

For a European Approach to R&D Tax Incentive(s)

Study of the European Law Institute





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Executive Summary

The fall off in economic activity following the financial crisis of 2008 has highlighted the need to encourage new areas of economic activity. As the European Union deals with the financial and health consequences of the COVID-19 pandemic, this continues to be the case. Innovation is a possible generator of economic activity, one which many believe is underutilised in Europe. It is widely agreed that technological advances are important contributors to long-term growth, but research and development (R&D) of new technologies is risky. That is precisely why EU member states incentivise R&D through their tax systems by supporting companies that invest in new technology.

Boosting R&D is one of the main objectives of the European Union. A majority of studies conclude that tax incentives stimulate investment in R&D and are an important component in encouraging research-oriented economic activity. However, the R&D incentives currently in place in the European Union are not always adequate and in any case piecemeal.

At the end of 2016 the European Commission proposed a Common Corporate Tax Base (CCTB) which contained some elements relating to R&D. The primary aim of the CCTB was to establish a single set of rules for calculating the corporate tax base in the EU member states which should improve the Single Market for businesses by reducing administrative burdens, compliance costs and tax obstacles for companies operating in multiple member states. The CCTB defined R&D, building upon statistical analysis produced by the Organisation for Economic Co-operation and Development within the so called Frascati Manual. Nonetheless, the CCTB did not address many existing discrepancies between national tax laws, including what would constitute R&D expenditure. This lack of certainty as to what constitutes R&D means that there is no uniformity within the European Union as to what costs are eligible for R&D tax incentives. The CCTB proposal did not, therefore, remedy the theoretical and practical problems arising from varying national definitions of R&D and, in this regard, was a missed opportunity to provide a legal environment conducive to R&D.

This Study proposes new solutions to the problem of lack of a uniform definition of R&D and R&D expenditure. The conceptual framework in the Study is particularly apt within the context of EU tax harmonisation. The Project Team took the definition of R&D provided for in the Frascati Manual as a starting point.

The reports prepared by National Correspondents of 14 EU Member States and Switzerland detailed the legislation and practice in their respective jurisdictions. A comparative analysis of these national reports enables this Study to offer a common interpretation of R&D and R&D expenditure.

The Study contributes to the shaping of the new tax legal order, particularly within the EU and is addressed primarily to EU institutions, national legislatures, tax administrations and taxpayers.

Adoption of the solutions proposed in this Study is designed to strengthen pan-European Union R&D activities through a uniform approach to R&D, and thereby contribute to economic activity by removing barriers to the Single Market. This is of interest to member states, citizens, companies and professionals throughout the European Union.

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Principles

The 10 Principles outlined below provide a common position on diverging interpretations of R&D and R&D expenditure.

These Principles, and the Study in general, deal only with discrepancies in interpretation amongst European Union member states and do not deal with areas where there is a consistent approach by member states. For example, the Study notes that the requirement for novelty in the definition of R&D is broadly accepted by member states but divergent approaches as to what is meant by novel and how such novelty must be identified.

1

R&D includes basic research, applied research and experimental developments with or without commercial objectives in all fields of knowledge, including social sciences, digital design, humanities and, when research is involved, the arts.

2

The level of novelty of the R&D is considered both from the perspective of the publicly available knowledge (world's perspective), and the company's private knowledge (firm's perspective).

To achieve a uniform interpretation of novelty, one should consider an expert-body at EU level, which could, for instance, build upon the decision of the Boards of Appeal of the European Patent Office.

3

Depreciation expenses relating to assets created or acquired as new (including those used under a leasing agreement) and directly used for research operations are eligible R&D costs.

4

R&D staff include the following categories:

1. researchers educated at university-level who conduct research activities directed by the taxpayer;
2. researchers without university-level education who have a minimum of 4 years documented experience of R&D;
3. other R&D staff such as laboratory technicians who have a minimum of 2 years documented experience of R&D; and
4. support staff necessary to support the above categories of R&D staff.

Where staff participate in both R&D and non R&D activities, staff costs are allocated to eligible R&D activities based on the proportion of time spent on such activities.

All costs relating to R&D staff are eligible R&D expenditure except for profit sharing schemes or return on investment. However, to the extent that a profit-sharing scheme is based on R&D, the relevant proportion of profit-sharing may be eligible R&D expenditure.

5

Standardisation expenses are not eligible R&D expenditure, except where scientific methods are used for the purpose of standardisation. Technology watch connected to research projects is eligible [up to [amount to be decided] € per year and per taxpayer].

6

Expenses incurred in an EU member state relating to filing, maintenance and the defence of patents are eligible [within a threshold of € [amount to be decided]]; insurance costs linked to patents are eligible [within a threshold of € [amount to be decided]]. Intellectual Property (IP) consultant's fees, translation costs and taxes are examples of such expenses.

7

Other operating expenses are eligible R&D expenditure based on their link to R&D activities. Alternatively, a notional deduction of 50% of the research staff expenses could be granted. Services of tax advisors or innovation firms are tax deductible in accordance with general principles but are not eligible R&D expenditure.

8

If R&D activity is outsourced to third parties within the European Economic Area (EEA), these outsourcing expenses are eligible up to a [certain] percentage of the total R&D expenses incurred.

9

The company out-sourcing R&D has priority in claiming R&D tax incentives (if the out-sourcing company can claim R&D tax incentives, the R&D contractor cannot also claim).

10

Non-refundable government, state agencies, or EU subsidies or grants related to R&D projects should be *deducted* from eligible expenses of the year during which these expenses are incurred, and irrespective of the payment date of the subsidies/grants.

When these subsidies or grants are refundable, they are *added* to the basis for calculating the tax incentive for the year in which they are refunded to the organisation that paid.

Theoretical Framework and Methodology

2.1 Introduction to the Research

This Study proposes new solutions to cope with the diverging interpretations of the definition of R&D and of eligible R&D costs, together with a conceptual framework for R&D costs in the course of tax harmonisation, particularly in the EU. The results below are based on a comparative analysis of the reports prepared by National Correspondents of 14 EU Members States and Switzerland on the basis of the legislation and practice in their respective jurisdictions.

The scope of concepts (definitions¹) is an important issue in international tax law. Some have clear meaning, usually when an applicable tax treaty provides a definition: for instance, Article 5 of the Model OECD Treaty defines a permanent establishment as (in short) a fixed place of business. More often this is not the case, and additionally some concepts are understood differently depending on the tax jurisdiction. While this could be an opportunity for taxpayers (for instance, a financing is considered an equity in one country and a debt in another, creating tax saving opportunities [interest are tax deductible, dividends are not] in the latter), it is also a drawback that should be avoided - situations of double taxation may result precisely from different meanings given to the same concept.

Certainty in the meaning of concepts is an objective for all parties, whether businesses, tax judges, and tax administrations. Therefore, proposing an R&D concept together of those of eligible R&D expenses, particularly in the context of the CCTB is a key task

for effective management of costs in businesses and public finance control of tax administrations.

R&D tax regimes of different countries allow taxpayers to benefit, in due course and through many techniques, from a low tax rate for R&D income. Even if the possibility of using a tax advantage for a single research activity twice is carefully monitored at national levels, in a time of public austerity, citizens and legislators around the globe are now more focused on the erosion of the corporate income tax bases (or rates) resulting from these tax incentive regimes.² Any effort to give more consistency, more flesh, to a concept must be greeted. The world is changing but tax systems have been slow to adapt in the same direction. This can hinder economic progress, lead to a loss in tax revenue for governments, and frustrate taxpayers who, in due course, elect officials.

In 2016, the European Commission decided to re-launch the Common (Consolidated) Corporate Tax Base (C(C)CTB) project in a two-step approach, with the publication on 25 October 2016 of two new interconnected proposals on a CCTB and a CCCTB. The 2016 CCTB provides for the determination of a single set of rules for the calculation of the corporate tax base. Companies operating across borders in the EU would no longer have to deal with 28 different sets of national rules when calculating their taxable profits. A single set of rules would apply with respect to the computation of taxable income. Further, the intention is that the proposed double CTB is a first step on the way towards re-establishing the link between taxation and the place where profits are made, via an

¹ A definition is an attempt to describe the concept to which a word refers. See generally, M F Otte, L G X de Barros, What is the Difference Between a Definition and a Concept?, *Science Journal of Education*, 2016; 4(5): 159-168.

² In general, tax incentives depart from a general and neutral tax system. See generally, M Cotrut & K Munyandi, Tax Incentives in the BEPS Era, *IBFD Tax Research Series*, vol 3 (2018), p 3 and p 73 seq.

apportionment formula to be introduced through a new triple CTB proposal, which is the second step.

It is unclear whether the CCTB will be adopted any time soon. Right now, the strategy is directed to a temporary 'quick fix' (such as taxing the digital economy) rather than a comprehensive solution. On 1 January 2019, the Anti-Tax Avoidance Directive (known as ATAD) entered into force. This discourages companies from using excessive interest payments to minimise taxes. It does not specifically target R&D costs. The European Commission proposal, published on 21 March 2018, to tax digital business activities has not been adopted yet.³ That said, it seems to be the leitmotiv of the Council due to its political impact.⁴ This may leave the CCTB proposal behind for some time.⁵ At the end of December 2018, EU finance ministers failed to agree on this digital service tax (this requires the support of all 28 EU States, but Ireland and some Nordic countries opposed this tax). This is the reason why the EU Commission launched a debate in early January 2019 on a gradual transition to what it specified would be a more efficient and democratic decision-making in EU tax policy. This transition to qualified majority voting may increase the chance of CCTB being adopted, as it is the fourth step of the Commission's communication, which it aims to develop by the end of 2025.⁶

The CCTB draft directive of 25 October 2016 provides for a 'super-deduction' for 'costs for research and development' (Article 9.3).⁷ With such a 'super deduction', the taxpayer can deduct more than the

³ Proposal for a Council Directive laying down rules relating to the corporate taxation of a significant digital presence: Proposal for a Council Directive on the common system of a digital services tax on revenues resulting from the provision of certain digital services, COM/2018/0148 final - 2018/073 (CNS).

⁴ See report of meeting of ECOFIN on 21 January 2020, <https://www.consilium.europa.eu/media/42236/st05332-en20.pdf>.

⁵ The President of the European Commission, Ursula von der Leyen, presented her priorities for the incoming European Commission on 9 October 2019 and referred to both digital taxation and the CCTB. See https://ec.europa.eu/commission/sites/beta-political/files/political-guidelines-next-commission_en.pdf.

⁶ Communication from the Commission to the European Parliament, the European Council and the Council, Towards more efficient and democratic decision making in EU tax policy, COM(2019) 8 final.

⁷ In the 2011 CCTB version, no R&D tax incentive was provided.

expenses it incurred. A European Parliament report from 1 March 2018, proposes the deletion of the super-deduction of R&D costs and the introduction instead of a provision, according to which, for R&D costs of less than €20 million that relate to staff, subcontractors, agency workers and freelancers, tax payers will receive a 10% tax credit, based on the costs incurred.⁸ This report was adopted with no amendment with respect to the 10% tax credit by a European Parliament legislative resolution dated 15 March 2018 (hereafter the '2018 CCTB').⁹ In doing so, the European Parliament added the important and unequivocal assertion that 'a clear definition of the genuine expenses of research and development is needed to avoid misuse of the deductions [sic].'¹⁰

2.1.1 Basic Terminology

Basic tax terminology should be discussed, as a tax credit is not synonymous with a tax deduction. The fundamental differences explained below are important as the 2016 CCTB proposed a tax deduction mechanism, whereas the 2018 CCTB version provides for a tax credit. As a reminder, one could start with the following basic tax equations:

Tax Computation = [(Tax Base x Tax Rate) – Tax Credit/Reduction]

Tax Base = [Income – Tax Deductible Expenses]¹¹

To determine the exact amount of income tax owed (ie tax computation), one multiplies the amount of taxable income (tax base) by one or several tax rates (according to tax rates charts). Roughly speaking, the tax base is gross income minus tax deductions.

The following example illustrates the above. Assume (i) the corporate income tax rate is 33.3% and (ii) R&D expenses are not tax incentivised through deduction. Assume further that a company generates 100 of gross income, and has only 10 of R&D expenses. Its tax base would be 100 – 10 = 90. This is different from its tax liability (ie the computation of the tax owed), which is 90 x 33.3% = 30. Assume now that the R&D expenses can be incentivised through a deduction mechanism.

⁸ European Parliament Report on the draft CCTB directive, doc no A8-0050/2018 dated 1 March 2018, see recital 8 and proposed amendments to Article 9.

⁹ European Parliament legislative resolution of 15 March 2018 on the proposal for a Council directive on a Common Corporate Tax Base (COM(2016)0685 – C8-0472/2016 – 2016/0337(CNS)).

¹⁰ 2018 CCTB, Recital 8.

¹¹ eg such as R&D expenses.

For instance, the R&D effective costs of 10 could be deducted from the tax base by double their amount (ie $2 \times 10 = 20$). The tax base would no longer be of $100 - 10 = 90$, but rather of $100 - 20 = 80$. The resulting tax liability would be reduced from 30 initially to 26.64. Still, the incentive is computed at the level of the tax base, not of the tax liability.

This is the reason why some tax specialists refer to deductions as 'above the line',¹² ie applied before computing the tax liability.¹³ Only tax deductions allow for the reduction of the amounts of the income (base) that is subject to income tax. These deductions depend on a variety of factors, such as the nature of the expenses paid during the year. Others are fixed by the government/State (or European bodies in the CCTB context) and may have little relation to any costs incurred. The super-deduction initially envisaged by the Commission enters into this latter category, as it provided an extra 50% deduction of R&D costs, therefore an amount that is above the actual cost incurred and effectively paid.

On the contrary, a tax credit is an amount of money that taxpayers can subtract not from the taxable base, but from the amounts of tax that they themselves owe to their government/State or Treasury (ie tax liability). Said otherwise, unlike tax deduction, which reduce the amount of taxable income (ie the tax basis), tax credits, reduce the actual amount of tax owned and applied at the tax computation level, not at the tax base computation level. Tax credits are computed 'after the line'.

In other words, a deduction reduces taxable income and the value of the deduction thus depends on the taxpayer's marginal tax rate. It usually rises with income for individual taxpayers (whereas it is usually proportional for corporate taxpayers). Credits reduce taxes directly and do not depend on tax rates. The value of credits may only depend on the taxpayer's basic tax liability: non-refundable credits can reduce tax to zero, but any credit beyond that is lost.¹⁴

¹² Others may say that it is tax credits which are 'above the line', ie they may be booked in the profit and loss statement of the company; see eg: R Danon, General report, Tax Incentives on Research and Development, Cahier de droit fiscal international 2015, p 33.

