State aid support schemes for RDI in the EU's international competitors in the fields of Science, Research and Innovation
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ABSTRACT

Despite RDI being fundamental to any economy and producing an extremely beneficial effect on social welfare, EU has not yet met the objective of 3% GERD/GDP. Moreover, an econometric analysis demonstrates that public financing to RDI in the USA, Japan and South Korea is more efficient than in the Union. It also shows that the Union's State aid Framework constitutes a handicap for EU industry and research.

Undoubtedly the USA has put a driving force innovation in place through its public procurement policies. However, the Union, through Pre-Commercial Procurement, cannot copy the US system without undertaking profound legal adjustments.

The EU RDI State aid rules which add a supplementary legal layer to each Member State's national innovation policies are complex, time-consuming and restrictive. There is no equivalent abroad.

The competition law analysis improperly starts off by assuming that R&D public financing constitutes State aid under Article 107(1) TFEU. This does not consider the economic characteristics of RDI, which profoundly differ from production. The product market affected by the aided research is only considered at the stage of the compatibility analysis (Article 107(3) TFEU). This policy started in 1986 and became increasingly theoretical in the 1996, 2006 and 2014 RDI Frameworks.

A global reform would guarantee that the Union's industry is no longer in this disadvantaged position. This would require changes both in the legal analysis and the accompanying institutional framework. This would not raise any serious legal issues because the Commission has discretion in assessing the compatibility of the aid, as accepted by the European Courts.

A number of legal improvements are proposed, among which:

- Fundamental research has no adverse impact on competition and therefore should not fall under State aid;
- The risk of distorting competition on the product market should be the analysis' main issue. This would allow for the particular nature of R&D to be taken into account while significantly reducing the number of notifications and handling them in a quicker and simpler way;
- Incentive effect of aid should be presumed, or its demonstration significantly simplified, when the risk of distorting competition is limited;
- Our most efficient competitors apply 1-2 different aid intensities, whereas the Union applies 31. This should be corrected;
- The RDI definitions used for State aid control since 1986 should be replaced by the twofold categorisation of Horizon 2020 between Research & Technology Development Activities and Innovation Activities;
- An operational matching clause is needed and transparency requirements should be adapted;
- Structural Funds should be assessed under Article 107(3)(b) TFEU.
On the institutional side,

- Future framework for RDI State aid control should not be under the exclusive responsibility of competition regulators on both national and European level, as it has been since 1986;
- The internal governance within the Commission should better reflect the need for innovation and competition policies to be merged.
EXECUTIVE SUMMARY

Purpose and approach of the ENIRI study

In the context of the increasing globalisation of Research, Development, and Innovation ("RDI") activities, the purpose of the ENIRI study is to evaluate and assess the appropriateness and effectiveness of the regulatory framework for State aid to RDI in the European Union (EU). This will be accomplished by comparing the competitiveness of RDI in the EU with that of certain competitor third countries (Australia, Brazil, Canada, China, India, Japan, Russia, South Korea, USA, hereinafter 'third countries'), in order to recommend improvements to the Community regulatory framework.

To establish such recommendations, the ENIRI Final Study Report contains: a detailed description of the RDI support systems (1), a comparative analysis of financing support to RDI (2), a full analysis of the Community legal framework for State aid applicable to RDI (3), proposes suggested improvements for the design of an alternative system (4), and finally, makes policy recommendations (5).

1. Description of the RDI support systems

The examination of the RDI support systems includes a description of the evolution of the EU RDI and competition policies (1.1), the structure of national innovation systems (1.2), financial data on RDI State expenditure (1.3), public procurement practices (1.4) and the regulatory framework (1.5).

1.1 Evolution of the EU RDI and competition policies – It has taken 30 years to elaborate an EU policy for R&D. Over time, and through 8 successive Framework Programmes for Research, Technological Development and Demonstration activities, the Union has allocated increasing budgets which are currently in the range of EUR 10 billion per year. The Structural Funds to RTDI (approx. EUR 52 billion for the period 2007-2013) and the Competitiveness and Innovation Framework Programme (approx. EUR 3.6 billion for the period 2007-2013) complement the EU’s support instruments related to RDI. Nowadays, EU public funding to private RDI exceeds national public financing. Between 2007 and 2013, it is estimated that 57% of public funding to business-related RDI activities were financed at the EU level, while 43% stemmed from public national resources. However, EU financial resources are spread in very different ways among different Member States (see ENIRI Final Study Report, Section 5.1.1).

