interdisciplinary sectors.

Question 9) Beyond the proposed rules, empirical arguments are welcomed that demonstrate the need for State aid: i) for start-ups independently of the innovativeness criterion, and ii) for innovative SMEs established for more than [5 years].

CEA endorses that innovation is an activity involving risk with the particularity of “containing risk in the risk itself” (i.e. appreciation of risk is tedious and strongly dependent on the strategy of the involved actors). In most activities involving a risk that can be measurable (for instance statistically), risk can be transferred to special organisation such as banks, insurance... In innovation activities, there is no standard organisation to transfer the risk to. No private actor can estimate accurately the risk in an innovation activity. This is particularly true for seed capital because there is no product, no market and no client. Market alone can not build the financial instruments allowing a mutualisation of risk. The only actor that remains to support a risk that a private actor can not bear is the State. This aspect can not be let to the market rules alone.

3.2. Tackling the equity gap to increase the provision of risk capital in the EU

Question 10) Do you think that other types of State aid apart from those currently granted in respect of risk capital are required in order to help European SMEs grow beyond the start-up phase? If so, which ones?

Yes. CEA would see venture capital as appropriate when a private actor has a first client, an embryonic market but needs to adapt itself in order to win new markets. In this case, State aids are needed: in Europe venture capitalists are funding fewer projects than their private counterparts in the USA¹.

3.3. Supporting technological experimentation and the risks of launching innovative products

Question 11) Do you think that these provisions would produce the expected effects in terms of encouraging SMEs to launch innovative products in the market? If not, what changes should be made to these rules?

CEA fully agrees that these provisions would produce the expected effects in terms of encouraging SMEs to launch innovative products in the market. This type of investment required to launch innovative products are extremely costly, in particular for the first pre-series batch production. The proposed limited level of aid intensity [15%] can make the difference in terms of return on investment.

Question 12) Is there evidence that these provisions should be extended to large companies? Do you think that notification should be required for measures granting substantial amounts of aid to individual firms or individual sectors? If yes, above what amount? What empirical evidence should then be requested by the Commission?

CEA welcomes the EC proposal to support innovation and economic activity in Europe. CEA believes that the Framework should be developed around the size of the projects to be supported not the size of private actors. The public aid should be directed to an agreed-upon limited size of projects e.g. 3-5 millions euros to ensure that SMEs and large companies are on an equal footing. The State Aid should not be notified project by project under an agreed-upon size of projects. This size should be agreed Member State by Member State on common criteria such as population, GDP. The European Union should agree for each State on a quota for the total annual amount of public Aid to innovative projects; an ex-ante control should be ensured by the European Commission. CEA would not favour a notification project by project.

¹ Cf. http://www.pwcmoneytree.com/exhibits/EVCA_Final_Activity_2004_Release.pdf and <http://www.pwcmoneytree.com/exhibits/05Q3Highlights.pdf>.

4 - A SUPPORTIVE BUSINESS ENVIRONMENT FOR INNOVATION

4.1. Encouraging innovation intermediaries

Question 13) How would you regard specific support for innovation intermediaries which merge or develop a joint venture to reach critical mass in a technological field of specialisation? Should investment aid be permitted in this context? If so, on what conditions? What other measures could be envisaged?

From our perspective, it seems that innovation intermediaries are irrelevant in this domain. The market rules should apply in this field. If innovation intermediaries provide added value, their 'clients' would be ready to pay for their service. CEA would not favour any public Aid to innovation intermediaries.

4.2. Encouraging training and mobility

Question 14) Is there evidence that the recruitment by SMEs of other types of highly skilled personnel should be also aided?

Training and mobility of staff play a key role in innovation. But CEA would not endorse 'micro-management' aspects of innovative projects in the Framework, leading to encourage specific categories. CEA would support a more global approach: when there is an innovative project, the requirements can differ from one project to another, it could be equipment, staff,... The Framework should aim at supporting innovation projects in Europe whatever the needs are but following two criteria given in answer to question 3 i.e. scientific and technological criteria and economic criteria in Europe.

Question 15) Should the Commission adopt specific rules for cases where a researcher chooses not to return to his/her home university or where the university no longer intends to hire him/her back?