¹³ Collins English Dictionary 2018, V¹⁵ 'tax-deductible'.

¹⁴ See generally, S Holt, The Earned Income Tax Credit at Age 30: What we Know, Washington DC, Brookings Institutions, 2006; E Maag, Tax Credits, the Minimum Wage, and Inflation, Tax Policy Issues and Options brief 17, Washington DC, Urban-Brookings Tax Policy Centre, 2006.

Background

To analyse and comment upon the working of the CCTB draft, one has to begin by consulting Recital No 8 of the 2018 CCTB, which provides:

'Measures that incentivise private entities to invest in the real economy should be supported, as the current investment gap in the Union is one of the key sources of its economic weaknesses. At the same time, tax reliefs for companies need to be carefully constructed, and implemented only where their positive impact on jobs and growth is evident and any risk of creating new loopholes in the taxation system is excluded. Therefore, promoting innovation and investment should be done through public subsidies equally available to everybody rather than through tax exemptions.'

Surprisingly indeed, the above Recital No 8 seems to promote the German traditional view, which is not favorable to R&D tax incentive as it clearly states that public subsidies should be preferred to 'tax exemptions'.¹⁵ Two terminological remarks have to be made. First, the use in Recital No 8 of the word 'exemption', which relates to the tax base, is confusing. 'Exemption' usually relates to a situation in which a person or organisation does not have to pay tax on certain income. An exemption does not refer to a deduction from the tax base, but rather to a non-inclusion in the tax base. This latter vocabulary may seem inappropriate for the type of R&D tax incentive envisaged in the CCTB which is concerned with costs, not (exempt) income.

Second, and despite the above, which seem to support the removal of the super-deduction, the 2018 CCTB does not solely remove the super-deduction; it replaces it with a tax credit. In addition, here again, from a technical standpoint, the use of the word 'exemption' (which relates to the tax base) in the Recital No 8 above, a 'tax credit' in Article 9.3 (which relates to the tax computation) is very confusing. This probably shows the hesitations of the European Parliament, reflecting the debates between its members. Indeed, and from a technical standpoint, a tax credit is usually linked with the tax computation. However, it has been consistently advocated, whether in the 2016 CCTB version or the 2018 CCTB version, that the C(C) CTB proposals concern the corporate tax base and is not meant to harmonise national corporate tax rates

¹⁵ Ch Malke, I Schlie, Ch Spengel, German report, Tax Incentives on Research and Development, Cahier de Droit Fiscal International 2015, p 319 et seq.

which belongs to tax computation. Member States would retain their sovereign right to set their own tax rates.¹⁶ Therefore, by introducing a tax credit, it seems that the European Parliament is no longer proposing a provision relating to the tax base, despite clear announcements made and still continuously mentioned in its own European Parliament briefing.¹⁷ This may reveal a philosophical shift.

2.1.2 Philosophical Shift

The philosophical shift may result from the above variation in terminology. Does it mean that, for EU institutions, the next step would be to harmonise tax rates? This is far from sure, as the technicalities of this new European Parliament proposal may still be debated and clarified: Germany was pushing for no R&D tax incentive at all in the CCTB.¹⁸ Until recently, Germany was (next to Estonia and Finland) an EU country that did not offer R&D tax incentives in its general rules on business taxation. However, the German National Correspondent at an early stage of this research project noted that 'the implementation of such incentives is discussed among German scholars and the German government stated in its coalition agreement, that an implementation of (not necessarily but most likely tax) incentives shall take place within this legislative period' (ie by 2021). A 2016 draft law providing for a tax credit limited to SMEs (small and medium-sized enterprises) exists in Germany. And indeed in February 2019, the German Federal Ministry of Finance also published a draft for a discussion on the development of a bill on tax incentives for R&D, which was finally adopted on December 14, 2019. It therefore hints at what the German position now is.

The philosophical shift may also express a compromise signaling to the EU Council of Ministers the following: that the R&D tax incentive should no longer be

lowered nor should it be totally eliminated.¹⁹ The Finish presidency of the European Council (1 July - 31 December 2019), did not relaunch the CCTB process and it is not yet sure if and when it will be relaunched and if a tax incentive provision be maintained. Still, many National Correspondents expressly remained attached to their national R&D tax incentives.²⁰ The French Ministry of Finance was even in support of preserving the local (ie French) R&D tax credit in addition to the EU super-deduction.²¹ In the meantime, some academics expressed concerns about the efficiency, and therefore maintenance, of the French R&D tax credit.²² Others reacted by paying attention to the possibility that the EU super-deduction for R&D costs could potentially introduce new incentives for profit shifting.²³ However, the European Commission was very clear in its intention: '[If] Member States (...) give a tax credit after the computation of the tax liability [, this] would be in opposition to the spirit of the CCTB. By granting a tax reduction after the application of formula apportionment they would not ensure a level playing field for R&D in the EU and could induce harmful competition between Member States.

¹⁹ Just before the summer 2018, German and French EU MPs reached a common position where the CCTB should not feature any tax incentives thus leaving for further discussions the possibility for Member States to provide other tax policy measures 'outside' the scope of the CCTB (eg tax credits) and regarding the approximation of corporate tax rates.

²⁰ Hungarian national report.

²¹ B Mauchauffé, Head of the strategy department ('sub-directorate BP1') at the Tax Legislation Directorate within the French Ministry of Finance, hearing before the Finance Commission of the French Senate, reported by Albéric de Montgolfier during the 14 December 2016 hearing of the same Commission, available at <http://www.senat.fr/compte-rendu-commissions/201612126fin.html>.

²² JL Pierre, *Crédit d'impôt recherche : observations et interrogations sur une dépense fiscale majeure*, Mélanges Patrick Serlooten, Dalloz, 2015, p 709 (specifically, para 18 et seq. on the concept of R&D); contra: see *Etudes d'impact du crédit d'impôt recherche (CIR) – une revue de la littérature*, Rapport à l'attention de Monsieur Thierry Mandon, Secrétaire d'Etat chargé de l'enseignement supérieur et de la recherche, MENESR, 2017, available at https://cache.media.enseignementsup-recherche.gouv.fr/file/CIR/83/9/Evaluation_CIR_OFCE_avril_2017_755839.pdf.

²³ Eurodad, *Survival of the Richest - Europe's role in supporting an unjust global tax system 2016*, 7 December 2016.

¹⁶ See eg Briefing – EU Legislation in Progress – Common corporate tax base (CCTB), June 14, 2018, p 11, available at [http://www.europarl.europa.eu/RegData/etudes/BRIE/2017/595907/EPRS_BRI\(2017\)595907_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2017/595907/EPRS_BRI(2017)595907_EN.pdf).

¹⁷ See supra.

¹⁸ C W Ernst, *Evaluation of Tax Incentives for Research and Development in Germany*, 2012, EUL Verlag.

Therefore this option is not retained.²⁴

Said otherwise, if a R&D tax incentive scheme is provided in a European text, such as the CCTB, one could imagine the CJEU deciding to relieve Member States of the possibility of having an additional tax incentive at national level. If nothing technically forbids the cumulate use of the French R&D tax credit (tax computation) and the super-deduction (tax base), national tax credits could become legally null and void, as constituting an obstacle to freedom of establishment. This would be even more accurate if the European Parliament proposal of a tax credit were kept, since it would weaken the argument that the CCTB impacts should only be 'above the line'.

It is therefore probably advisable to adopt an intermediary approach that the 2018 CCTB replaced the super-deduction initially available for a vast variety of research (2016 CCTB), with a 10% tax credit on a very limited number of research costs (notably R&D staff costs) - (Article 9.3, 2018 CCTB). One could make two immediate comments of unequal importance on this 10% tax credit. First, the 10% rate is low compared to most common EU tax credit rates in existing regimes. To list just a few, these tax credits rates are: 14% in Austria, 13.5% in Belgium, 30% in France, 25% in Ireland, 14% in The Netherlands,²⁵ 32.5 % in Portugal,²⁶ and 25%, at least, in Spain.

Second and more decisively, this proposed tax credit entails a breach of the general policy option laid down by the EU Commission clearly providing that 'a minimum requirement should be that the preferred option maintains the current tax incentives for R&D expenses. Incentives going beyond the current levels in the EU need to be balanced against the revenue costs for providing such incentives.'²⁷

Even more clearly, the same document concluded that

²⁴ EU Commission Staff Working Document Impact Assessment, Accompanying the document Proposals for a Council Directive on a Common Corporate Tax Base and a Common Consolidated Corporate Tax Base (CCCTB), October 24, 2016, no SWD(2016) 341 final, p 29 § 4.4.2.2 entitled 'Tax credit for R&D expenses'.

²⁵ For expenses above 350.000 €.

²⁶ And 47.5% for start-ups (see <https://www.oecd.org/sti/rd-tax-stats-portugal.pdf>).

²⁷ Commission Staff Working Document. Impact Assessment - Accompanying the document 'Proposals for a Council Directive on a Common Corporate Tax Base and a Common Consolidated Corporate Tax Base (CCCTB)', {COM(2016) 683 final}, {SWD(2016) 342 final}, p 23.

'tax credits reduce directly the tax bill and therefore do not vary with the tax rate. However, tax credits go beyond the scope of the common base.'²⁸ This is the reason why the tax credit option was not kept initially, taking into consideration the different approaches in Europe and other parts of the world.

2.1.3 Different Approaches

As a preliminary point, it should be noted that the current Study does not deal with the decision to opt, at EU level, for a super deduction or for a tax credit. It only addresses the more general and conceptual question of 'what notion of R&D activity should be, and the costs associated thereto' at European level. This question was valid for the super-deduction of R&D expenses. It is still valid for a R&D tax credit and for many tax incentives. The research focuses on input incentives (e.g. R&D tax credits and super-deductions), but increasingly EU countries also have very attractive special IP tax regimes, and in particular the patent box²⁹ also known as IP box regime, the innovation box or the IP box. These special tax IP regimes aim at fostering R&D by providing preferential treatment for income from qualified intangible assets.³⁰ This is why there are so-called 'output tax incentives'.³¹ In the early 1970s Ireland introduced an exemption from tax on patent royalties for Irish-resident companies and individuals. Section 34 Finance Act 1973 allowed total tax relief in respect of royalties and other sums from Irish patents. This regime was criticized by the Code of Conduct Group on Business Taxation – the so-called Primarolo group - in 1999.³² The exemption was the subject of progressive anti-avoidance measures in Ireland until its eventual abolition in 2011 as a result of a review which concluded that it had been used as a tax-efficient way of remunerating employees.³³ Several countries followed Ireland's example, including France in the early 1980s. This system was criticised both

²⁸ Id p 28.

²⁹ So-called because there is a box to tick on the patent boxes tax qualifying profits.

³⁰ R Danon, General report (op cit), p 33.

³¹ See infra § 2.1.3.1.

³² https://ec.europa.eu/taxation_customs/sites/taxation/files/resources/documents/primarolo_en.pdf. Section 32 Finance Act 1996 imposed an arm's length test for the exemption of royalties.

³³ Minister for Finance, Michael Noonan, on 16 February 2012 <https://www.kildarestreet.com/wrans/?id=2012-02-16.725.0>

by the EU (Economic and Financial Affairs Council (Ecofin) assessment 2014) and the OECD under its Base Erosion and Profit Shifting (BEPS) project, since it was suspected of being used as a BEPS tool, to lower corporate taxes. Therefore, the OECD and the BEPS Action item 5 promoted the so-called 'modified nexus approach' under which there must be a direct link between the income benefiting from the preferential treatment in that country and the R&D expenditure incurred there and contributing to that income. In other words, the favorable tax treatment of IP income must be linked to the underlying R&D activities undertaken by the taxpayer in the country where it obtains preferential tax treatment. These incentives have been or should be amended in order to comply with this approach. This was the case in France with respect to its Finance Law of 2019, which offers a reduced (10%) tax rate applicable on annual net income calculated after deducting R&D expenses for the year related to the assets generating this income. Even more importantly, it is only a fraction of the net result which is intended to be effectively subject to a reduced rate; that is where the nexus approach makes sense, because it is not enough to have research revenue and research expenditures: it is still necessary that these expenses and revenues be well connected to the research activity of the taxpayer that receives the income.

Generally, therefore, such output incentives' tax benefits are applied on revenues, and not on expenses as for R&D tax credit or tax deduction. The Frascati Manual's definition comes into play of course, but as a starting point as it is not always the same definition of research as for input incentives, even in the same countries. However, in order to define 'research' for purposes of this output tax incentive, the French draft administrative guidelines make direct reference to its R&D tax credit guidelines (ie input tax incentive).³⁴ This makes even more relevant the efforts to encourage a common understanding within Europe.

2.1.3.1 Europe and Other Parts of the World

The European Commission issued a 2014 report entitled 'A Study on R&D Tax Incentives'.³⁵ It stressed that 'R&D tax incentives schemes are widely adopted in advanced economies, including innovation leaders

³⁴ See BOI-BIC-BASE-110-10-20190717, no 140.

³⁵ European Commission, A Study on R&D Tax Incentives, Final Report, November 2014, https://ec.europa.eu/futurium/en/system/files/ged/28-taxud-study_on_rnd_tax_incentives_-_2014.pdf.

like the United States and Japan.³⁶ Trying to decrease its innovation gap against these two countries, the EU aimed at becoming more innovative.³⁷ Among the tools used, in most EU countries are tax incentives. Indeed, from an economic standpoint, tax incentives for R&D expenditure reward firms for the social benefits that they themselves are unable to appropriate from innovation. Firms in industries with high R&D orientation and in sectors with high market concentration are on average more responsive to fiscal incentives to R&D.³⁸

R&D process can be divided into two phases, the one requiring expenditure (identification of a problem, development of a solution), and the one bringing revenue (launch of the product into the market) to the taxpayer. Accordingly, there are two types of tax incentives depending on the timing of their effect in the R&D process, they focus either on cost deduction, or on lowering of tax on income generated by the research (eg patent income).

The first category of tax incentives includes the so-called 'input incentives' and comes into play when expenses are incurred. These incentives typically include super-deductions (enhanced allowances), tax credits, and accelerated depreciations. Super-deduction and tax credit have been discussed above. Accelerated depreciation is an incentive that allows the taxpayer to depreciate qualified purchased assets at a higher rate in earlier fiscal periods. As a result, this will reduce the taxable base or generate, as the case may be, carry forward losses.