From a legal point of view, the Commission holds exclusive jurisdiction to assess the compatibility of State aid with the common market, pursuant to the criteria it has established in the Community Framework for State aid to RDI ("RDI Framework"), and the General Block Exemption Regulation ("GBER"). In the past 30 years and through the adoption of four successive versions of the RDI Framework, the Commission has progressively and substantially reinforced the economic analysis part of the State aid to RDI legal assessment. Since the 2014 RDI Framework, the Commission has also strengthened its requirements regarding information to be submitted by the Member States. Therefore, contrary to the official "simplification" objective and official statements supporting it, the State aid control system itself has not been simplified – indeed the reality remains far from it – and has instead become more complex through successive stages (see ENIRI Final Study Report, Section 5.1.2).

1.2 Structure of the National Innovation Systems ("NIS") – In both EU Member States and in the analysed third countries national governments are the main actors in defining the priorities and implementation of RDI policy. Administrative bodies are also active in each country; they perform advisory tasks and implement decisions. At the regional level, the situation is very diverse. One group of countries do not have any regional RDI policy, a second group of countries address regional RDI concerns
through national policies, and a third group addresses the federal States which have a much more decentralised system and the ability to grant more power and autonomy to the local authorities (see ENIRI Final Study Report, Section 5.2).

1.3 Financial and other data on RDI State expenditure – The ENIRI study has identified 2,982 support measures to private RDI implemented during the period 2007-2012. Of these, 1,710 support measures were implemented in EU Member States, amounting to an overall budget of EUR 203,548,786,000. Moreover, 1,272 support measures were identified in the analysed third countries, representing a total global amount of EUR 491,005,757,000. No single third country has a budget which exceeds the combined EU Member States budget. Furthermore, the countries implement very different funding policies, targeting different sectors and beneficiaries and using different forms of aid (see ENIRI Final Study Report, Section 5.3).

1.4 Practices for public procurement – EU public procurement directives clearly provide (indirect) opportunities to finance RDI activities through public procurement contracts. In that respect, the Pre-Commercial Procurement ("PCP") scheme provides detailed guidelines on how R&D services may be procured. The initial objective was to establish a measure similar to certain American public procurement systems, in particular the SBIR (Small Business Innovation Research) Program, the efficiency of which is recognised worldwide and which succeeded in getting products resulting from RDI activities into the commercialisation phase. However, the success of the SBIR could not be replicated in the EU as a result of EU’s WTO obligations, and the constraints of EU State aid legislation. On the one hand, EU public authorities have to design their procedures and their contracts in accordance with strict conditions in order to avoid qualification as State aid. On the other hand, in the SBIR, the procuring agency which subsidises the research activities also undertakes to purchase the developed product. In doing so, it introduces it to the production and commercialisation phase. However, in the European PCP, the contracting authorities must follow two separate and successive public procurement procedures in order to subsidise the research activity, and to purchase the final product. The other remaining third countries display material differences in their regulatory frameworks for public procurement. However, they do tend to adopt and adapt successful programmes already implemented in certain countries, for instance the SBIR Program (see ENIRI Final Study Report, Sections 5.4 and 6.6).

1.5 The regulatory framework – The most important factor when comparing the regulatory framework applicable to public financing to RDI in the EU and the analysed third countries is the twofold level of the regulatory framework applicable in EU Member States. In addition to the national rules applicable to research and innovation financing, the Member States are subject to the Community rules on State aid. These rules define strict conditions for the compatibility of the aid with the Common market, and therefore competition law, through State aid control, is predominant. Accordingly, a support measure adopted at the national level by a Member State which qualifies as State aid under Article 107(1) TFEU must, in addition to the national rules, comply with the EU rules on State aid to RDI. These rules constitute a hallmark of the EU system, and trigger a full-blown competition law and economic analysis in order to assess the compatibility of the aid with the common market. Conversely, the third countries have a single layer of regulation at national level, which imposes only a review of the aid pursuant to the scientific and innovation policy of each country (see ENIRI Final Study Report, Section 5.5).

2. Comparative analysis of the financing support to RDI

The ENIRI Final Study Report includes a comparative analysis related to the public funding measures to RDI (2.1), case studies (2.2) and the efficiency of public support to RDI (2.3).


