

HM Revenue and Customs

Consultation: The scope of qualifying expenditures for R&D Tax Credits

Submission by: National Centre for Universities and Business (NCUB)

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Background on the National Centre for Universities and Business

The National Centre for Universities and Business (NCUB) is a strategic leadership network that provides a collective voice on the future of collaboration between universities and business. Driven by data, shaped by ideas – NCUB seeks to inform, influence and shape the future of collaboration. Our members share a commitment to working together to tackle some of the UK's biggest challenges. From adapting our education and training systems to developing the talent needed in the future, to transforming lives and opportunities through research and innovation.

To note

NCUB has been asked by UK Research and Innovation, to form a [taskforce](#) comprised of business and university leaders to collectively provide UK Research and Innovation with evidence and insights on the progress of universities and businesses in working through their stability toward greater contribution to the nation's recovery, and advise on how we should tackle key challenges as set out in the Research and Development Roadmap in relation to university-business linkages. **Findings and recommendations from the Taskforce will be published by the end of October.**

To support the work of the Taskforce, NCUB is collecting evidence that informs our response to this consultation, including:

- Interviews with universities and businesses to understand what makes the UK an attractive place to come and do R&D
- Four Advisory Groups focussed on:
 - o Successes and learning from the crisis
 - o Supporting the whole innovation system
 - o Research talent, capability and culture
 - o attracting business R&D investment to the UK
- Comparative understanding into all of the different support levers within the UK's innovation landscape (including R&D tax credits) and what impact each of these can do to increase R&D business investment into the UK

As the work of the Taskforce continues, further evidence will be gathered and considered. **This evidence could be shared in more detail with HMRC.**

Overview

Given the scientific and economic importance of R&D to the UK, since 2017 the government has committed to an ambitious target for economy-wide R&D investment to constitute 2.4% of GDP by 2027.

R&D tax credits form a core part of the government's support for innovation. The tax credits support innovative businesses as they invest, driving growth and productivity across the UK.

Research into the benefits of R&D tax credits has been extensive and as nations increase the quality of their research base, fiscal incentives are starting to play a bigger role in large R&D-intensive firm decision-making about where (and if) they choose to invest.

A CBI report¹ published in May 2019 showed that tax credits themselves can stimulate more R&D investment, suggesting that for each £1 of tax foregone, between £1.53 and £2.35 of R&D expenditure is stimulated. The 2010 evaluation of R&D tax credits suggested a wider range between £0.41 and £3.37². Even the low-end result represents a good level of additionality.

Concurrently, research published in the *Journal of Public Economics* estimated that a 10% reduction in the user cost of R&D leads the average firm to increase its research intensity—the ratio of R&D spending to sales—by 19.8% in the short-run³. Long-run estimates imply that the average firm faces adjustment costs and increases spending over time, though small and young firms show evidence of reversing initial increases.

However, tax incentive support represents a rapidly evolving area of policy with governments constantly seeking to reform the generosity, efficiency and structure of their schemes. And technological developments present new challenges for tax policy.

Digitalisation is transforming R&D and innovation processes, enhancing collaborative and open innovation, lowering production costs, blurring the boundaries between manufacturing and service innovation, and speeding up innovation cycles. **Data has become a critical input to innovative activities**. Global investment in R&D growth is being driven by ICT services, with software and AI being key technological drivers of corporate R&D investments.⁴

Research from a NESTA report suggested that the world's 1000 largest R&D companies report shifting R&D spending away from products towards software and services. For example, between 2010-2015 R&D spending on products as share of global spend fell from 46% to 41% and is expected to fall to 37% by 2020. R&D spending on software and services meanwhile grew from 54% to 59% over the same period and is expected to increase to 63% of global spend by 2020⁵.

This has important implications for policies aimed at supporting business innovation, including the need for sustainable research-data infrastructure, the importance of openness and accountability, and rapidly evolving demand for data analysis and data management skills. Although software acquisitions and their maintenance costs are included within the R&D tax credit, businesses adopting more data-driven R&D practices are finding that their R&D activities are not recognised by incentive structures in the UK⁶.