The second category of tax incentives are called 'output incentive', commonly known as 'patent boxes'.³⁹ They would typically provide a preferential treatment for income from qualified intangible assets. Since the debate around patent boxes now focuses on revenue losses for the Treasury without a commensurate increase in innovation and R&D for

³⁶ Id, p 5.

³⁷ Eurostat, Smarter, greener, more inclusive? – Indicators to support the Europe 2020 strategy, 2015, p 68, available at <http://ec.europa.eu/eurostat/documents/3217494/6655013/KS-EZ-14-001-EN-N.pdf/a5452f6e-8190-4f30-8996-41b1306f7367>.

³⁸ I Bodas Freitas, F Castellacci, R Fontana, F Malerba, A Vezzulli, The additional effects of R&D tax credits across sectors: A cross-country microeconomic analysis, Working Papers on Innovation Studies (2015), Centre for Technology, Innovation and Culture, University of Oslo.

³⁹ See supra p 25.

society,⁴⁰ the European Commission concluded that patent boxes, which introduce a preferential rate for income from innovations that are already protected by IP rights ('IPRs'), raise concerns when they are used as a tool for profit shifting. IPRs enable firms to capture a large part of the social benefits their products offer; as such, the need for a tax incentive for protected innovations becomes unclear. The issue was partially addressed in the OECD/G20 BEPS action plan, aiming at reconciling substance and form. The 'modified nexus approach' specifically reunites income and substantial activity. More precisely, the tax benefit for income derived from IPRs should be proportional to the IPRs owner's own R&D expenditures. Tax benefits from IPRs acquisitions and outsourced R&D can also be claimed but are limited to a combined 30% of the IPRs owner's own R&D expenditures. Therefore, the current Study does not address 'output incentives' further.

2.1.3.2 Super-Deduction, Tax Credit, or Accelerated Depreciation

The relative benefits and drawbacks of a super-deduction, versus a tax credit or accelerated depreciation could be assessed through the practice of the Member States in the EU. The European Commission analysed and benchmarked more than 80 tax incentives schemes in 31 countries.⁴¹ Tax credits are the most widely used tax incentive (in 21 countries), while super-deductions can be found in 16 countries, and accelerated depreciations in 13 countries. The reason why these numbers differ might arguably be that popularity of each incentive depends on its impact on public finance.

The underlying issue relates to public finance theories.⁴² In order to assess whether public funds should support R&D, the question is how such support should be designed to be efficient and to comply with the legal requirements of EU law and in national laws. This question is not only relevant in EU law. It originates in the works of early social philosophers,

⁴⁰ See generally, M A Sullivan, A History Lesson for a Future Patent Box, *Tax Notes International*, 7 September 2015, p 823; A Gupta, *Boxing the Box: Patent boxes Take Center Stage at IFA Congress*, id; in French: W Chaiehloudj, *Les stratégies fiscales de l'industrie pharmaceutique. Regard sur l'attractivité des Patent Boxes et la pratique des corporate inversion tax deals*, *Propriété industrielle* no 1, January 2016, study no 2.

⁴¹ European Commission, *A Study on R&D Tax Incentives*, Final Report, 28 November 2014, p 56.

⁴² See also *infra*.

such as Adam Smith's *Wealth of Nations* (1776): the ability to pay, fairness, simplicity, and efficiency are the four basic tenets of a 'good tax system.'⁴³ In addition, and linked to the more modern theories on public choice,⁴⁴ there is a need for a tax system to minimise interference with economic decisions (the 'neutrality' principle): participants of the tax system should face the same choice options and decisions – on sums to invest, location, the employment of more or less labour, etc – should be made on their economic merits and not for tax reasons. However, a neutral tax system is not always efficient.⁴⁵ Indeed, the encouragement of certain behaviour may have high social returns justifying the discriminatory treatment of certain activities. This is the reason why Germany requests full accounting of revenue losses attributable to provisions of federal income tax laws.⁴⁶

This also explains why the European Commission concluded that tax incentives should ideally apply to those types of expenditures that bring about strong knowledge spill-overs. More notably, it recommended, as regards the type of incentive and its tax basis, 'to provide a carry-over facility and an option to receive the benefit even in case a company is not profitable (cash refunds):'

Since some types of expenses are likely to generate higher knowledge spill-overs than other types of R&D expenditure, the European Commission concluded that it is good practice to provide for '[t]ax incentives based on the wage bill paid to researchers [...] because [...] researchers move from one employer to another and take their former's employers knowledge with them.'⁴⁷

The European Commission concluded in terms of 'best practice principles' that 'volume-based R&D tax

⁴³ M Myrsky, *What Does a Good Tax System Require?*, *Yearbook for Nordic Tax Research* 2012, p 169.

⁴⁴ R Musgrave & A Peacock, *Classics in the Theory of Public Finance*, New York, St Martin's Press, 1958; D Mueller, *Public Choice: A Survey*, *Journal of Economic Literature*, 1976, p 395.

⁴⁵ An opposite reason for departing from neutrality is when private actors in the economy do not bear the full social cost of their activities (eg environmentally harmful activities).

⁴⁶ See B Bittker, *Accounting for federal 'tax subsidies' in the National Budget*, *National Tax Journal* 1969, p 244; S Surrey & W Hellmuth, *The Tax Expenditure Report - Response to Professor Bittker*, *National Tax Journal* 1969, p 528.

⁴⁷ European Commission, *A Study on R&D*, p 6.

credits are preferred over incremental ones.⁴⁸ The 2018 CCTB proposal introducing a 10% tax credit in lieu of the initial super-deduction is in line with such good practices. Another reason to prefer a tax credit is that, unlike a super-deduction that may affect tax rates, tax credits do not lead to tax-rate adjustment.⁴⁹ As to the basis for the tax credit, the 2018 CCTB proposal preferred to limit it to wage costs, probably bearing in mind the general trend of lowering corporate tax rates in Europe.⁵⁰ Indeed, it is generally considered that a tax system using a broad tax base with a low tax rate is more efficient than a system with higher tax rates on smaller bases. This is certainly an argument for minimising tax expenditures.

The design of the above tax incentives currently raises several other concerns that are not addressed in the current Study.⁵¹ One of these concerns is linked with the increasingly cross-border context in which intangible and new business models operate in Europe. Often, one can observe a split within a company between R&D functions or incomes and

production or commercial activities.⁵² This issue is targeted by transfer pricing rules,⁵³ but may also be addressed by other tax rules, to be designed, and that may pave the way for future ELI work.

Bearing in mind the aforementioned, the 2018 CCTB provision that 'A clear definition of genuine expenses of research and development is needed to avoid misuse of the deductions'⁵⁴ is noteworthy. This assertion should remain true whether a super-deduction mechanism or a tax credit one is adopted, and even whether the CCTB is adopted or not: a theoretical framework is indeed necessary.

2.2 Theoretical Framework

By providing an R&D tax incentive, the 2016 and 2018 CCTBs seek to promote a European view of what the EU considers a 'fair' distribution of public goods in the innovation sector. Although the 2016 CCTB defines 'research and development' (Article 4.11) as including basic research, applied research, and experimental development, there is no precise list of costs which should, or should not, be taken into account for purposes of the 'super deduction'. Should research in the social sciences, humanities or even the arts be viewed in Europe as a better social good and be promoted through public finance? This could be a highly debatable question. In the drafting phase of the 2011 proposal for a directive for a CCTB, the Commission did not consider seeking consensus on an EU-wide definition of R&D for tax purposes: R&D support is marginally mentioned in a 2007 CCCTB

⁴⁸ Ibid, indeed, tax credits are implemented in two different ways: volume-based or incremental. Volume-based schemes apply to all qualified R&D expenditure, while incremental schemes only apply to increases in R&D expenditure. In the latter case, the base amount on which the increment is calculated is a firm's average expenditure either in some fixed period of time (for example between 2010 and 2012) or during the past few years (for example the last 3 years).

⁴⁹ Ibid, p 75.

⁵⁰ Eg, France; the UK. In general, corporate tax rate in the European Union is expected to decrease: see <https://tradingeconomics.com/european-union/corporate-tax-rate> (accessed on 20 January 2019).

⁵¹ For a review of the literature, see P Arginelli, *Innovation through R&D Tax Incentives: Some Ideas for a Fair and Transparent Tax Policy*, *World Tax Journal* 2015, vol 7 (no 1); N Noked, *Integrated Tax Policy Approach to Designing Research & Development Tax Benefits*, Discussion paper no 57, 2014, Harvard John M Olin Fellow's Discussion Paper Series (available at < http://www.law.harvard.edu/programs/olin_center/fellows_papers/pdf/Noked_57.pdf > (accessed on 16 August 2018); M Graetz and R Doud, *Technological innovation, international competition and the challenges of international income taxation*, *Columbia Law Review* 2010, p 407.

⁵² For example, in the famous 'Google case' (Paris Administrative Court (Tribunal Administratif de Paris), 12 July 2017), and although no R&D was particularly involved, Google Ireland Limited provided online advertisement services through Google website which was used by French business customers (B to B services) and invoiced them directly, where Google France SARL only assisted the French customers. The Court did not find that Google Ireland had a permanent establishment in France. The ruling was confirmed by the Paris Administrative Court of Appeals on April 25, 2019 (the French tax authorities have lodged an appeal before the French Administrative Supreme Court).

⁵³ These rules ensure that the price at which related parties located in different tax jurisdictions transact is a market price (arm's length principle).

⁵⁴ See Recital 8. The word 'deductions' may be replaced by the ones of 'tax credits'. The French version of the document uses the word 'charges' which shows a certain inconsistency in the terminology.

working group paper, but no R&D incentive was found in due course in the 2011 proposal.⁵⁵

This contrasts sharply with discussions nowadays. First, patent box regimes were not as common and widespread then as today. Second, as the 2011 proposal was 'only' optional for companies and not intended to increase tax charges for companies or lower tax revenues for EU Member State, simplicity and the ease of administration (for both companies and tax administrations) was a high priority for the work on the CCCTB. It was also an important objective to tackle obstacles for doing business in the Single Market and making the EU an attractive and competitive place for EU companies and foreign direct investors.

Since then, however, a lot of water has flowed under the bridge: Rules introduced by BEPS, in general, and from the ATAD 1 and 2, in particular on the Common Base, triggered the need for a balanced approach. It was therefore decided to insert new measures into the CCTB project, such as temporary loss set-off, notional interest (Allowance for Growth and Investment) and the R&D super reduction.⁵⁶

Today, across countries, the input incentive bases typically used are R&D costs (most countries), especially wages, and IP costs.⁵⁷ A distinction is usually drawn between current expenditure (wages, salaries of R&D staff, cost of materials, etc.) and capital expenditure (cost of equipment and facilities used for R&D purposes). For instance, in Finland, only wages and salaries of R&D staff are taken into account, other current (cost of materials, etc.) and capital expenditures being excluded. However, many questions remain. For R&D staff cost? How should staff

⁵⁵ CCCTB working group paper dated July 27, 2011 and entitled 'CCCTB: possible elements of a technical outline' (CCCTB/WP057/doc/en), especially p 9, footnote 14 providing: 'This effectively gives 100% deduction of research and development expenditure even when of a capital nature'. See generally the background documents for the preparation of the 2011 CCCTB proposal: https://ec.europa.eu/taxation_customs/business/company-tax/common-consolidated-corporate-tax-base-ccctb/preparation-2011-ccctb-proposal_en

⁵⁶ Thanks are due to Uwe Ihli, Head of Section - Corporate Tax Directives and Common Consolidated Corporate Tax Base with the European Commission for very useful insights.

⁵⁷ European Commission, A Study on R&D Tax Incentives, Final Report, November 2014, https://ec.europa.eu/futurium/en/system/files/ged/28-taxud-study_on_rnd_tax_incentives_-_2014.pdf, Tables 5.2 & 5.3, pp 57-58.

costs be defined? Do they include bonuses, benefits in kind and compulsory social security contributions? What happens to assets, which are only partly used for R&D eligible projects? A further distinction could be made based on sub contracted R&D expenses and expenses for R&D that were directly and personally carried out by the taxpayer.

Along with the inquiry as to which costs should be included, one could request some precision as to the definition of R&D itself. Indeed, one recital of the proposed CCTB directive mentions the goals of the 'super-deduction' as being '[t]o support innovation in the economy and modernise the internal market'.⁵⁸ Therefore, national tax administrations could argue that costs associated with research which do not have any particular application or use that benefits the economy or leads to the modernisation of the internal market, may not qualify for the 'super-deduction'. However, taxpayers may well argue the contrary, based on some European national tax heritages, which foster basic research with no commercial objective. This is one example of the debates that may occur as regards the goal (impacting the definition) of 'research and development' for CCTB purposes.

Each different national interpretation will probably guide each national tax administration in construing Article 9.3 of the proposed CCTB directive. The result may well be very different approach in construing the super-deduction. Of course, the ECJ may in due course unify the diverging interpretations, but this may take years whereas certainty is needed now in a very sensitive area for business and national budgets.

As a preliminary issue, why use tax incentives rather than direct subsidies? Financing R&D projects that would have been undertaken by an enterprise even without external financing is a waste of resource, as public spending will not help to create new R&D. 'Hence, the most cost effective way would be to single out those projects where the social but not the private benefit exceeds the social costs.'⁵⁹ This may support direct subsidies where governmental agencies evaluate each R&D projects by weighing private and social return. However, there is no guarantee that the government is in a better position to make that assessment than the market. On the contrary, the market would be less vulnerable to the demands of special interest groups than the government. Besides,

⁵⁸ Recital no 8.

⁵⁹ A Hansson and C Brokelind, Tax Incentives, Tax Expenditures Theories in R&D: the Case of Sweden, World Tax Journal, 2014, p 170, at 176.

direct subsidies are associated with more uncertainty and higher administrative costs. The conclusion is that it is difficult to favor direct subsidies over tax incentives or not. However, this choice in Europe has to be made bearing in mind the State aid prohibition. In certain cases, tax incentive will make it possible to avoid a State Aid characterisation whereas a direct subsidy would clearly be within the scope of the prohibition. This can induce Member States to develop a bias in favor of implementing economic policies through tax incentives rather than direct subsidy.⁶⁰

The purpose of this Study is neither to decide whether to favor direct subsidies over tax incentives, nor is it to decide, from among the various tax incentives, which one should prevail. Its main purpose is to propose new solutions to solve the diverging interpretations of the definition of R&D for tax purposes and the definition of eligible R&D costs. How to promote such uniform interpretation in Europe?