No, it should not. Although CEA understands the Commission's concern, it does not understand the impact of these rules on innovation.

4.3. Supporting the development of poles of excellence through collaboration and clustering

Question 16) What definition of cluster/clustering activities should be followed and what criteria should be used to distinguish clusters from the broader category of innovation intermediaries?

CEA supports the definition stressed in the consultation document i.e. 'Clusters are generally identified as groupings of innovative start-ups, small, medium and large enterprises as well as universities or research institutions, operating in a particular sector and region and designed to stimulate innovative activity by promoting intensive interactions.'

CEA would propose as a definition: a cluster/clustering activities are a sharing of physical resources (staff, test equipment, facilities, buildings...), training and teaching resources and complementarities between actors, whatever the legal and financial structure.

Therefore, three criteria could be used: physical resources, training and teaching resources and complementarities between actors.

Question 17) Do you think that State aid should be allowed to promote European centres of excellence? If so, what type of State aid, for what reasons, and subject to what conditions? What other, possibly better, measures could be envisaged?

CEA does think so. It could be indirect aids via the access under privileged conditions to physical resources, training and teaching resources, facilities, hosting infrastructures of public organisations (universities, R&D centres...). The interest of a centre of excellence is to gather public Aid in order to produce wealth to private actors that belongs to the centre without any direct financial flow from the private actors.

Question 18) Are additional criteria needed to avoid State aid being fragmented and to encourage the concentration of resources in a limited number of poles of excellence?

This question should not be addressed at EU level.

Question 19) What are your views more generally about the need for additional provisions for infrastructure that supports innovation (e.g. in the field of energy, transport etc.)?

CEA does not see at this stage any additional provisions from Member States or from the European Union needed.

Question 20) Do you think that large firms should be entitled to State aid, e.g. to establish research facilities in a European pole of excellence? Should the Commission try and develop specific criteria to control such State aid? What type of economic evidence should be requested to analyse the necessity of such State aid?

Yes, we do think that large firms should be entitled to State aid. CEA welcomes the EC proposal to support innovation and economic activity in Europe. CEA believes that the Framework should be developed around the size of the projects to be supported not the size of private actors. The public aid should be directed to an agreed-upon limited size of projects e.g. 3-5 millions euros to ensure that SMEs and large companies are on an equal footing. The necessity of such State aid should be analysed using two criteria: scientific and technical criteria and economic criteria in Europe, as indicated to answer to question 1.

About CEA

French **Commissariat à l'Energie Atomique** (CEA) was founded in 1945 as the central public R&D organisation on applications of nuclear energy. Over the past half century it has held a central role in the development of the nuclear industry in France and has widely expanded its R&D scope to include basic research, new energy sources, information technologies, nanosciences, and health and life sciences. Its civilian application activities employ about 10500 people presently grouped into four main divisions: Nuclear Energy, Technological Research, Matter Sciences, and Life Sciences. Its global annual budget is about 1.5G€ of which 1/3 from private sources, and it is the fourth largest French patenting institution (first public) with close to 300 filings of priority patents in 2004.

Due to its large range of activities, CEA is deeply involved in multiple research partnerships with universities or technical schools (U-TS) as well as private companies. Various formal ways are used for the partnerships with universities and U-TS, from the simple research contract to the lab federation within a regional or a national scale or to the association of labs or to common entities with legal personalities. 54 frame contracts with CEA French partners have been signed since 1997 to give a stable framework to these relations.

Parallel to collaborative research, CEA is involved in contract research with private actors. Since its beginnings, CEA has been upheld to marketing its innovations and developments, through external industrial enterprises with some of whom long term relationships have been established. CEA has also paid attention to protect and transfer innovations ensuing from its basic research activities. Consequently, innovations from CEA continuously range from disruptive to incremental, and all usual approaches to technology transfer have been explored over the years and are currently in use: R&D contracts from enterprises who hold property rights on possibly ensuing know-how, licensing of previously developed internal know-how, spin-offs, etc. This long standing tradition of technology transfer is reflected in an excellent record keeping of patents and agreements for over 30 years which served as a basis to answer this present consultation.

Within RTD FP6 collaborative contracts, CEA is currently involved in more than 200 contracts and acts as co-ordinator for less than 40 of them.