2.1 Comparative analysis of the public support to RDI – The comparative analysis of the public support to RDI between the Member States and the analysed third countries has been carried out according to three parameters: the form of the State support, the sector targeted by the State support, and the beneficiary of the State support (see ENIRI Final Study Report, Sections 5.3, 6.1 and 6.2):

- Regarding the form of the State support, the EU implements a wider variety of forms of State support than the third countries which mainly rely on direct funding measures (especially the USA, Australia, and China). Reduction of taxes is the second most utilised instrument, being particularly important in Japan, Canada, South Korea, Brazil and Australia.
- As far as the targeted sectors are concerned, the ICT and services sectors are more targeted in the EU than in the third countries, even though ICT is of great importance in Brazil, South Korea, and Japan, and services are also significant in Russia and South Korea. India and the USA favour biotechnologies and pharmaceuticals. Russia distinguishes itself by the important share of the budget it allocates to energy, a highly competitive sector in this country. Japan and China prioritise high-tech manufacturing, while Australia and India invest substantially in other sectors. Support measures that target several sectors, but where it was not possible to break down the budget into the number of sectors concerned, have been classified as ‘transversal measures’. This type of measure is widely used in the reported countries, especially in Japan, Canada and certain EU countries.
- As regards the beneficiaries of the finance measures, (i.e. large industry, SMEs, and public and non-profit RDI performers), third countries heavily subsidise the public and non-profit RDI performers, with their share of national budget exceeding 85% in Japan and the USA. However, this category of beneficiary only receives 43% of the aggregate budget in the Member States. Brazil is unique in that it mostly focuses on large industry, while the budget share dedicated to SMEs is massive in the EU, Canada and China.

The main conclusion that can be drawn is that the third countries implement a genuine industrial policy, since they invest massively in selected fields in which they aspire to be leaders in the future. By contrast, EU Member States cannot follow the same approach, in particular, due to the application of EU competition policy.

2.2 Case Studies – Several case studies have been carried out within the ENIRI study.

- Case studies type 1 deal with RDI investments by European companies in the USA, Japan, China and India, illustrating the comparative advantages of these countries for RDI investments.
- Case studies type 2 concern RDI investments by non-European companies established in one Member State benefitting from the incentives and a favourable socio-economic environment in the host country.

Case studies types 1 and 2 focus on the main reasons for multinational companies to locate their R&D activities in the USA, China, India and Japan, as well as in the EU. The conclusion has been reached that, apart from common drivers, namely the market size and the proximity to the company’s other activities, the importance of the different factors varies from country to country. The reasons driving multinational companies to locate R&D activities in developed economies, such as the USA, Japan and EU, are knowledge driven, while China and India are attractive for reasons linked to access to national markets and lower production costs. The main finding is that R&D public support is not in and of itself decisive for such a decision on localisation, but plays an important role when the countries rank equally in all other factors. This is also true when the companies decide whether to keep or increase their R&D activities in a given location. Moreover, the objective is to highlight the
most important EU public policies which support R&D activities for both European and non-European companies. This has the result that the selected companies have identified product market regulation, tax incentives and direct public support as the most important public policies supporting R&D activities which constitute an advantage for the EU (see ENIRI Final Study Report, Section 6.3.1).

- **Case studies type 3** concern RDI subsidies having taken place in the USA, Japan, China and South Korea. The purpose is to assess, through a *prima facie* analysis, whether the identified examples of support measures would have been compatible with the Treaty if the EU State aid rules had been applied. It results in the fact that *none* of the examined measures which would be qualified as State aid would have been cleared under the EU State aid rules. More precisely, public support outside the EU displays the clear objective of enhancing a country's competitiveness concerns and ignores any potential impact on competition. Neither the existence of market failure, nor the demonstration of an "incentive effect" of the aid is required in the third countries. Moreover, the public support measures in the third countries cover generally the whole spectrum of R&D activities and in some cases also cover activities that would qualify as commercialisation activities which are excluded from the scope of the RDI Framework (see ENIRI Final Study Report, Section 6.3.2).

- **Public financing in third countries.** In addition to the support measures studied in case studies type 3, a number of support schemes have been selected in some third countries. These have been subject to a *prima facie* evaluation under the EU rules, taking into account only the intensity of the aid as regards the nature of the research. The results of this first analysis were that no measures are compliant with the State aid rules applicable to RDI in the EU. This analysis leads to the conclusion that the EU State aid rules are very complex, since they provide for numerous different aid intensities (level of funding expressed as a percentage of eligible costs), depending on the nature of the research activity and the size of the recipient entity. By contrast, the measures implemented in the analysed third countries provide more often than not for a single aid intensity regardless of the type of research. In addition, the acceptable aid intensities in the third countries exceed the ones set out under the European rules.