⁶⁰ For this view, see G Tar, *Considérations sur le choix, par un Etat membre de l'Union européenne ou de l'Espace économique européen, entre une réduction d'impôt ou une subvention pour mener à bien une politique économique*, *Eur & Int'l J'l of Tax Law*, 2016, p 256.

Commentaries

Principle No 1:

R&D includes basic research, applied research and experimental developments with or without commercial objectives in all fields of knowledge, including social sciences, digital design, humanities and, where research is involved, the arts.

3.1 The Notion of R&D

Research is usually presented as a legal concept as soon as a result is found. It is only when the researcher becomes a finder that the benefit from certain legal protection is available and/or that the finder is subject to legal duties (eg, confidentiality). However, as regards tax law, a researcher that is not yet a finder may well benefit from certain tax incentives. A tax credit is also a mean to compensate the taxpayers for the technical risks they are willing to take and the associated development efforts. In most jurisdictions, a R&D project that is stopped because of technical difficulties can still be eligible for a tax credit. For instance, many pharmaceutical R&D projects do not yield results. Research is therefore a tax concept not only during the results phase, but also during the activity phase. What does R&D mean precisely?

The Frascati Manual provides the definition of research and experimental development (R&D) and of its three components: basic research, applied research, and experimental developments. These definitions have been criticised for not being sufficiently clear and objective. For instance, the central distinction between basic and applied research appears highly dependent on the subjective attitude of the researcher. In addition, many projects may often include both basic (synonymous for fundamental) and applied aspects that do not easily fit in either category.

3.1.1 No Commercial Objective?

Background

As mentioned above, the Frascati Manual⁶¹ provides that R&D covers three types of activity: basic research, applied research and experimental development.

⁶¹ Frascati Manual, § 2.9.

Basic research (also known as 'fundamental research') is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any particular application or use in view. Applied research is an original investigation undertaken in order to acquire new knowledge. Experimental development is systematic work, drawing on knowledge gained from research and practical experience and producing additional knowledge, directed to creating new products or processes or to improving existing products or processes. Most R&D tax credit claims fall in that last category. Public scientific organisations (ie receiving public funding and not subject to corporate tax) pursue usually fundamental (ie basic) and applied research programs. However, among the above main categories, some refinements could be proposed.

Should research for tax incentive purposes be limited to applied research and experimental development, thus excluding fundamental research? In other words, should a commercial objective be a condition of the R&D tax incentive? Half a century ago, basic research was often called 'pure science' or simply 'science'. Scientific research is then perceived as a search for truth that ought to be as free as possible from the interference not only of particular economic, but also of political, ideological and religious interests. Of course, resources for basic research could be justified because of possible 'positive output consequences' but also simply 'because it is a pleasurable activity'. This Weberian ideal type science was championed right after World War II. The defenders were people like the Austrian Karl Popper, or the American Robert Merton. In Europe, the scientific tradition was more seen as a crucial support for liberal democracy against totalitarian regimes or as a barrier against the latter. This was the original view.

This classical liberal ideal of science was eroded in the sixties. At that time, a new theory primarily interested in contributing to economic growth emerged. The focus of science policy had shifted to economic growth and development. Science was recognised as a fundamental motor in economic growth and supported by public money on a scale unknown

before the War. Therefore, the democratic control of science then appeared more important than its autonomy. In addition, the distinction between basic and applied research reflects the difference between science and politics as social institutions. Science is dedicated to managing and increasing knowledge of overall validity, whereas politics' role is to produce agreement and ensure collective action. It is in applied science that science and politics best interact. Applied science depends highly on advanced scientific knowledge and methods, but it is dedicated to the solution of practical economics.⁶²

Should research with no commercial objective qualify for tax incentives?

In the US for instance, such a direct link with a commercial objective is necessary to benefit from a US tax credit.⁶³ Indeed, research qualifying for the purposes of section 41 of the Internal Revenue Code means research which 'is undertaken for the purpose of discovering information which is technological in nature, and the application of which is intended to be useful in the development of a new or improved business component of the taxpayer'.⁶⁴ However, R&D expenditure that initially is 'unsuccessful', whether in terms of the research objective or commercially, may nonetheless result in an advance in knowledge. This intermediate knowledge could be later used in projects that yield advances in other areas, processes, or practical applications and even result in commercial success. Even in the US there is no absolute opposition to provide some kind of tax incentive to fundamental research.⁶⁵ German Correspondent even confirmed that 'The closer R&D comes to improvement of existing technology, the less it qualifies as really innovative.' This is also the view taken by the French Correspondent.

For the same reasons, all National Correspondents believe that the position taken by Article 4 of the CCTB proposal is correct in so far as it includes fundamental research. This is not the case though for all EU domestic legislations.

⁶² N Roll-Hansen, Why the distinction between basic (theoretical) and applied (practical) research is important in the politics of science?, AHCRC, 2009.

⁶³ US IRC § 41 ('in carrying on any trade or business') or § 174 ('in connection with his trade or business').

⁶⁴ US IRC, section 41 (d)(1)(B).

⁶⁵ S Shay, J Clifton Fleming, Jr, R Peroni, R&D Tax Incentives: Growth Panacea or Budget Trojan Horse?, 69 Tax Law Rev, 2016, p 419, at 432.

Discussion

According to the jurisdictions under review, and unlike in the US, a 'commercial objective' requirement to qualify for R&D incentives would not be necessary in Europe. Most of the National Correspondents answered that R&D should include basic (fundamental) research, which expands to pure basic research. R&D for CCTB should therefore generate new knowledge as an output, irrespective of its purpose, which could be the generation of economic benefits, addressing societal challenges or simply generating knowledge in itself.⁶⁶ The Finnish Correspondent mentions that in order to apply (or likely construe) the Finnish R&D super-deduction that was only applicable between the 2013-2014 tax years, it is required that the R&D activity is carried on for the benefit of (one's own) business but no other conditions regarding the intended or realised application were set. This view is closer to the US approach where it should be 'in connection with his trade or business'. The Italian Correspondent added that it is difficult to determine a priori the result of R&D activities, and therefore R&D should include all activities, irrespective of their application or use. Such unanimity is interesting as this would distinguish the European approach of R&D, which will include fundamental research, from the American tax concept of R&D.⁶⁷

3.1.2 Social Sciences, Humanities (Including the Arts?)

Should R&D be limited to the industrial sector or also include social sciences, humanities, and the arts? The latter group should not be confused with the 'service sector', which is much broader (for instance communications or energy supply belong to the service sector, but not necessarily to social sciences, humanities, or the arts).⁶⁸ The service sector amounts to 60% of the world economy, and more than 75%

⁶⁶ Frascati Manual, § 1.16.

⁶⁷ S Shay et alii, op cit, p 419.

⁶⁸ § 2.41. Moreover, p 59 of the Frascati Manual (2015 edition) provides the following classification of 'Social sciences': (1) Psychology and cognitive sciences, (2) Economics and business, (3) Education, (4) Sociology, (5) Law, (6) Political sciences, (7) Social and economic geography, (8) Media and communications, (9) Other social sciences. As to 'Humanities and the arts', it distinguishes (1) History and archaeology, (2) Languages and literature, (4) Philosophy, ethics and religion, (5) Arts (arts, history of arts, performing arts, music), (6) Other humanities. For further differences between these terms, see also below.

in most developed national economies. Is it thus not surprising that the largest portion of research expenses for the US R&D tax credit is for services.⁶⁹ To be precise, the question is usually not the inclusion of services into the R&D credit but rather the inclusion of part of the service sector, ie social sciences, humanities and arts, within the R&D tax credit.

One could consider, for instance, the following activities: the development of new theories of financial risks (basic research activity); the study of new types of algorithms enabling insurance or savings contracts to cover risks linked to different markets in a new way (applied research); the development of a software or risk management service based on a new financial algorithm (experimental development). Should all or only some of these activities pertaining to social sciences, humanities, and the arts be included in the definition of R&D for tax purposes?⁷⁰ Alternatively, should a distinction be made for tax purposes between social sciences and humanities on the one hand, or the arts on the other hand?

Background

If these endeavours, together with all scientific and technological developments, are subject to tax subsidies through the R&D allowance, it could mean that almost every activity potentially qualifies for R&D tax credits. If this is the case, the financial burden of R&D could become unsustainable and the policy may not achieve its aim of encouraging scientific and technological innovation. It also lacks transparency because such a wide coverage of R&D tax credits would be better substituted by a reduction in tax rates.

However, as stressed by the German Correspondent, the tax privilege needs 'to be as neutral as possible. In modern economies, it is almost impossible to draw a clear demarcation between industry and services. This is the reason why the R&D definition should cover all sectors of business, including service providers of all kinds. This does not mean, however, that all sectors are equally innovative, whether actually nor potentially.

Issue

Some voices among the National Correspondents suggested excluding banking and insurance from the definition of R&D for policy reasons. Banks (some of them at least) were at the origin of the financial crisis of 2007–2008 and should not be helped further through

⁶⁹ Eg S Shay et alii, op cit, at 428.

⁷⁰ See discussion below with respect to definition of 'services'.

tax incentives. However, the Project Team considered that this reason alone, but also the principle of equality before tax, does not justify a differentiation for R&D tax incentives purposes. More precisely, the Project Team confirmed the view that the expression 'service sector' includes not only activities performed within social sciences, humanities, and the arts, but also the 'servitisation' of industry. Except for Ireland, all National Correspondents agreed to include the service sector in the concept of R&D.

When it comes to the status of arts, should it be differentiated from humanities? The majority of the Project Team believed that art works involving research should not be rejected, as a matter of principle. This being said, and although art involves some level of creation,⁷¹ this creativity is not enough to qualify as R&D: the other criteria have to be confirmed (eg uncertainty, systematicity, transferability and/or reproducibility).⁷² There are definitely relationships between the arts and sciences.⁷³

On the one hand, Irish law statutorily excludes 'arts and humanities' for the definition of R&D for tax purposes and similar exclusions exist in the US,⁷⁴ Canadian, and Australian law.⁷⁵ French law, on the other hand, does not specifically exclude 'arts and humanities'. There is also a technical argument for inclusion of arts in the definition of R&D for tax purposes, namely that EU law and in particular State aid law should preclude discrimination based on activities. It is worth noting that the Swiss National Correspondents indeed emphasised the neutrality principle.

Based on this last technical argument alone, the view taken by the Project Team was that 'services, including social sciences, humanities, and the arts' should be part of the European concept of R&D.

The second question discussed was the 'digital design'. Indeed, the digital revolution gave birth to a digital economy that challenges the traditional concept of value creation. In this new world, the innovative nature of start-ups and global companies' business

⁷¹ R Untereiner, *Réflexions sur la création artistique*, *Bulletin de l'Association Guillaume Budé*, no 2, June 1960, pp 285–293.

⁷² Frascati Manual, § 2.17.

⁷³ See generally, Y Kreplak, *Retour sur les relations entre art, science et recherche, 'Entre arts et sciences'*, no 19 Culture & Musées, 2013.

⁷⁴ IRC section 41 (d) (4) (G).

⁷⁵ See generally, M Bowler-Smith, *Comparing R&D tax regimes: Australia, Canada, UK and US*, B.T.R. 2017, 1, 34–59.

models and the continuous improvement of the design of their interfaces and the experiences they offer through their applications is fuelled by data, especially personal data. Data allow companies that collect them to measure and improve the performance of an application, to customise the service rendered, to recommend purchases to their customers, to support innovation efforts which give rise to other applications, or still make strategic decisions. Users of a service become quasi-collaborators, volunteers, of businesses, and contribute to the blurring of the border between production and consumption. Users thus become, through such data, auxiliaries of the production and create value generating profits on different faces of the business models. More specifically, users in the digital economy are auxiliaries of R&D activities.

It is not clear if such R&D involving users is compatible with the definitions given in the Frascati Manual. On the one hand, the Manual excludes from the scope of R&D 'systems or programs that were available to the public before the beginning of the said work'. It thus seems to favour the idea of an R&D confined in the organisation, remote from users and even characterised by the absence of interactions with them. However, as mentioned above, R&D in the digital economy in many cases involves contact with users. On the other hand, several elements of the Frascati Manual suggest a wider meaning, since among the R&D activities are for example: 'advances in operating systems, programming languages, data management, or software development tools.'

It is therefore difficult to resolve these uncertainties and reach a conclusion on the exact delineation of R&D activities in the digital economy. The difficulties of interpreting and applying R&D tax rules curb growth and innovation in the digital economy. One of the theoretical bases of R&D tax incentives is grounded on the idea that knowledge derived from R&D and indirect long-term macroeconomic effects is generally impossible to fully appropriate. In the digital economy, this theoretical foundation should lead one to reconsider the scope of R&D and move it clearly from technology to 'business models' and 'designs'. There are three reasons for reconsidering such scope.

First, Europe needs digital champions, like the US or China. Business models and designs are decisive for the success or failure of digital economy companies. However, they are subject to the same characteristic as traditional knowledge resulting from R&D: a company cannot keep all the research results to

itself. Once the activity is started, these elements, even radically innovative, can largely be imitated by competitors, especially by large companies that have sufficient resources to very quickly counter the entry of a disruptive competitor on the market.

The second reason for extending the notion of R&D to business models and designs is that these companies perform R&D activities through their users. These companies in the digital sector operate under a 'traction' characteristic. Traction is defined as the ability to quickly establish a privileged relationship with users and then use data from regular and systematic monitoring of their activity. This monitoring has the purpose of enriching the offer and accelerating the conquest of market share. It is true that this meeting as early as possible with the market, allows a company to protect its R&D thanks to the speed of execution and especially to feed this R&D with user contribution. That said, the precocity of the encounter with the market makes such a business model and the design of the experience more vulnerable to imitations by competitors.

Finally, the third reason for the necessary extension of the R&D notion to business models and design is the speed with which applications are launched in the digital economy. This rapidity can be explained by the radical changes in the role of technology in value creation. Most innovative technologies from the digital economy are born within communities of developers. The dominance of free software is one of the factors of the considerable decline in the cost of technology. The fact that technological R&D has moved from the inside to the outside of organisations is leading companies to concentrate their R&D efforts on other areas: the business model, design, "the traction," and the processing of data from regular and systematic monitoring of user activity.

Design, business models, and 'traction' are therefore as much a matter of R&D as data collection and processing, algorithmic and software architecture. The obsolescence of the European concept of R&D compared to the reality of the digital economy is a strategic threat to competitiveness. This question is all the more important at a moment when Europe is becoming aware that unlike other regions such as China or the United States, it has not seen the birth of a digital giant such as Google or Alibaba. Moreover, if arts include design and architecture, one must consider opening the R&D category to include digital design.