¹ "The Changing Nature of R&D Building an innovation ecosystem for the data age", CBI in partnership with Leeds University; May 2019; <https://www.cbi.org.uk/media/2697/innovation-rd.pdf>

² "Evaluation of Research and Development Tax Credit", HM Revenue & Customs; March 2015; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/413629/HMRC_WorkingPaper_17_R_D_Evaluation_Final.pdf

³ "Do tax credits stimulate R&D spending? The effect of the R&D tax credit in its first decade", Nirupama, R; *Journal of Public Economics*, Volume 140; August 2016; Pages 1-12; <https://www.sciencedirect.com/science/article/abs/pii/S0047272716300482#aeep-article-footnote-id1>

⁴ "Innovation policies in the digital age", Guellec, D. and C. Paunov; OECD Science, Technology and Industry Policy Papers; No. 59; November 2018; OECD Publishing https://www.oecd-ilibrary.org/science-and-technology/innovation-policies-in-the-digital-age_eadd1094-en;jsessionid=Y6vHhEVSLRDi9IROtxFeHy82.ip-10-240-5-42

⁵ "Rise of the Datavores: how UK businesses can benefit from their data", Nesta; November 2013; <https://www.nesta.org.uk/report/rise-of-the-datavores-how-uk-businesses-can-benefit-from-their-data/>

⁶ "The Changing Nature of R&D Building an innovation ecosystem for the data age", CBI in partnership with Leeds University; May 2019; <https://www.cbi.org.uk/media/2697/innovation-rd.pdf>

We therefore welcome the HMRC's invitation to consult on the current scope of qualifying R&D tax credits and we believe this is an important opportunity to address how the whole R&D system can support the UK's ambition to become world-leading in science and technology.

Question 1a Are there uses of data that contribute to R&D but which do not currently attract relief through the RDEC and SME schemes? Please provide examples to support your response. Question 1b To what extent are data sets employed in the R&D process consumed? To what extent do they retain value? Please provide examples to support your response.

Service-based Data R&D

Data innovation is rapidly changing and presenting a new set of challenges that businesses across sectors are facing. For firms investing in digital infrastructure and taking new risks, the service-based side of data R&D often does not fit the traditional manufacturing scope of R&D tax credits. A CBI report⁷ published in 2019 identified a clear shift in R&D spend towards software and services, highlighting a critical demand by businesses to make better use of their data and exploit opportunities to access new data.

Investing in data does not always have a cost and so it can be difficult for businesses to cost it when it comes to applying for R&D tax credits. **Often, it is the cost of infrastructure to collect, enable and amalgamate the data, in addition to hosting it. These are costs that have never been included in the scope of R&D tax credits and which are incurred even before a company starts their R&D activity.**

Data as a key tool for enabling R&D

Definitions of eligible activities should include the costs of purchasing, storing, using and analysing data which have been used in driving R&D and innovation in the UK but which have not so far been included in the scope of R&D tax credits.

Businesses' ability to derive insight and value from data is no longer limited to a few highly specialised firms. Advances in technologies and tools to collect, store and analyse this data are becoming widely accessible. Businesses are increasingly using data as a key raw material in their R&D. By 2020, an SAS report predicted that data analytics would contribute over £46 billion a year to the UK economy, some 2% of GDP⁸. Embracing data-driven R&D could unlock huge potential value. **We propose that more of the costs incurred in the generation, processing or analysing of datasets should be eligible for relief under the R&D tax credits regime.**

Question 2a Do you already claim for software costs under the current definition? If so, what was your experience of separating out the R&D specific costs for the purposes of the claim?

Businesses consistently cite challenges in navigating the complexity of the UK innovation support network and many are not aware of what support or collaborative opportunities are out there. If the scope of the tax credit system is to be extended to include new data and software innovation, **innovation support networks and universities need to take a more proactive approach to reaching**

⁷ "The Changing Nature of R&D Building an innovation ecosystem for the data age", CBI in partnership with Leeds University; May 2019; https://www.cbi.org.uk/media/2697/innovation-rd_.pdf

⁸ "The Value of Big Data and the Internet of Things to the UK Economy", SAS; February 2016; https://www.sas.com/content/dam/SAS/en_gb/doc/analystreport/cebr-value-of-big-data.pdf

business audiences and simplify the system so that SMEs in particular can benefit. There are many businesses undertaking data-driven innovation outside of the traditional audience for government R&D support and separating costs can be an additional hurdle for businesses, particularly SMEs, to jump.

Question 2b Are there any software costs that currently qualify for R&D tax credits, that could be limited or excluded from relief without materially affecting R&D projects? Please provide examples to support your response.

NCUB is not aware of any.