It appears, therefore, that the EU RDI State aid legislation significantly restricts all Member States' research policies, while there is no equivalent restriction in the third countries, which accordingly can implement the research policy of their choice. Consequently, the EU State aid rules constitute a material handicap imposed on European industry which cannot benefit from public funding in the same way as competitor companies in third countries (see ENIRI Final Report, Section 6.4.1).

### 2.3 Efficiency of the public support to RDI

An econometric analysis has been undertaken based on different models and using different techniques. This analysis demonstrates that public support in the EU as a whole is on average more efficient than in Australia, Canada, Brazil, Russia and India, but lags behind Japan, South Korea, the USA and China. The quality of the regulatory framework has been measured against the threefold background of *(i)* the complexity of the framework, *(ii)* the implementation of the rules, and *(iii)* the timeframe needed for obtaining the aid. It has therefore been concluded that the complexity of the framework together with the implementation of the rules significantly impact the efficiency of the public support to RDI. In this respect, the EU State aid Regulatory Framework also constitutes a handicap on European companies (see ENIRI Report 30 part 2 and ENIRI Final Study Report, Section 6.5).
3. **Analysis of the community legal framework for State aid to RDI**

Over the period 2008-2013, RDI State aid expenditure in the EU amounted to EUR 61,050.50 million, which represented around 6% of the Business Enterprise expenditure on R&D ("BERD") in the Member States. Around 78% of the RDI State aid cases were cleared by the Commission under the GBER between 2008 and 2015. However, this figure is misleading since merely 17% of the State aid expenditure in value was assessed under the GBER. Therefore, the RDI Framework is in practice the main legal instrument applied to RDI State aid in the EU, which is both an unexpected and presumably undesirable finding. When State aid is notified to the Commission, its compatibility is examined under the RDI Framework, which raises a series of economic issues leading to a full-blown legal analysis of the compatibility of the aid with the common market. Pursuant to this review, 98% of State aid measures to RDI led to a direct approval by the Commission. It is therefore particularly relevant to note that only 2% of the cases notified and examined under the RDI Framework triggered the opening of a formal investigation procedure (see ENIRI Final Study Section 6.7.1).

In this respect, the ENIRI Final Study Report includes an analysis of the 2008 and 2014 GBER and the 2006 and 2014 RDI Frameworks. In addition, the Commission's 56 decisions dealing with ad hoc and individual RDI State aids have been reviewed. This has enabled the study of essential legal issues, namely the "incentive effect" (3.1), definitions of the RDI activities (3.2), small and medium-sized enterprises (3.3), net extra cost (3.4), the matching clause (3.5), the transparency requirement (3.6), Article 107(3)(b) TFEU (3.7), the fundamental question of the existence of a distortion of competition (3.8), and the public financing of research organisations (3.9).

3.1 **Incentive effect** – In order to demonstrate the compatibility of aid with the common market, the notifying Member State must demonstrate that the aid has an "incentive effect", following which it must have as effect that recipients engage in additional RDI investments or activities. This is critical for the competition law analysis carried out by the Commission. To demonstrate the incentive effect, the Member State must provide a counterfactual scenario to the Commission, and submit detailed information regarding the level of profitability of the aided project. Further, the Commission examines the project's lifecycle, the size of the upfront investment, the timeline for anticipated revenues, and the income and cash flow situation of the beneficiary. Finally, the Commission assesses, the level of risk involved in the project, *inter alia*, the irreversibility of the investment, the probability of commercial failure, the risk of whether the project is less productive than expected, and that the project undermines other activities of the aid beneficiary as well as its financial viability. In addition to these formal requirements deriving from the RDI Framework, the Commission seeks to establish the absence of alternative sources of either internal or external funding for the proposed project.