Principle No 2:

The level of novelty of the R&D is considered both from the perspective of the publicly available knowledge (world's perspective), and the company's private knowledge (firm's perspective).

To achieve a uniform interpretation of novelty, one should consider an expert-body at EU level, which could, for instance, build upon the decision of the Boards of Appeal of the European Patent Office.

3.1.3 Novelty

Following the Frascati Manual, R&D activities must be novel, creative, uncertain, systematic, transferable and/or reproducible.⁷⁶ Among these criteria, the most important is the first on the list, the novelty.

Background

Research projects are expected to pursue entirely new advancements in knowledge. This includes novelty, which is different from an inventive activity. Indeed, a research activity could qualify for tax incentives despite the fact that it does not lead to an invention, whether patentable or not. Patents are heterogeneous in terms of the novelty and value of the underlying invention. Research is a process independent from its effective findings. The need to 'aim at' findings should be sufficient. Should the research be new to the public, irrespective of territory boundaries? Also, should it be absolutely or relatively new? According to the Frascati Manual, the potential novelty of R&D projects in the business enterprise sector has to be assessed by comparison with the existing state of knowledge in the industry.⁷⁷ This requirement should go beyond country borders as long as it belongs to the same industry. It is therefore broader than a novelty, which is solely new 'to the product market'. There are further levels of novelty, for instance 'new to the world', which supports R&D with the largest potential social returns. Indeed, such requirement provides benefits to taxpayers involved in basic research, rather than imitating another country's new knowledge. An R&D activity is 'new to the firm' when it entails the diffusion of existing knowledge to a firm. Proprietary knowledge may have already been acquired by other firms, but it is not publically available and is new to this particular firm.

⁷⁶ Frascati Manual, § 2.7.

⁷⁷ Frascati Manual, § 2.15. The same approach is taken by the 2018 Oslo Manual for innovation (§ 3.57.)

Similarly, with respect to innovation, the 2018 Oslo Manual provides that 'a local or regional market novelty could be based on imitating what is already available in other geographical markets, whereas a world-first innovation will be a market leader.'⁷⁸ More precisely, a 'world-first product innovation implies a qualitatively greater degree of novelty than a new-to-market innovation.'⁷⁹ The 2014 EU Commission Paper recommended, as a best practice, first 'new to the world', and second 'new to the country' levels of novelty with regard to R&D.

Issue

Which level of novelty should be included in the definition of R&D? Should R&D activities be new (i) 'to the firm'; (ii) 'to the product market'; (iii) 'to the country'; or (iv) 'to the world'? Or perhaps, since the CCTB tax incentive aims to promote European R&D activities, (v) 'to the Internal Market'? The first option was supported by Austrian, Croatian, Finnish, French, Italian and Latvian National Correspondents. Austrian (also) and Greek Correspondents supported the second option, whereas no National Correspondent supported the third. Belgian, French, German, Luxembourgish and Irish National Correspondents supported the fourth option while Spanish and Hungarian the fifth. In fact, in Spain the 'new to the world' level of the novelty is required by the tax administration. However, courts have sometimes accepted a lesser degree of novelty for these tax credits, but the correspondent believes that it should be new to the Internal Market given the scope of the draft directive.⁸⁰

In practice, it is generally assumed that the level of novelty should be both new to the world and new to the firm. An eligible project would be 'new to the world' for a company with no prior R&D experience in the domain of the project and for which knowledge gained by competitors is not publicly available (but still above publicly available knowledge, otherwise this is not R&D but training), and 'new to the firm and the world' if the company has prior acquired and proprietary knowledge in that domain and it is trying to gain further knowledge in that domain.

This can be seen from the following example. Many companies carry out activities abroad: for a French-based research project, a group may have its Asian or US subsidiaries involved. Therefore, a territorial

⁷⁸ Frascati Manual, § 3.58.

⁷⁹ Frascati Manual, § 3.59.

⁸⁰ European Commission, A Study on R&D Tax Incentives, Final Report, 28 November 2014, figure 5.3, p 59.

definition of novelty (ie, 'new to the country' criterion) may not make sense. It is therefore not surprising that no country applies a territorial definition, and that most countries refer to the 'new to the world' and/or 'new to the firm' criteria. Assume a technology has been developed by a US company, but this company keeps this development secret. Many companies, such as Oracle or SAP, do not reveal the source code nor detailed algorithms of their software program for instance. Therefore, a competing company willing to develop this technology could claim the R&D tax incentive, because it would not have access in its own state of the art to this technology. In the meantime, the novelty criteria could not be simply 'new to the firm' since such criterion would involve huge costs for public finance. Indeed, if the 'new to the firm' criterion was the sole and unique criterion, virtually all training expenses could be included as R&D costs, which would be unbearable from a public finance standpoint. If is therefore the combination of the two criteria ('new to the world' and/or 'new to the firm') which has to be retained. This is the main difference with the novelty criterion as required for a patent.⁸¹

The 'new to the market of the firm' criterion is retained, for instance by France, for the innovation tax credit: for an innovative product to be eligible, there is no need to look at the state of the art. What is important is to carry out a market study: is this product available on the relevant market segment?⁸²

The level of novelty of 'Internal Market' would fall between new 'to the firm' or 'to the market of the firm' and new 'to the world'. Indeed, a strict 'new to the world' novelty requirement would imply high administrative and compliance costs, and would not stimulate adoption of foreign technologies. A 'new to the Internal Market' novelty requirement would not permit imitation between firms located in the Internal Market and is easier to implement.

⁸¹ Under French patent law, novelty should be strictly 'new to the world': see F Pollaud-Dulian, *La propriété industrielle*, Economica, 2011, no 264. Indeed, in the French law of 5 July 1844, the requirement of novelty appeared in Articles 1 and 2 and was defined in Article 31: 'Will not be deemed new any discovery, invention or application that in France or abroad and prior to the date of filing the application, will have received sufficient publicity to be enforced'. See J Schmidt-Szalewski, *JCI Brevets*, fasc 4260 (nouveau), updated on 8 September 2018 (see no 1).

⁸² See French administrative guidelines, BOI-BIC-RI-CI-10-10-45-10-20160302, § 50 & 90 et seq.

Replacement of the 'new to the world' level by the 'new to the Internal Market' one will make it easier for taxpayers to demonstrate the element of novelty, which would mean more burden on national budgets. Therefore, the 'new to the Internal Market' level may not yet be an option to consider for the EU liberal economies. Should the general landscape evolve, further consideration may be given to that criterion, but only after carrying out an economic study to assess the impact on each local budget and firm's innovation of such standard, in particular in countries like France, Belgium, Luxembourg, or Ireland.

3.2 Definition of Eligible Costs

Eligible costs definition is usually the second condition for input tax incentives, whether EU or national, or whether structured as a super-deduction or a tax credit. In business and accounting,⁸³ cost is the monetary value that a company has spent in order to produce something. Cost denotes the amount of money that a company spends on the creation or production of goods or services. It does not include the mark-up of profit. If producers were to sell their products at the production price, their costs and income would break even, meaning that they would not lose money on the sales. However, they would not make a profit either. From a buyer's point of view, the price is the cost of a product. It is also the amount charged for a product by a seller, and it includes both the production cost and the mark-up, added by the seller in order to make a profit.

The term cost sometimes refers to the monetary value of expenditures for raw materials, equipment, supplies, services, labour, products, etc. It is true that cost most closely equates to the term expenditure. However, the definition is much more difficult, as it depends on the adopted point of view (accounting or

⁸³ A branch of accounting is very much concerned with costs. It is cost accounting (or analytical accounting – *comptabilité analytique* in French), which is the process of recording, classifying, analysing, summarising, and allocating costs associated with a process, and then developing various courses of action to control the costs. Its goal is to advise the management on how to optimize business practices and processes based on cost efficiency and capability. See generally, S Bragg, *Cost Accounting Fundamentals*, 5th ed Accounting Tools (2016).

economy generally) and the jurisdiction in question.⁸⁴ In accounting, and while there are exceptions, it is generally true that costs are related to business assets and they are shown on the balance sheet. Expenses are related to business expenditures usually over time or with no financial benefit, and they are shown on the business net income (profit and loss) statement. An expense may refer to the consumption of the item acquired, while an expenditure is a payment or disbursement.⁸⁵ For instance, a company makes an expenditure of 10,000 to purchase equipment. Assuming the equipment use is for ten years, the income statement reports the asset's expenditure as depreciation expense of 1,000 per year.

Costs are however often treated exactly as an expense because most expenditures are consumed at once: for instance, when the expenditure relates to a specific period (monthly bill, salaries, rent, office supplies), the expenditure immediately converts from a cost to an expense.

Bearing in mind the above distinctions, this Study uses the terms cost, expenditure, and expense interchangeably.

There are a number of different types of costs for a R&D activity. Accounting rules may provide further clarification for their definition. For instance, the Latvian Annual Financial Statements and Consolidated Financial Statements define research costs as 'costs which are directly applicable to research measures, as well as such costs which have arisen in the project development stage of creation of a particular intangible investment object, if the undertaking cannot separate the research stage of such project from its development stage.' However, the financial statements report these R&D costs in several ways;⁸⁶ for instance, Belgian domestic tax law follows Belgian

⁸⁴ Definitions are not universally accepted: see already L Perridon, *Quelques concepts fondamentaux de l'économie de l'entreprise dans la littérature étrangère*, *Journal de la société statistique de Paris*, tome 102 (1961), p 70, at 58 et seq.

⁸⁵ An expense is reported on the income statement in the period in which the cost matches the related sales, has expired, was used up, or had no future value. In other words, expenditure will generate future economic benefits for a company, whereas expenses will generate the benefit for the current period only.

⁸⁶ K T Szilagy, *Accounting Problems of Research and Development*, *Periodica Oeconomica*, October 2010, p 140.

GAAP, and not EU accounting rules.⁸⁷

In the effort of clarifying a tax concept for R&D purposes, it is therefore fundamental to define these costs with precision in order to avoid/limit future litigation.

There are three general heading of Operating Expenses, also known as OPEX: general and administrative expense (G&A), sales and marketing costs (S&M), and R&D. R&D expenses are often long-term investments, and sometimes treated as capital expenditure, defined as those expenditures that are likely to create benefits over multiple periods. For instance, International Accounting Standard no 9 requires the expensing of research cost but allows for the capitalisation of development expenses. Similarly, in France, UK or Canada, firms are permitted to capitalize development's costs as the research gets closer to commercial exploitation.⁸⁸ However, this permission is not a requirement. In general, though, most companies in most countries expense R&D costs.

However, when an innovative company uses its capital assets for R&D purposes, the capital expenditure may enter into the tax incentive basis. This is probably why the Frascati Manual, in its new chapter on government tax R&D⁸⁹ provides that their scope cover 'all types of R&D costs, including current and capital expenditure.'⁹⁰

⁸⁷ See the general remark in the introduction concerning the relationship between accounting and tax: see supra § 3.2.

⁸⁸ Prior to 1975, US companies were allowed to capitalize R&D expenses. Accounting rule SFAS 2, which has governed the treatment of research and development expenses since 1975, requires that all R&D expenses be expensed in the period incurred. Once and SFAS is published, it becomes part of the FASB accounting standards, known as generally accepted accounting principles, that govern the preparation of corporate financial reports. Some argue that, for purposes of valuation, R&D expenses should be treated as tax-deductible capital expenditures: A. Damodaran, *Research and Development Expenses: Implications for Profitability Measurement and Valuation*, Paper Stern School of Business, 2009 (available at <http://people.stern.nyu.edu/adamodar/pdfiles/papers/R&D.pdf>).

⁸⁹ Chapter 13 entitled Measurement of government tax relief for R&D.

⁹⁰ Frascati Manual, § 13.26.

Principle No 3:

Depreciation expenses relating to assets created or acquired as new (including those used under a leasing agreement) and directly used for research operations are eligible R&D costs.

3.2.1 Capital Expenditure

Capital expenditure, also known as CAPEX, are funds used by a company to acquire, upgrade, and maintain physical assets, such as property, industrial buildings, or equipment. A taxpayer cannot generally deduct spending on capital assets immediately; instead, the taxpayer claims the cost over time, reflecting the asset's depreciation (or decline in value): this 'depreciation allowance' corresponds to this deduction over a period.

3.2.1.1 Depreciation Expenses in General

In general, depreciation expenses corresponding to assets created or acquired as new directly and exclusively for research operations are eligible R&D costs.⁹¹ In the case of mixed use of research and manufacturing, only the research part must be used to calculate the depreciation allowance for R&D tax incentive purposes. The taxpayer shall determine the allocation in proportion to the time used. For instance, a company acquired an equipment amortized during a five-year period. If taxpayers use this equipment for research operations conducted the first year alone, they will only take into account the first depreciation allowance for tax incentive purposes. In subsequent years, the taxpayer shall not retain the depreciation expenses of this equipment since it is not using the equipment for research operations.

Depreciable capital assets of the taxpayer comprise also assets leased under a leasing agreement for tax incentive purposes, subject to providing the amount of depreciation computed for these assets by the leasing company. This straightforward usual treatment is not the one provided in the 2016 CCTB proposal, which is difficult to grasp.

3.2.1.2 Depreciation Expenses in the 2016 CCTB Proposal

Background

The tax treatment of movable tangible assets and immovable property, as regulated in articles 9, 10 and

⁹¹ For instance in France: see French administrative guidelines BOI-BIC-RICI-10-10-20-10-20140404.

12 of the 2016 CCTB proposal is different.

Its Article 9 provides: 'In addition to the amounts which are deductible as costs for research and development in accordance with paragraph 2, the taxpayer may also deduct, per tax year, an extra 50% of such costs, with the exception of the cost related to movable tangible fixed assets, that it incurred during that year. To the extent that costs for research and development reach beyond EUR 20,000,000, the taxpayer may deduct 25% of the exceeding amount.'⁹²

In addition, the Explanatory Memorandum further provides that 'R&D costs will be fully expensed in the year incurred (with the exception of immovable property).'⁹³

Further, the CCTB proposal, under the 'Other deductible items' heading (Article 10) provides that '[a] deduction shall be made in respect of the depreciation of fixed assets referred to in Articles 30 to 40.'⁹⁴

Its Article 12 also provides that '[b]y way of derogation from Articles 9 and 10, the following items shall be non-deductible: ... (i) acquisition or construction costs or cost connected with the improvement of fixed assets which are deductible under Articles 10 and 18, except for the cost related to research and development. The costs referred to in point (a) of Article 33(1) and points (a) and (b) of Article 33(2) shall not be treated as costs related to research and development; ...'⁹⁵

What seems clear from the above articles, is that costs relative to movable property are fully expensed in the year incurred (Article 10), but they do not give rise to the super-deduction (Article 9).