Question 2c Are there any software costs, partially or wholly for R&D purposes, that do not currently qualify for R&D tax credits, that should be if the regime is to better reflect the nature of modern R&D? Please provide examples to support your response on whether these costs could be separated out straightforwardly.

Software (cloud computing)

The CBI report mentioned above demonstrated clearly that cloud computing software is another facet of R&D spend that is not completely covered by the current scope of R&D tax credits. The HMRC consultation document acknowledged that some software costs currently relating to assets developed for internal use do qualify for R&D tax credits; however, there are other costs, typically incurred alongside software costs where the software is leased from external parties, and which are not currently eligible. This is typically identified as part of 'cloud computing' and payments will cover a range of activities, including use of software, storage rental, support and processor running time⁹. Businesses will often purchase packages which are used to facilitate activity across their business operations as well as R&D activity.

Question 3a What experience do you have of claiming R&D tax credits in other jurisdictions, where expenditures pertain to data or cloud computing?

n/a

Question 3b What evidence can you provide that a scope expansion in these areas would drive you to make additional investments in research and development.

As a result of Covid19 and the ensuing economic crisis, company boards are focusing on managing cash flow and R&D budgets are at risk in cost-saving measures being proposed. While impact across different sectors will vary, longer term impacts are expected to hit other parts of industries as smaller companies further down the supply chain continue to develop recovery plans, especially in sectors where demand and sales may remain low. **It is essential that the UK provides incentives to businesses to continue to invest in R&D. Tax credits remain an integral part of the R&D incentive landscape that will support business managers and R&D directors to justify to their Boards the benefits of R&D and a return on their investment.**

In August 2020, NCUB in collaboration with the Policy Evidence Unit for University Commercialisation and Innovation (UCI) at the University of Cambridge developed and ran a survey to explore the effects of the Covid-19 pandemic on the levels of innovation-focused activities universities have with external partners and their abilities to continue to engage in such activities through the crisis and into the

⁹ "The Changing Nature of R&D Building an innovation ecosystem for the data age", CBI in partnership with Leeds University; May 2019; https://www.cbi.org.uk/media/2697/innovation-rd_.pdf

economic recovery. Our initial survey generated 58 responses covering all regions and nations of the UK, and most types of universities. These findings represent preliminary analysis of responses. A full report will be produced by UCI/NCUB in due course which captures the full results and insights.

The survey showed that UK universities' engagement with businesses had increased at a rapid rate, with businesses, particularly SMEs, looking to find ways to pivot and adopt a more digitally enabled way of working. If the UK can harness this innovative momentum that has arisen since the beginning of the crisis through a more tailored R&D tax regime, it is likely that businesses will continue to do more R&D. This is particularly true when they start to see a return on investment.

In addition, the Department of Business, Energy and Innovation's (BEIS) review to Grow the Artificial Intelligence capabilities in the UK¹⁰, recommended that the UK's R&D incentives system support the development of AI and digital capabilities amongst businesses. Expanding the scope of R&D tax credits to include software and data was recognised as an important facilitator to increase the R&D investment from businesses.

Question 4 Would changes to the R&D tax relief rules in the areas outlined above lead to any change in the commercial relationships between companies, insofar as expenditure is outsourced to a third-party provider?

Although the UK has taken a generous interpretation to defining the types of activity covered by R&D tax credits, evidence gathered by our Taskforce suggested that there are significant numbers of companies not claiming. There are many reasons for this. One is about awareness but the other relates to **how businesses outsource some of their services which results in the service falling outside of their claim, e.g. testing services or clinical trials are often outsourced to a contract research organization (CRO) and will therefore fall outside of an R&D claim.** These types of services begin to leak into third party costs and companies cannot claim for the costs they're incurring. **HMRC must address these discrepancies where there are services that are outsourced.**

Question 5a Are there expenditures on indirect activities which should be limited or excluded from eligibility for relief? Please provide examples to support your response. Question 5b Are there other expenditures on routine work which should be limited or excluded from eligibility for relief? Please provide examples to support your response.

NCUB is not aware of any.

¹⁰ "Growing the artificial intelligence industry in the UK - Recommendations of the review", Department for Digital, Culture, Media & Sport and Department for Business, Energy & Industrial Strategy; October 2017; <https://www.gov.uk/government/publications/growing-the-artificial-intelligence-industry-in-the-uk/recommendations-of-the-review>