This shows that the demonstration of the incentive effect is subject to the collection and dissemination of an extensive amount of detailed information. This would not raise concerns if the resulting analysis was robust. However, this analysis is imprecise, because RDI activities are far upstream from the product market on which effective competition will take place, and the results of the activities are highly uncertain. Moreover, the establishment of a counterfactual scenario in the context of RDI State aid is a difficult and largely theoretical process, hence calling into question its necessity. Such a detailed analysis unavoidably prolongs the approval procedure of an already lengthy State aid review. Indeed, in the majority of the cases reviewed, the approval process took on average 8.6 months (15.3 months in the case of pre-notification), which is in addition to the national procedure. Therefore, the estimated total period will usually be far more than 2 years, and will require the preparation of two different files. However, time is also of the essence in RDI activities, and so long review periods considerably reinforce both uncertainties and risks for the beneficiaries of the aid, and their counterparties. In the most efficient analysed third countries, the total period is shorter, on average 7 to 8 months. Against the background of the
globalisation of RDI activities and competition which takes place with competitor third
countries, a long delay in obtaining State aid clearance is even more harmful for
European undertakings and may even deprive them of their first mover advantage vis-
à-vis their non-European competitors. Moreover, what makes the request purely
theoretical is that the Commission has never concluded that the incentive effect is
lacking in any of the 56 decisions analysed. This is also true in hundreds of cases
decided under the 2006 and the 2014 Frameworks. Indeed, in doing so, the
Commission systematically reached the conclusion that the aid under examination was
necessary (see ENIRI Final Study Section 6.7.1.7).

3.2 Definitions of research activities – The current definitions of research activities do
not fit with the specificities of the research. Being based on the Frascati Manual since
1986, EU State aid legislation has adopted a threefold categorisation of R&D activities,
i.e. fundamental research, industrial research, and experimental development. This
has progressively become more complex with each modification. The special character
of EU State aid to RDI legislation lies in the application of different ranges of accepted
aid intensities in relation to the nature of the research activity, lowering with market
proximity. However, this pyramid structure of R&D categorisation treats research in a
way which is similar to production, and does not correspond to the reality of research
and innovation. By contrast, the EU's main competitor third countries essentially make
use of the Technology Readiness Level ("TRL") scale, which better takes into account
the process of RDI, and provides for a single intensity of aid in each support measure,
irrespective of the proximity of the research to the product market. In Horizon 2020,
the Commission itself only uses a twofold categorisation (Research & Technological
Development on the one hand; and Innovation on the other hand) which views RDI as
a continuing process and allows for appropriate levels of funding even at the stage of
experimental development. Furthermore, the Commission sometimes makes use of the TRL scale, when available (see ENIRI Final Study Report, Section 6.7.2.1).

3.3 Small and Medium-Sized Enterprises ("SMEs") – The current system of State aid
to RDI does not do the particularities of SMEs justice. SMEs mainly perform
innovation activities, and do little research. In practice, they are purely market-driven.
Likewise, SMEs face more difficulties in finding external financing and they compete
against big companies to attract highly skilled labour, market new products and
benefit from knowledge spill-over. These factors are inversely correlated to their size.
Access to clusters, collaborative research and contractual research are even more
essential to SMEs than to large enterprises. Against this background, the current EU
State aid framework does not specifically tackle the issues with which SMEs are
confronted when it grants 10% or 20% more intensity of aid under strict conditions. It
also maintains uncertainties as to the qualification of State aid for universities and
research organisations. This enhances the unpredictability and legal uncertainty
surrounding the activities of SMEs, and thus constitutes a hindrance to collaborative
research between SMEs on the one hand, and universities and research centres on the
other (see ENIRI Final Study Report, Section 6.7.2.3).

3.4 Net extra cost – The "hurdle rate" and "net extra cost" tests were introduced by the
2014 RDI Framework in the assessment of the compatibility of the aid. This analysis
introduces a budgetary control mechanism which has no merit in relation to the
analysis of the aid's adverse effect on competition. Moreover, the "net extra cost" test
is ill-conceived for R&D, since the uncertainty involved in an R&D project renders it
impossible to implement it with a sufficient degree of precision. Such an analysis
provides only for very rough approximations, while at the same time it introduces a
significant burden for the Member States. This is essentially of a bureaucratic nature,
and unreasonably exacerbates the discretion of the European Commission. Such
discretion itself is highly questionable in view of the absence of judicial control over
the application of this criterion, due to the fact that the Commission has never
adopted a negative decision (see ENIRI Final Study Report, Section 6.7.2.5).
3.5 **Matching clause** – The matching clause would enable aid in the EU to be approved, even though the aid intensity exceeds the Framework requirements, if competitors located outside the EU receive aid of an equivalent intensity for similar R&D projects. Although it is a critical issue against the background of globalisation, this has never been applied, mainly due to the high standard of proof and the complex procedure required. In practice, the Commission has only drawn limited – if any – conclusions on the basis of the fact that undertakings located in competitor third countries have benefitted from public financing (see ENIRI Final Study Report, Section 6.7.2.6).