With respect to building costs and financing expenses related to the acquisition of immovable [property] / immovable fixed assets,⁹⁶ costs related to acquisition or construction of new or second-hand commercial or industrial immovable assets are excluded from the super-deduction, and these costs should be fully

⁹² Art 9.3 (emphasis added).

⁹³ Frascati Manual, § 8.

⁹⁴ Art 10. Articles 30 to 40 constitutes a Chapter IV entitled 'Depreciation of Fixed Assets' and details rules for depreciation (fixed assets register, depreciation base, timing, etc.). Article 38: provides that certain categories of fixed tangible assets will not be eligible for a depreciation allowance. These are fixed tangible assets, which not subject to wear and tear and obsolescence, such as land, fine art, antiques, or jewellery, and financial assets.

⁹⁵ Art 12. For additional context, see Annex.

⁹⁶ Art 12(i)

deductible in the year they are incurred.

Concerning the issue of which criteria for proportional eligibility applies if the asset is used both for R&D and manufacturing purposes (eg an equipment used both to manufacture prototypes and serial products), most National Correspondents agree that there should be a pro rata calculation. In France the 'time spent' criteria for the pro rata calculation is used, while in Greece, Italy, or Switzerland it is left to the taxpayer to decide which criteria should be used, as no guidance is provided.

Discussion

For the purpose of consistency, the Project Team suggests to replace 'property', by 'assets' in Recital 8 of the CCTB Proposal. Usually, 'properties' which are used in the course of a business or profession become 'assets'. Further, for accounting purposes, the term 'asset' is usually preferred, rather than 'property'. Also, a definition of asset and intangible asset should be provided.

For clarification purposes, the tax treatment of movable tangible assets and immovable property should be better explained, for instance in a new Recital 8 a. As the Project Team understands the proposal, the tax treatment of depreciation expenses has to be distinguished depending on whether the assets concerned are movable or immovable.

For movable fixed assets, depreciation expenses are not available since the costs of these assets are fully expensed in the year incurred, and are not eligible for the super-deduction.

For immovable fixed assets, depreciation expenses remain available, since the costs of these assets cannot be fully expensed in the year they were incurred, and depreciation expenses are eligible for the super-deduction.

Further clarification would be beneficial for a situation where an asset is used both for R&D and manufacturing purposes (eg an equipment used both to manufacture prototypes and serial products). Some National Correspondents suggested that the criteria for proportional eligibility should be based on a time spent pro-rata calculation and others mentioned that their tax systems leave it to the taxpayer. The production of prototypes and the construction of a pilot plant / or pilot facilities could be considered as R&D activities.

Finally, the question of the extent to which an asset is used for R&D purposes has to be further clarified. A possible formulation would be: 'An asset is considered directly used for R&D purposes if such is used to carry out research programs of the business.' More precisely, 'indirect use' of assets for R&D purposes can be included if indirect costs can be determined. Examples of indirect use of assets for R&D purposes are: (i) handling devices; (ii) calculation tools; (iii) computers; (iv) machines used to manufacture components of a prototype; or (v) telephones, small office appliances, office furniture.

Indirect costs can be included in the tax base of the super-deduction, when allocated – if possible – to a cost unit or a cost centre proportionally. Indirect costs (or other overhead costs) would have to be estimated if no applied cost accounting method is available (as is the case in Austria).

3.2.2 Current Expenditure

The OECD defines current expenditure as 'expenditure on goods and services consumed within the current year, which needs to be made recurrently to sustain the production ...'⁹⁷

Current expenditure could include final consumption expenditure, property income paid, subsidies and other current transfers (eg, social security, social assistance, pensions and other welfare benefits).

While the 2016 CCTB proposal could potentially encompass a vast variety of current expenditure (R&D staff cost, standardisation expenses,⁹⁸ patent related expenses, and other current expenditure related to R&D) in the super-deduction, the 2018 CCTB proposal reduced the scope of the costs that are eligible to R&D staff costs. However, since these costs usually represent more than 60% of total R&D costs, such reduction is not drastic.

⁹⁷See: <https://stats.oecd.org/glossary/detail.asp?ID=5570>.

⁹⁸Infra para 3.2.2.2.

Principle No 4:**R&D staff include the following categories:**

- 1. researchers educated at university level who conduct research activities directed by the taxpayer;**
- 2. researchers without university level education who have a minimum of years documented experience of R&D;**
- 3. other R&D staff such as laboratory technicians who have a minimum of 2 years documented experience of R&D; and**
- 4. support staff necessary to support the above categories of R&D staff.**

Where staff participate in both R&D and non R&D activities, staff costs are allocated to eligible R&D activities based on the proportion of time spent on such activities.

All costs relating to R&D staff are eligible R&D expenditure except for profit sharing schemes or return on investment. However, to the extent that a profit-sharing scheme is based on R&D, the relevant proportion of profit-sharing may be eligible R&D expenditure.

3.2.2.1 R&D Staff Cost**Background**

The 2015 Frascati Manual provides guidance on defining and identifying R&D personnel, that is the people who perform R&D activities, whether highly trained scientists and engineers, or technicians with high levels of technical experience and training, or supporting staff contributing to directly carrying out R&D projects.⁹⁹ The Manual treats as R&D personnel any individual undertaking one or more of the above tasks 'contributing to the intramural R&D activities (...) irrespective of their function (formal role) or their employment status'¹⁰⁰ Such a comprehensive view, adopted for statistical measurement of R&D personnel, cannot, without precaution, be transposed for tax incentives purposes as it does not take into account the legal aspects of the relationship between the R&D provider and the beneficiary (who is paying the personnel?), and would impair significantly national budgets with possible abuse of deductions or tax credits.

⁹⁹ Chapter 5 (2015 éd), p 149 et seq.

¹⁰⁰ p 150.

This is the reason why the Frascati Manual also limits the above by providing that not all of the personnel contributing to or facilitating the performance of R&D activities are to be included in the R&D personnel totals, but only those who make a direct contribution to R&D activities.'

Therefore, the Manual excludes from the R&D personnel the 'individuals undertaking indirect support or ancillary activities in R&D-performing units.'¹⁰¹ However, 'their related costs (including the remuneration of the personnel providing such services) should be included in the statistical unit's R&D expenditures and be reported as other current costs.'¹⁰²

3.2.2.1.1 Definition of R&D Staff**Methodology (Formal and/or Functional Approach?)**

The main methodological question is whether researchers should be defined according to a formal criterion (ie a black letter list (including degrees/diplomas (eg PhDs), qualifications) or a functional approach. Many countries (for instance Belgium, France, Greece) use the formal criteria. Some, however, use both formal and functional definition, for instance Latvia.¹⁰³

'Scientific staff - scientists who have acquired a scientific qualification (a scientific doctoral degree) and professionals with an academic degree or a higher education diploma, who perform research activities in order to acquire new knowledge, products, processes, methods and systems, as well as project managers who are engaged in planning and the management of scientific and technical aspects of research activities.

Research technical staff - persons who have the necessary technical knowledge and experience in one or several areas and who participate in research activities by performing technical tasks under the guidance of the scientific staff. Engineers, technicians, laboratory assistants, technologists, and operators are included in the research technical staff bracket.

Research assistants - persons who perform assisting functions in the execution of scientific technical works (employees of planning, economic, financial, and scientific technical information structural units, employees of special and scientific technical libraries,

¹⁰¹ Frascati Manual, § 5.4 (emphasis added).

¹⁰² Frascati Manual, § 5.5 (emphasis added).

¹⁰³ Latvian national report.

patent service specialists, archivists, as well as qualified workers who ensure the assemblage, adjustment, maintenance and repair of the equipment and devices necessary for the performance of scientific activity. A scientist is defined as an individual who performs scientific activity and who has acquired scientific qualifications in accordance with the procedures specified in this Law.¹⁰⁴

The above definition is interesting as it uses both a formal criterion and a functional criterion. However, should there be an inconsistency between the formal and the functional criteria, the latter should prevail. This approach should be supported.

Other countries (eg Poland) seem to refer to the wording of the employment contract¹⁰⁴ and effective research, but legal doctrine challenges this approach as too restrictive.¹⁰⁵

Some National Correspondents (eg, Austrian and Irish) consider that the R&D staff category can be broader than researchers and scientists since the phrase is not defined in their legislation but through reference to a more open definition including all staff and employees involved in the R&D process (for instance Austrian regulation BGBl II 2015/515, and Irish Tax and Duty Manual, Part 29-02-03, p 22). The current approach under Irish legislation focuses on the activity performed, not on academic or professional qualifications.

Since the educational structure is converging in the EU, one has a better sense across Europe of which specific diploma evidences research capacities and qualities. Nevertheless, the Project Team is of the opinion that formal qualifications should not preclude somebody who has learned to be a researcher from experience, but without having a formal degree, to qualify as R&D staff.

In Spain there is a specific additional tax credit for 'qualified researchers' exclusively dedicated to R&D activities. The Spanish tax administration understands that research technicians and other supported staff cannot be considered 'qualified researchers'. This approach is not supported by the Project Team, who support the view that research technicians may be considered R&D staff, as, although the formal criterion is an indication, the functional criterion should prevail. This raises the question of which staff should qualify

¹⁰⁴ See Head of the Tax Chamber in Katowice, private ruling of 25.01.2017, no 2461-IBPB-1-2.4510.934.2016.3.

¹⁰⁵ P Wyrwa, *Ułga na działalność badawczo-rozwojową w praktyce*, Lex/el, Warszawa 2017.

as R&D staff.

Which Staff Should Qualify (R&D Related Personnel)?

R&D-related personnel are those performing R&D-related tasks. The Frascati Manual provides a list of these key tasks. According to this basic categorisation, R&D personnel not only perform scientific and technical work for an R&D project (setting up and carrying out experiments or surveys, building prototypes, etc.), but also 'plan and manage R&D projects, prepare interim and final reports for R&D projects, provide internal services for R&D projects (e.g. dedicating computing or library and documentation work), and ... support ... the administration [for] the financial and personnel aspects of R&D projects.'¹⁰⁶

Research Technicians

Should research technicians be included in the category of R&D-related personnel? One reason to support their inclusion is the fact that without them, the principal researcher cannot carry out the research. For instance, under French regulations, research technicians are staff who provide indispensable support to actual researchers, such as preparation of substances, material and appliances for experimentation; assistance to researchers during experimentations or actual performance of experimentations; maintenance and controlling of the functioning of the appliances and equipment required. This group is considered research staff also in Belgium, Croatia, Greece, Italy, Luxembourg, as well as Ireland, which evaluate the activity, not the qualifications.

More Remotely Involved R&D Staff

An important question arises as to whether the inclusion of research technicians extends to other employees who, though not official researchers, still indirectly contribute to R&D activities (eg a manager overseeing a research program or unit, a secretary, administrative staff, or cleaning personnel, etc). In order to answer, it is important to determine where the R&D activity starts (ie does the submission of an R&D proposal constitutes a qualifying R&D function?) and ends (does typing out a final research report still qualify for the tax incentive?).

Some National Correspondents (eg from France, Hungary, Italy) believe that including indirect research staff or staff performing ancillary activities could

¹⁰⁶ Frascati Manual (2015), § 5.2.

be a source of uncertainty and potential abuse. For example, under this approach, general managers should not qualify, unless they directly contribute to the research itself. In Austria, Greece, and Luxembourg, the costs of administrative staff running the project are clearly included as R&D related (but not the costs of cleaning staff).¹⁰⁷ This seems to also be the case in Italy. In France, this category of staff is not openly recognised as conducting research, but it is indirectly included as a percentage allowance pertaining to administrative costs. In Ireland, Poland and Belgium, however, they are excluded, since administrative tasks are not considered as eligible costs, even if they are necessary and may constitute a prerequisite to a research project.

For the reasons above, all National Correspondents supported the inclusion of research managers and all but Spanish NCs supported the inclusion of technicians in the category of R&D staff. With regard to secretaries, HR and cleaning staff, NCs were against their inclusion. When it comes to general managers of businesses with a R&D department, National Correspondents did not agree to include them in the category of research personnel, unless they are actually performing research activities.

Partial Involvement

In case the staff participates both in R&D and non-R&D activities, the Project Team suggests to allow for proportional eligibility based on time spent on various activities, proved by a detailed timesheet. There is a clear unanimity in responses. As an example, Greek law provides for a legal basis for that proposal.¹⁰⁸

3.2.2.1.2 Definition of R&D Staff Cost

Certain costs including wages and compulsory social security contributions qualify as R&D staff costs. Other potential costs do not qualify in such a straightforward manner. For instance, non-compulsory social contribution schemes qualify in Austria or Greece, but not in France.

With respect to employers' contribution in the form of the participation of employees of the enterprise in a profit-sharing scheme (employee share-ownership), the answer is more complicated as not all Member States recognize such a scheme. While the Polish legal system does not recognise such category of payments,

¹⁰⁷ Greek Law 4310/2014 (Art 18) and the ministerial decision 109/2017 article 3 para d.

¹⁰⁸ Relevant provision is article 3 para d of the Greek Ministerial Decision 109/2017.

in France the 'intéressement et participation' is eligible personnel expenses.¹⁰⁹ One possible reason to exclude profit sharing is that it is in principle based on a return on investment and does not qualify as staff costs. However, the company issuing the profit-sharing shares could base its profit upon the amount of research (eg a group subsidiary dedicating its operations to R&D activities). If profit sharing is based on research, then the Project Team sees no reason for excluding these costs.

The application of the above criterion becomes more complicated with regard to bonuses and/or benefits in kind. When a researcher receives stock/shares based on performance, one could still consider that this remuneration arises directly from the research activity. The right answer depends on the particular situation and the drafting of the contract or motivation for the unilateral decision of the employer to grant a bonus.

With respect to indirect R&D costs (eg support staff indirectly and partially effected), and if an analytical accounting document provides details of expenses based on time spent on a certain activity, it is suggested that a percentage allowance would be a preferred solution to cope with a somehow time consuming calculation.

Finally, some countries covered in this research provide that compensation paid to PhD holders of should count more (eg double) than other costs for a limited period of time, in order to promote their hiring. Since such measure is contrary to the harmonisation objective of the proposed directive it is believed that it should not apply on a European level.