3.6 **The transparency requirement** – The transparency of the aid has become a condition for the compatibility with the internal market pursuant to the 2014 RDI Framework. Under the umbrella of the need to enhance accountability, peer review, and more effective public spending, the transparency requirement involves the duty to disclose certain information on the Member State's website related to each individual and ad hoc aid which exceeds EUR 500,000. However, the transparency requirement, as imposed by the current legislation, may cause serious harm to undertakings engaged in RDI activities because it enables competitors, particularly outside the EU, to attain a detailed knowledge of the research in which EU undertakings are engaged. Such transparency is not a requirement in the competitor third countries. Moreover, and more importantly, it does not contribute at all to addressing any competition law issues arising from the aid (see ENIRI Final Study Report, Section 6.7.2.7).

3.7 **Article 107(3)(b) TFEU** – Article 107(3)(b) TFEU provides that State aid in relation to important projects of common European interest ("IPCEI") may be declared compatible with the internal market. The reference to Article 107(3)(b) TFEU has to be welcomed and encouraged. However, the recent IPCEI Communication is ill-suited for RDI projects. In particular, it only applies to transnational projects, which excludes national projects and, in practice, limits the scope of application of Article 107(3)(b) TFEU to the Commission's projects. While it provides for a maximum aid intensity of 100%, this is subject to the strict condition that the aid amount does not exceed the funding gap: this raises the same concerns highlighted above for the net extra cost test. This condition consequently introduces a significant bureaucratic burden for Member States, ill-suited for RDI projects, considering the high uncertainty involved in an RDI project (see ENIRI Final Study Report, Section 6.7.3).

3.8 **Distortion of competition** – Upon assessing the existence of aid, the Commission presumes that the measure threatens to distort competition. In doing so, the Commission has shifted the burden of proof to the Member State, which is subject to a detailed, time consuming and administratively burdensome assessment procedure to prove that the aid is compatible with the internal market. This should be seen in contrast to the fact that, following this procedure, i.e. at the level of the compatibility of aid (Article 107(3) TFEU), the Commission has concluded, in all ad hoc and individual aid cases, that the risk of distorting competition is limited and, in two-third of the cases, that the aid has pro-competitive effects. Moreover, the market share of the aid beneficiary on the relevant product market affected by the aid has been very low in many cases, and sometimes inexistent. Indeed, in 10 cases out of 56, the applicable market share was 0% and in 23 cases it was lower than 5% (including the 10 fore-mentioned cases). This is a fundamental question since the particular nature of R&D activities renders the existence of competition in the future product market uncertain. It is, therefore, not clear whether the cornerstone of the analysis, i.e. the finding that all public research funding is presumed to distort competition and thus falls under Article 107(1) TFEU, is correct. In any event, long lasting and detailed investigations should be reserved for cases where a serious distortion of competition can be feared (see ENIRI Final Study Report, Section 6.7.2.2).

3.9 **Public financing of research organisations** – Since 1986, there has been an increasing trend by the Commission to complicate the legal treatment of the public financing of higher education and research organisations. The Commission's current approach represents a complex labyrinth and does not provide the necessary legal
certainty. Moreover, it can also be characterised as overly restrictive since it does not take into account the nature of the R&D activities and the interests of the contracting parties in collaborative research agreements. Therefore, it falls into sharp contrast with the most efficient competitors of the EU which are promoting collaboration between industry and academia by all means (see ENIRI Final Study Report, Section 6.7.2.4).

4. Suggestions for improvements and proposal of an alternative system

The ENIRI study has highlighted some weaknesses in the EU regulatory framework for State aid to RDI (4.1) and of the institutional system of EU support for RDI (4.2). It has therefore also shed light on some potential improvements to develop an alternative system which better takes account of the particularities of RDI activities. Indeed, in addition to being highly uncertain, the results of RDI activities materialise in the long term, and the knowledge produced is subject to a limited appropriability. Therefore, the risk of distortion of competition when awarding State aid to RDI materialise at a late stage in the process. Consequently, State aid to RDI should not be dealt with in the same way as aid to production activities, since their anticompetitive effect cannot be compared to each other (see ENIRI Final Study Report, Section 7.2).

4.1 EU regulatory framework for State aid to RDI – Global reform of the system of State aid to RDI is necessary to achieve the aim of simplification and acceleration of the procedure. Such a reform would not raise any serious legal issues since it would constitute an exercise of the Commission’s wide discretion in assessing the compatibility of the aid, as regularly accepted by the European Court of Luxembourg. It would also allow for the particularities of RDI to be better taken into account (as is already the case for antitrust) (see ENIRI Final Study Report, Section 7.2).

At the level of the notification of the aid, a new objective should be set up, according to which 80% in value of State aid to RDI should be exempted under the GBER. For this to be achieved, the GBER’s RDI provisions should be profoundly simplified. Besides the modification of the notification thresholds, the current system involving 25 different aid intensities should be abandoned and replaced by only two aid intensities (see ENIRI Final Study Report, Sections 8 and 9).

In this respect, the RDI State aid rules should follow the twofold categorisation adopted in Horizon 2020. The current pyramid structure of the definitions for R&D activities should be abandoned in favour of the distinction between Research and Technological Development activities on the one hand, and Innovation activities on the other hand, as referred to in Horizon 2020. Likewise, the aid intensities (currently amounting to 31 aid intensities in the RDI Framework and 25 in the GBER) should be simplified. They should also be increased up to 100% for aid to RTD activities, and 70% for aid to Innovation activities, as in Horizon 2020. Moreover, as is also the case in Horizon 2020 and in most of the analysed third countries, there should no longer be any distinction of the maximum aid intensity allowed according to the size of the beneficiary. Consequently, large, medium-sized, and small enterprises should be placed on an equal footing. Moreover, since fundamental research has no commercial application in view, it should be outside the scope of any State aid control (see ENIRI Final Study Report, Sections 8 and 9).

The current notification thresholds expressed in project value do not allow cases which raise the most serious competition issues to be caught. The ENIRI study suggests three different ways to amend them. A first solution would consist in the doubling of the notification thresholds of 2014. A second solution would be to simply remove any predetermined notification thresholds. It would therefore be for the Member State concerned to determine whether the aid measure is liable to distort competition and, on this basis, decide to notify. In case the answer is not clear, the Member State should enter into discussions with the Commission within the framework of preliminary
meetings, in order to conclude whether the aid measure should be notified to the Commission. A third solution would be to abandon the thresholds based on the project value in favour of thresholds expressed in market shares on the product market. It would enable an analysis of the real position of the beneficiary of the aid on the relevant product market. As a result, this would also enable any risk of distortion of competition to be ruled out at the beginning of the assessment, when the recipient undertaking does not have any market share, or when it has a very low market share (see infra). This is the method used in antitrust and merger control (see ENIRI Final Study Report, Sections 8 and 9).

In relation to the substance of the competition law analysis, distortion of competition should constitute the main parameter of the assessment of the State aid, at the level of both the existence, and the compatibility of the aid (where there is aid). The twofold profitability test (net extra-cost and hurdle rate) should be abandoned to rely on aid intensities as in the other regimes existing outside the EU, and the transparency requirement as a compatibility condition should be abandoned. The matching clause should be improved in order to apply it to the Member States, and to better protect the interests of the EU research and innovation policy against the background of international competition from third countries. Likewise, the incentive effect should be presumed or its demonstration should be significantly facilitated when the Commission concludes that the risk of distorting competition is limited. Finally, whether or not the product market considered in an R&D project will impact a bigger geographical market than that of the Member States should be an essential element for the Commission in the analysis of the restriction of competition, and in particular to determine the market shares (see ENIRI Final Study Report, Sections 8 and 9).

It is also suggested that the current system of public financing of higher education and research organisations is replaced by a system which would leave room for governments to implement a proactive innovation policy. Therefore, the Market Economy Investor Principle test should be adjusted to take into account the particularities of research organisations' interests. Moreover, the Commission should conclude that there is State aid within the meaning of Article 107(1) TFEU only when the risk of distorting competition on the product market is real, taking account of the fact that collaboration entails the sharing of results and significant procompetitive effects (see ENIRI Final Study Report, Sections 8 and 9).

With regard to aid to promote the execution of important projects of common European interest under Article 107(3)(b) TFEU, the adoption of new Guidelines would allow the analysis to be based on the determination of innovation goals, which are particularly important from society's perspective. Such Guidelines should provide that these goals may not necessarily be market related (see ENIRI Final Study Report, Sections 8 and 9).