Principle No 5:

Standardisation expenses are not eligible R&D expenditure, except where scientific methods are used for the purpose of standardisation. Technology watch connected to research projects is eligible [up to [amount to be decided] € per year and per taxpayer].

3.2.2.2 Standardisation and Technological Watch Expenses

Standardisation expenses are expenses related to the establishment of technical standards concerning products. Standards are rules, guidelines or characteristics for activities or their results, for

¹⁰⁹ This position results from a French Supreme Administrative Court decision of 12 March 2014, overriding French administrative guidelines.

common and repeated use, aimed at achieving an optimum degree of order in a given technical context.¹¹⁰ Standardisation is the process of formulating, drafting, publishing and reviewing appropriate technical standards for the benefit of individuals, businesses, governments and/or society, together with implementing them through relevant regulations, testing and certification, marking and labelling, inspection and surveillance.

Should expenses related to the establishment of technical standards concerning the products of a business be eligible for the super-deduction (eg expenses incurred on participation of employees in official meetings of standardisation bodies)? The answers given by National Correspondents span a whole range of options. France and Greece seem to be in favour of eligibility of such costs, while Luxembourg and Spain seem to be against. The Austrian, Irish, Italian and Polish National Correspondents proposed a compromise: standardisation expenses should not be included with the exception of research activities that use scientific methods for the purpose of standardisation.

The French position qualifying standardisation meeting costs as R&D related costs irrespective of the fact whether such meetings include research activity, should not be supported, as such meetings may only be coordination of views or dealing with administrative issues not related to standardisation research. However, standardisation could sometimes take the form of a research activity. First and formally, it is true that standards developers are primarily research and testing bodies. Second, and from a more substantive standpoint, as research matures, standardisation provides a bridge between research

¹¹⁰ See, ISUG, Study into the Impact of Standardisation (2002), p 4, and Annex 2. The European Directive no 98/34/EEC (formerly 83/189), defines a standard as a subspecies of a 'technical specification.' It is a technical specification approved by a recognized standardisation body for repeated or continuous application, with which compliance is not compulsory. The WTO Agreement on Technical Barriers to Trade defines a standard as: 'A document approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.'

results, implementation, and widespread deployment of such results. Standardisation can effectively reduce the proliferation of innovations, but by limiting the field, promotes the emergence of more robust technological infrastructures at the same time.

In an effort to establish a common R&D concept for tax purposes, one should support the answers of Austrian, Irish, Italian, and Polish National Correspondents, according to which only standardisation that uses scientific methods should qualify as cost eligible for R&D tax incentives. The French (and Greek) position disconnecting standardisation from research activities is not defensible, even though the Project Team agrees that standardisation should be promoted in research activities generally. This promotion could take other forms, such as its integration in a researcher's career assessment.

The remaining issue is whether expenses related to technical monitoring/technological watch should be taken into account?

Technology watch (*veille technologique* in French) is intended to provide an up-to-date assessment of new technologies. It 'consists in systematically capturing, analysing, disseminating and exploiting useful technical information for the watch and growth of a company. Watch must be ready for any scientific or technical innovation susceptible to creating opportunities or threats.'¹¹¹

The answers to this question by National Correspondents varied, including that many jurisdictions did not reply (Austrian, Belgian, Hungarian, and Swiss), probably because there is no local view on the subject. Some considered that if connected to a research project, expenses related to technical monitoring should be taken into account (Luxembourgish), including with no limit (Croatian, Greek, Italian, and Spanish) or within a yearly limit (EUR 60,000 in France).

Therefore one can conclude that a moderate approach would be to consider technology watch costs as eligible for R&D tax incentives, if linked to the carrying out of a research project. In addition, depending on public expenditure impact (to be assessed by economists) these costs could be limited to a certain amount (to be determined) to avoid abuse,¹¹² or not.

¹¹¹ C Rovira, *Technology Watch and Competitive Intelligence for SEM-SEO*, no 6, 2008.

¹¹² French national report.

Principle No 6:

Expenses incurred in an EU member state relating to filing, maintenance and the defence of patents are eligible [within a threshold of € [amount to be decided]]; insurance costs linked to patents are eligible [within a threshold of € [amount to be decided] €]. Intellectual Property (IP) consultant's fees, translation costs, taxes are examples of such expenses.

3.2.2.3 Patent Related Expenses

Patent related expenses are expenses linked to the filing, maintenance and defence of patents incurred in a Member State (for instance, IP consultant's fees, translation costs, taxes). Taxes refer to miscellaneous taxes/fees levied for the benefit of the IP National Protection Agency for the grant of patents and for the benefit of foreign states or international bodies which ensure the protection of the invention. There is considerable difference in patent costs between Member States. For example, fees paid for a patent maintained for 20 years in Germany can be more than five times higher than in Malta. However, the cost of a German patent relative to the size of the German market is nearly 75 times lower than for Malta.¹¹³

Some National Correspondents replied that expenses linked to patents should be eligible for the R&D tax incentives (Austrian, Belgian, French, Greek, Irish and Italian). Spanish and Luxembourgish Correspondents supported the approach of the Frascati Manual, according to which R&D would typically not include administrative and legal work connected with patents, routine tests or data collection. Polish Correspondent explained that patent related costs are eligible only for micro, small and medium entrepreneurs. Therefore, for larger companies typically targeted at this stage by the super-deduction, this should not be eligible.

In the United States, many patent related expenses are deductible, including attorney's fees. Such legal fees are considered part of research and experimental costs, as defined by the Internal Revenue Service.¹¹⁴ Other deductible expenses include the costs of applying for the patent and the research required for

¹¹³ European Commission, Patent costs and impact on innovation study: an international comparison and analysis of the impact on the exploitation of R&D results by SMEs, Universities and Public Research Organisations (2015).

¹¹⁴ Publication 535 (2019), Business Expenses, available at https://www.irs.gov/publications/p535#en_US_2019_publink100078332

patent development. The costs of obtaining a patent, including attorneys' fees paid or incurred in making and perfecting a patent application, are research and experimental costs. However, costs paid or incurred to obtain a patent developed by a third party or another taxpayer are not research and experimental costs.

Some National Correspondents suggested that to ensure consistency with the above Principle and R&D concept, patent-related costs should not be included as research costs. This is the case even if patents impact research investments.¹¹⁵ Overall however, since patents are often a necessity to secure the output of R&D operations, it was decided to consider some patent-related expenses as eligible for R&D tax incentives, in full or up to a limit.

Similarly, premiums and contributions or the share of premiums or contributions relating to legal protection insurance contracts providing for the inclusion of expenditure incurred in disputes relating to a patent owned by the taxpayer should be eligible. However, premiums and insurance contributions related to a contract underwritten by a company to cover itself for the taxpayer's own infringements are not eligible, since it is not related to a patent defense trial. Similarly, premiums or the share of insurance premiums relating to contracts providing for the assumption of expenses resulting from a possible breach of law (damages and interest, fines, costs, etc.) are not eligible expenses.

Principle No 7:

Other operating expenses are eligible R&D expenditure based on their link to R&D activities. Alternatively, a notional deduction of 50% of the research staff expenses could be granted. Services of tax advisors or innovation firms are tax deductible in accordance with general principles but are not eligible R&D expenditure.

3.2.2.4 Other Operating Expenses Related to R&D**3.2.2.4.1 Identification of Such Residual Category Expenses**

The majority of National Correspondents were in favour of identifying such residual category of expenses (Austrian, Croatian, French, Greek, Irish, Italian, and Spanish). In Hungary the law provides that the costs such as compensation payments or wages, income taxes, social security contributions paid during

¹¹⁵ H L Williams, How do patents affect research investments?, Ann Rev Econom 2017, pp 441–469.

the period, shall not be considered as direct costs of R&D activities. Other operating expenses relating to R&D are considered 'indirect costs' and are thus not eligible. The Hungarian National Correspondent stressed, however, that a non-inclusive list would be useful for tax authorities. Belgian and Swiss National Correspondents had no particular view on the question, while the Polish legislation suggests that there should be an exhaustive list of eligible R&D expenses, in line with respective national system.

3.2.2.4.2 List of Other Expenses

National Correspondents were more divided as to whether a detailed list of possible expenses is advisable. Austrian, Belgian, Croatian, Greek, Irish, Polish, and Spanish National Correspondents answered positively, but seem (it is clear for Croatia and Poland) to favour a non-exhaustive list due to the vast variety of R&D projects in different industries. The Greek National Correspondents share a similar opinion, although their national law has an exhaustive list. The Irish and Luxembourgish approaches where, respectively, that 'it would be impossible to have a complete list; a residual category would be required. Therefore, a detailed list is not useful' and 'there should be a certain degree of flexibility.'¹¹⁶

The French National Correspondent explained that a lump sum (*forfait* in French) should be computed based on other expenses, and no detailed list is therefore necessary, while the Italian, and Swiss National Correspondents had no particular view on this question.

Since none of the National Correspondents supported the view that an exhaustive list of (other) eligible expenses is advisable, it is recommended that such a list is not required. However, should tax administrations or national legislators be willing to maintain such list, they are free to do so. The only requirement should be that these expenses be computed based on the involvement in R&D activities. Of course, this may create burdensome monitoring costs. To alleviate these costs, as the need may be, these other operating expenses related to R&D activities may be computed as a percentage of other eligible expenses.

3.2.2.4.3 Percentage of Expenses

Concerning the issue of whether it is appropriate to assess these expenses notionally by reference to other precisely defined eligible expenses (eg 15% of immovable [property] depreciation expenses,

and/or 50% of eligible staff expenses), National Correspondents were also divided in their approaches. Belgian, Hungarian and Irish explained that there is no guidance on this issue in their jurisdictions.

French regulations evaluate general and administrative expenses at 75% of the amortisation of assets directly affected to the research and 43% of the research staff expenses (as of Jan. 1st, 2020).

Croatian National Correspondent proposed an interesting alternative: together with such notional expenses, taxpayers should also have the possibility to provide a detailed and precise list of the other operating expenses they incurred during an eligible R&D project and were necessary for research as well as reasonably and consistently allocated directly to the research. Due to the development of IT and sophisticated programmes for record keeping, this would not create additional costs for the business. If taxpayers find it reasonable, in accordance with their appraisal of the cost effectiveness of such compliance, the exact calculations should be accepted as an alternative. Austrian and Greek National Correspondents seemed to agree.

Italian, Luxembourgish, and Polish National Correspondents were of the contrary opinion.

The Croatian alternative offers the advantage of reconciling various views: the lump sum costs could be substituted for actual costs, depending on which is (i) easier to maintain or more favourable to the taxpayer, or (ii) easier to control for the tax administration. This is therefore the view supported in this Study.

3.2.2.4.4 External Consultants' Fees

As to whether fees paid to external consultants assisting the company to determine its R&D super-deduction should be eligible, and to what extent, only the Italian National Correspondents believed that these expenses should be deductible as part of an amount eligible for R&D tax incentives. In Austria, services of state-certified tax advisors are tax deductible as a special expense, regardless of any R&D activity. This is also the case in Belgium, Croatia, Greece, Ireland, and Luxembourg.

The French and Spanish National Correspondents seemed to have a different view. In France there is a different system, external consultants' fees are taken into consideration to decrease the amount of the tax credit. If the remuneration is a proportion of the tax credit obtained, it comes fully at a reduction of the tax basis for the credit. Otherwise, the amount is

¹¹⁶ Irish and Luxembourg national reports.

deductible after reduction of the higher between 5% of the tax basis before this reduction or EUR 15,000.

Polish and Swiss National Correspondents didn't express any particular view on the issue.

Apart from the Italian NCs, the remaining NCs were against the view that these costs should be eligible for purposes of the R&D tax incentives. Due to the fact that such consultants are not performing R&D activities, the recommendation is that remuneration for services of tax advisors or innovation firms are regularly tax deductible but should not be eligible as 'costs for R&D'.

Principle No 8

If R&D activity is outsourced to third parties within the European Economic Area (EEA), these outsourcing expenses are eligible, up to a [certain] percentage of the total R&D expenses incurred.

Principle No 9

The company out-sourcing R&D has priority in claiming R&D tax incentives (if the outsourcing company can claim R&D tax incentives, the R&D contractor cannot also claim).

Principle No 10

Non-refundable government, state agencies, or EU subsidies or grants related to R&D projects should be *deducted* from eligible expenses of the year during which these expenses are incurred, and irrespective of the payment date of the subsidies/grants.

When these subsidies or grants are refundable, they are *added* to the basis for calculating the tax incentive for the year in which they are refunded to the organisation that paid them.

3.2.3 Contracted Expenditure

Contracted expenditure relates to subcontracting R&D tasks. To understand the context, one needs to identify the main (tax) questions of whether a taxpayer can subcontract costs in respect of qualifying R&D activities? If they can, who can claim the costs in respect of qualifying R&D activities: the general contracting company (or 'principal') or its subcontractor? Indeed, when the principal company is considering claiming for subcontracted R&D expenses, it is crucial to establish whether, or not, the subcontractor has already claimed R&D tax incentives for the project it

has undertaken on behalf of the principal company. If the subcontractor has already claimed such expenses, can the principal company claim too? A positive answer (ie double claim) to this last question would support the so called 'double-dipping,' '[t]he usually illicit practice of accepting income from two mutually exclusive sources (as from a government pension and a government salary or from two insurers for the same loss).'¹¹⁷

The tax world implements this legal definition as follows: double dips refer to the achievement of a tax deduction in two countries for what is, in fact, the same interest payment. However, double dips do not only concern interest payments, they prevent multinational corporations from using tax havens and other tax avoidance structures to generate two expense deductions for only one investment.¹¹⁸ Concerning R&D activities, should a single research activity give rise to two tax incentive claims?

3.2.3.1 Context

Numerous contract research organisations are emerging from the academic world or elsewhere offering their expertise in specific processes. In the R&D industry, a subcontractor is an individual or company hired by a general contractor (or prime contractor, main contractor, or principal) to perform a specific task as part of the overall R&D project. The general contractor ordinarily pays for services provided to the project. The main features of subcontracting are risks, deliverables, autonomy, and IPRs.

Concerning risks, in subcontracted R&D, the general contractor pays the subcontractor for the outcome of the R&D, regardless of the project's success. Therefore, it is the principal company, not the subcontractor, which incurs any failures or overruns. For deliverables, the principal company should be carrying out an R&D project and contracting out a specific part of that project to the subcontractor. The principal company is therefore knowledgeable in the area of development and outlines a detailed specification of the work. The level of autonomy is also key to the understanding of the subcontracting relationship. If there is a very low level of autonomy and high level of supervision, one could suspect difficulty in characterizing the relationship as subcontracting: in this case indeed,

¹¹⁷ Literally, the expression means 'putting food into a dip for a second time after it has already been bitten'.

¹¹⁸ See for instance, M Huynh, E Lockwood, & M Maikawa, The Anti-Tax-Haven Initiative and the Foreign Affiliate Rules, Rev Fisc Canadienne (2007), vol 55, no 3, p 657.

the scales will tip in favour of an externally provided worker. If the principal company is subcontracting qualifying activities, the subcontractor will enjoy a degree of autonomy in resolving the uncertainties despite the fact that the principal company keeps interest in the R&D. Finally, with respect to IP, and if the principal company's R&D is subcontracted, it is generally expected that the IPRs will rest with the principal company. However, all the above features are complex and are used as indicators rather than being conclusive of the status of the relationship.

Let us illustrate the above on the following example. Assume a lab is developing a diagnostic kit for the COVID virus. Researchers would need partners from another lab specialized in biomarkers to ask them for specific synthesis or tests. Working with a second team of experts will increase the scientific value of the project. Each lab has its own expertise, the necessary knowledge and equipment that relates to it. In-house research does not always allow for some specific experiments. Outsourcing is then a serious option to consider. Other options would be partnerships or training, but they are more lengthy process, whereas hiring a subcontractor is probably more cost effective.¹¹⁹ In this way, the general contractor receives the same or better service than the general contractor could have provided itself. Subcontracting opens doors to working with different companies and academic groups. It offers different expertise to better pursue R&D through partnerships and the benefit of external experts' knowledge. From the subcontractors' point of views, this allows further specialisation.

Concerning the above, the Frascati Manual distinguishes internal and external R&D personnel.¹²⁰ However, this distinction is for statistical purposes only. From a legal perspective, internal R&D personnel are usually employees, whereas external R&D personnel are usually subcontractors.¹²¹ It is well established in comparative labour law that the main test used to distinguish the two situations usually relies on who

¹¹⁹ It avoids investment costs (and maintenance costs of some equipment) and enhance strategic alliances, allowing the principal R&D company to focus on its core business.

¹²⁰ Chapter 5 (2015 éd), p 149 et seq.

¹²¹ This is not always the case: one can distinguish the externally provided workers, who are temporary workers sourced from an external agency. They work like regular employees, but their contract is with the agency, not with the R&D company performing the R&D-related tasks.

sets the working rules?¹²² Employees must follow rules set by their employer; independent contractors set their own rules.

3.2.3.2 Are Subcontracted Costs Qualifying Expenses?

Costs of subcontracting are currently treated differently in Member States.

On the one hand, there is the UK regulation, according to which one cannot claim twice for the same expenses. For R&D expenses other than staff costs, the UK distinguishes two situations: the first involves a large company ordering from a Small or Medium Enterprise (SME). In this case the ordering company cannot claim R&D expenses subcontracted to a private company. The large ordering company can only claim 100% of the expenses for work subcontracted to public entities (eg universities, health bodies) or individuals.¹²³ The rationale being that large companies may afford a private lab. If it does not do so, it is then the one (the UK subcontractor) doing the work who can claim the tax credit. The second situation is when the ordering company is a SME, in which case it can claim subcontracted R&D expenses (ie invoices) to a non-related private company up to 65%, or up to 100% to a related company.¹²⁴ In this case, the UK subcontractor cannot claim the R&D expenses. In both cases one cannot claim for the same expenses twice.

The UK makes a particular case for staff costs: UK large and SME companies may claim staff costs for contracted employees working under the supervision, direction, or control off the claimant, where their services are provided through a third party staff provider (restricted to 65% of the costs) or up to 100% if provided through a related party staff provider. In this case, the UK subcontractor cannot claim the R&D staff expenses. The rationale being that the subcontractor is merely acting as a staff provider.

On the other hand, a French company can claim R&D expenses subcontracted to a private EU company, if the private subcontractor has a valid agreement from

¹²² G Cavalier (with R Upex), *The Concept of Employment Contract in European Union Private Law*, *International Comparative Law Quarterly*, Oxford University Press, vol 55, Jul 2006, pp 587-608.

¹²³ See generally, HM Revenue & Customs, *Research and development tax relief*, available at <http://www.hmrc.gov.uk/gds/cird/attachments/rdsimpleguide.pdf> (consulted on Dec. 12, 2019).

¹²⁴ Id.

the French Ministry of Research and if the R&D work is actually driven by the company. In this case, French private subcontractors with a valid agreement cannot claim the R&D expenses paid for by another French company, whether the subcontractor has actually claimed the R&D expenses or not.¹²⁵ From these two sides of the spectrum, one can easily see the possibility of double-dips at the EU level.

There are also further solutions in place. For instance in Belgium the following principle applies: who owns the assets benefits from the tax incentive. Indeed, and with regards to the R&D tax credit or investment deduction, Belgian law usually requires that the following general conditions are met: (i) activation of expenses (ie, it must be an asset for use within the company); (ii) new assets not having been used for professional purposes in Belgium before; and (iii) used for 'own use' (ie not acquired in order to lease out).

Because of these requirements, and where the same asset is used by both principal and subcontractor, it is impossible to claim a R&D tax allowance. Economically however, an overlap at the subcontractor level may occur when acquiring (tangible) R&D assets to complete the subcontracted work. The salary

expenses will not benefit from the tax allowance since these expenses are not linked with an asset owned and used by the subcontractor; at the principal level, the activation of the subcontracting costs will, to some extent, be reflecting the subcontractor's expenses.

Most National Correspondents agreed that such contracted expenses should be qualified for purposes of the R&D tax incentive (Austrian, Belgian, Croatian, French, Greek, Hungarian, Irish, Italian, Latvian, Luxembourgish, Polish, Spanish, and Swiss).

Limits

The above could be limited with respect to the amount (to be determined) or territorial scope.

The amount claimed may be limited to an absolute value or to a percentage of the total costs of the research project or of the payments made to the subcontractor. For example in Greece, such sub-contracted payments qualify for up to 70% of the whole cost of the research project. It is also true in the UK, if the company and the subcontractor are not connected, the company can only claim R&D tax relief on 65% of the payment it makes to the sub-contractor.¹²⁶

In other countries absolute value limits are preferred, for instance in Austria, where R&D tax credit is only available for expenses in the amount of EUR 1 million per financial year. This amount has to be reduced proportionately if the fiscal year covers less than 12 years. This applies both for situations of subcontracting, and non-subcontracting.

Under current French law, R&D costs invoiced by accredited private subcontractors can be kept within the limit of three times the total amount of all the other R&D eligible expenses incurred by the company.¹²⁷

Overall, the Project Team proposes to give priority to the principle described above. Therefore, the eligibility is up to a [certain] percentage of the total R&D expenses incurred.

Finally, the question whether a tax incentive (whether a super-deduction as provided for in the CCTB proposal or another tax incentive) should be excluded if the subcontractor or the company itself benefits from

¹²⁶ HMRC Internal Manual, Corporate Intangibles Research and Development Manual, R&D tax relief: categories of qualifying expenditure: subcontracted activities - CTA09/Ss 1078, 1133 – 1136, available at < <https://www.gov.uk/hmrc-internal-manuals/corporate-intangibles-research-and-development-manual/cird84200>>.

¹²⁷ French national report.

¹²⁵ Versailles Administrative Court of Appeal, Altran, 15 October 2015.

another incentive scheme under national or European law should also be further investigated, as it is another research project on its own.

The next limit is whether there should be a territorial scope in order to exclude payments to subcontractors outside European Economic Area (EEA), which cannot invoke the freedom to provide services.¹²⁸ Most National Correspondents agree that subcontractors should be located within the EEA (Austrian, French, Greek, Italian, Luxembourgish, Polish, and Spanish). Swiss Correspondent concurred (as it limits its own tax incentive to expenses carried out in Switzerland).

However, the Belgian and Croatian National Correspondents are of the opposite view and emphasise that there is no point in punishing companies relying on service providers located outside the EEA. Another argument would be that by contracting R&D activities outside the EEA creates spill over effects within broader Europe.

In the United States, section 174 expensing rule is not limited to R&D performed in the United States.¹²⁹ For instance, R&D performed through a foreign branch or by a foreign service provider is eligible for tax deduction. This is also the case under the UK R&D tax credit.

Only Irish Correspondent considered the answer to the question relating to territorial scope as being 'a pure policy decision'.

Taking into consideration that Europe aims at being

¹²⁸The European Free Trade Association (EFTA) was established on 3 May 1960 following the signing of the Stockholm Convention on 4 January 1960. Its purpose was to serve as an alternative trade bloc for those European states that were unable or unwilling to join the then European Economic Community (EEC), now the European Union (EU). Of all previous members (Austria; Denmark; Norway; Portugal; Sweden; Switzerland; and the United Kingdom (UK), and later on Finland, Iceland, and Liechtenstein), only four remain part of EFTA today; Iceland, Liechtenstein, Norway and Switzerland. In order to extend the EU's Single Market to EFTA States, the European Economic Area (EEA) was established in 1994. Of the four EFTA states, Iceland, Liechtenstein and Norway are a part of the EEA while Switzerland is not. Instead, Switzerland has a series of complex bilateral agreements with the EU. The same basic rules governs the EEA Internal Market: for instance, the EEA Agreement guarantees the freedom to provide services on a non-discriminatory basis anywhere in the European Economic Area.

¹²⁹26 U.S. Code para 174.

'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,'¹³⁰ the idea was that Europe should provide in its area all necessary tools for R&D success. Therefore, the notion of a territorial limit was kept in this Study.

3.2.3.3 Who Claims R&D Tax Incentives (Principal vs Subcontractor)?

Assuming the subcontracted costs qualify as R&D expenses for the given tax incentive, the determination of who claims the R&D tax incentive (the principal company or its subcontractor) becomes crucial. It usually depends on who takes on the financial burden of the project and who holds the IP of the subcontracted work.

The following example illustrates the problem. A US company makes an investment in Europe through a Dutch company owning the IP, and pursuing R&D costs in Denmark, Spain, and France, the latter subcontracting R&D works in Romania. Who should be able to claim R&D expenses? Is it the US company bearing the financial risk of the project? Or the Dutch company owning the IP? Or even the French company supervising the R&D activity? And what about the Romanian company whose employees are realising the R&D activity?

The general idea is that only one entity can claim the deduction. The view of the Swiss National Correspondent reflects this general principle that should be adopted at EU level: if the ordering company can benefit from the super-deduction, the R&D subcontractor is not entitled to any super-deduction.

This is currently true from a national perspective, but not from a European-level perspective: R&D personnel expenses in country A that are invoiced in country B may be claimed in both countries under different regimes (France, Belgium, etc). This is often seen as a competitive advantage of Europe as compared to the US for instance. However, the question of whether this should still be the case in the future remains within the framework of a European incentive scheme.

This is part of a general limitation for a double deduction in case of a unique R&D activity. In Spain for instance, there is also a limit as to the acquisition of the rights to the eventual results of the R&D activity by the subcontractor and ordering company, in order to avoid unjustified double or multiple tax incentives for the

¹³⁰ Lisbon Strategy followed by the Europe 2020 Strategy.

same R&D activity.

Other countries have provisions to prevent double use of expenses. For example in Austria neither the agent can be controlled by the principal, nor can they be in the same group of companies, while in France, Spain, and Hungary, this applies to both the principal, and the sub-contractor levels. This may clearly be addressed by the draft CCTB directive or any European tax incentive concept. Therefore, the proposed Principle would include the following: 'If the ordering company can benefit from the tax incentive, the R&D supplier is not entitled to this tax incentive.'

3.2.4 Reimbursed Expenditure (Governmental, State and EU Funding)

The last inquiry concerns the tax treatment of expenditure reimbursed by the government or the state and/or the EU. The key to using innovation grants and R&D tax incentives together is careful cohabitation. These two sources of funding are not mutually exclusive but their relationship can be complicated. One important distinction between the two is the timing around when the taxpayer will receive a cash boost. Whereas grants tend to constitute up-front funding for which the taxpayer has to pitch, R&D tax incentives constitute retrospective funding that are claimed after having begun the R&D operations.

Almost all National Correspondents (except those from Belgium and Italy) agreed that governmental and State agency subsidies/grants related to R&D eligible projects should be deducted from the eligible expenses of the year during which these expenses are incurred.

Where these grants are refundable, they are added to the basis for calculating the tax incentive for the year in which they are refunded to the organisation that paid them.

There are usually important time delays (up to one to two years in some cases) between subsidy/grants payments and related R&D activities and associated expenses. Therefore, the taxpayer should consider when the grants are received, and when they are effectively paid. For instance, once a project is finished, the taxpayer receives the last payments of the grant the following year. When the taxpayer no longer has any expenses to match these grant payments, they retain them to match future expenses originating from another project. The French administration accepts that in the event a public subsidy is paid in a year and the expenditure eligible for the tax credit, which that subsidy is intended to cover, is exposed by the recipient

in subsequent years, the subsidy must be deducted from the expenditure incurred in the year or years in which the eligible expenditure is incurred.¹³¹ The final question is whether EU institution subsidies should be encompassed in the deduction from eligible expenses. An argument for deduction is that it would ensure an equal playing field with national subsidies.

The Project Team believes this question has to be further addressed by competition law specialist, since EU State aid rules require deduction and monitoring of cascading State aids.¹³² In particular, the *de minimis* rule limits aid to firms so as to not hinder competition in the EU: over three years, the taxpayer cannot obtain more than EUR 200,000 from a certain type of aid. It is up to the taxpayer to ensure it does not exceed this ceiling, by taking stock of the various aids collected. On the one hand, certain incentives are not included in the *de minimis* calculation.¹³³ On the other hand, other aids are included: usually, the regulation indicates whether the aid fits into the *de minimis* regulation.¹³⁴

¹³¹ See French administrative guidelines, BOI-BIC-RICI-10-10-30-20-20140404, no 10.

¹³² See in particular, Commission Notice on the notion of State aid as referred to in Article 107(1) of the Treaty on the Functioning of the European Union, C/2016/2946, §§ 44 et seq.

¹³³ Eg the research tax credit in France.

¹³⁴ This is expressly the case in France for the collection tax credit (designed for companies in the textiles, clothing and leather sector and related to the expenses of designing new collections. The resulting credit is known as 'collection tax credit', which is subject to the '*de minimis*' rule: see BOI-BIC-RICI-10-10-40-20190213, § 380).

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