From the procedural point of view, a two-step approach should be followed. At the level of the pre-notification, the Member State should determine whether the aid measure is liable to distort competition, using for instance, the market share held by the beneficiary of the aid on the relevant product market. In case of doubt, or in the interest of legal security, discussion should take place between the Member State and the Commission possibly leading to a notification of the aid. The Commission could carry out a simplified assessment of the aid within 20 working days, after having offered the possibility to competitors to submit observations on the potential competition concerns of the aid. This process already exists in the Notice from the Commission on a simplified procedure for treatment of certain types of State aid. The cases which would hit the new thresholds (assuming that the Commission retains the thresholds system) and raise serious competition issues should be examined by the Commission within a regulatory deadline of 5 months following a competition law analysis based on the impact of the aid on the product market (see ENIRI Final Study Report, Sections 8 and 9).
4.2 The institutional system of support to RDI – There is a real need to stimulate and exploit synergies between all types of EU support measures to RDI (in particular Horizon 2020 and Structural Funds) in a simple and efficient manner. However, the ability to stimulate and exploit synergies between the EU financial support to RDI in a simple and efficient manner is hindered by the fact that Structural Funds fall under State aid rules and so are assessed under Article 107(3)(c) TFEU. However, to the extent that Structural funds also aim at achieving centrally designed EU policy, a different compatibility assessment, possibly unrelated to market considerations, is justified (see ENIRI Final Study Report, Section 7.1).

To get State aid policy actively and positively contributing to the achievement of the Europe 2020 objectives, one should find a way to positively harmonise EU policies touching upon innovation (Horizon 2020, Structural Funds, and RDI State aid), the first two already contributing to the development of the Union's innovation policy (see ENIRI Final Study Report, Section 7.1).

For this to be successfully achieved, firstly, common definitions of R&D activities should be agreed, and the characteristics of the activities concerned should be taken into consideration. Moreover, RDI projects financed by Structural Funds should be assessed under Article 107(3)(b) TFEU (see ENIRI Final Study Report, Sections 8 and 9).

Secondly, full competence of State aid applicable to RDI should be transferred to Commission services in charge of RDI policy in close cooperation with DG Competition. A precedent already exists concerning the competence for State aid in the transport sector, which was held by DG Transport for many years. This would allow teams with high level scientific and technological training to implement research, technological development and innovation programmes or activities to better take account of the characteristics of the national RDI activity in the assessment of RDI State aid. Likewise, Commission services in charge of RDI policy should be directly responsible for the elaboration of the next versions of the RDI Framework and the GBER, in close cooperation with DG Competition. To this purpose, the Advisory Committee to be set up should not be limited to competition matters (see ENIRI Final Study Report, Sections 8 and 9).

Thirdly, the fact that there is no EU Court decision on the application of the RDI Framework is due to the fact that the Commission has never made a negative decision declaring the aid incompatible with the common market. Therefore, in order to respect the principle of good administration, any Commission policy regarding State aid to RDI should clarify that, in accordance with Article 108(3) TFEU, the Commission should take its position on any State aid project, even though it is not clearly compatible with the RDI Framework. In procedural terms, these cases should be handled within the same time limit as the others (see ENIRI Final Study Report, Sections 8 and 9).

5. Policy recommendations

The EU should put in place an innovation policy and State aid policy, which are at least as beneficial to innovation as the ones applied by its most successful competitors (see ENIRI Final Study Report, Section 9).

For this to be achieved, the new system for RDI State aid should address the fact that RDI activities are critical for the EU. They should also be subject to specific treatment as a matter of competition law resulting from the significant distance of RDI from the product market (even when it is successful). Therefore, there is a real need to harmonise scientific output, industry capacity, and the needs of society (see ENIRI Final Study Report, Section 9).

Consequently, State aid control to RDI in the Union (i.e. both the RDI part of the GBER and the RDI Framework, as well as the treatment of important projects of
common European interest) should be reformed in such a way that it no longer constitutes a handicap for European industry. To this effect, it is necessary to gain flexibility and to place EU innovation policy on an equal footing with EU competition policy (see ENIRI Final Study Report, Section 9).

The Commission should change the cornerstone of its assessment of State aid to RDI. Instead of adopting a micro-economic approach not dependent upon competition between undertakings but on economic efficiency (which is not the purpose of State aid control), the Commission should focus its analysis on competition concerns on the relevant product market affected by the aid, as was done at the WTO level in the Airbus/Boeing case. This would lead to greater consideration of the fundamental parameters of RDI investment in the Commission's legal analysis, and would also abandon the economic analysis which is essentially theoretical. This would also allow to significantly accelerate the treatment of non-problematic cases (see ENIRI Final Study Report, Section 9).

Public finances for RDI in the Member States and finances for the EU under Horizon 2020 should be treated equally whenever national measures contribute to putting an element of the EU Innovation policy in place (see ENIRI Final Study Report, Section 9).