R&D Tax Incentives: United Kingdom, 2020

Design of R&D tax relief provisions

The United Kingdom provides R&D tax relief through a volume-based R&D tax allowance which, in the case of large companies, was replaced by a volume-based tax credit (RDEC) in 2016.

Table 1. Main design features of R&D tax incentives in United Kingdom, 2020

<table>
<thead>
<tr>
<th></th>
<th>Corporate Tax Credit for Research &amp; Development</th>
<th>Research and Development Expenditure Credit Scheme (RDEC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax incentive*</td>
<td>Tax allowance</td>
<td>Tax credit</td>
</tr>
<tr>
<td>Type of instrument</td>
<td>Volume-based</td>
<td>Volume-based</td>
</tr>
<tr>
<td>Eligible expenditures†</td>
<td>Current, intangibles</td>
<td></td>
</tr>
<tr>
<td>Headline rates (%)</td>
<td>130</td>
<td>13</td>
</tr>
<tr>
<td>Refund</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Carry-over (years)</td>
<td>Indefinite (carry-forward)</td>
<td></td>
</tr>
<tr>
<td>Ceilings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D tax relief</td>
<td>EUR 7.5 million per project (SMEs)</td>
<td>No</td>
</tr>
<tr>
<td>Subcontracted R&amp;D</td>
<td>• If connected subcontractor, lower of:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- payment made to subcontractor;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- relevant expenditure of subcontractor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• If unconnected subcontractor, 65% of total subcontracted R&amp;D costs</td>
<td>No</td>
</tr>
<tr>
<td>Refund-specific</td>
<td>14.5% of surrenderable loss</td>
<td>No</td>
</tr>
</tbody>
</table>

* The United Kingdom also offers an accelerated depreciation (research and development allowance - RDA scheme) of machinery and equipment, buildings and intangibles used in the process of R&D (immediate write-off). In addition, the UK provide an income-based tax incentive for outcomes of R&D activities. This incentive is beyond the scope of this note.

Note: For more details, see OECD R&D Tax Incentive Compendium and Eligibility of current and capital expenditure for R&D tax relief


Key features:

- Under the R&D tax allowance, eligible subcontracted expenditures are limited to 65% of total costs (uncapped). A refund is available to SMEs for up to 14.5% of the period’s surrenderable loss.
- There is no upper limit to the amount of refundable credits in the case of the RDEC scheme.

Generosity of R&D tax support in 2020

Differences in the design of R&D tax incentives drive a significant variation in the expected generosity of tax relief per additional unit of R&D investment. In 2020, the marginal tax subsidy rate for profit-making (loss-making) SMEs in the United Kingdom is estimated at 0.27 (0.27), well above the OECD median of 0.20 (0.18). The tax subsidy rate for large enterprises is equal to 0.12 (0.12) in the profit (loss)-making scenario, below the OECD median of 0.17 (0.15).

Figure 1. Implied tax subsidy rates on R&D expenditures: United Kingdom, 2020

1-B-Index, by firm size and profit scenario

Note: Implied marginal tax subsidy rates, presented for different firm size and profitability scenarios, are calculated based on headline tax credit/allowance rates (see methodology and country-specific notes), providing an upper bound value of the generosity of R&D tax support, not reflecting the effect of thresholds and ceilings that may limit the amount of qualifying R&D expenditure or value of tax relief.

Recent developments in R&D tax relief provisions

Regular reforms of R&D tax incentives lead to continuous changes in the availability, scope and generosity of R&D tax incentives. Such reforms relate to the launch of new tax incentives, the R&D definition adopted for tax purposes, changes in tax credit and allowance rates, adjustments of thresholds or upper ceilings on qualifying R&D expenditure or tax relief amounts, or changes in the terms and availability of refunds.

In 2020, changes in the availability and scope of R&D tax incentives represented the most frequent type of policy reform (OECD, 2020), along with adjustments to the headline R&D tax credit/allowance rates and adjustments of thresholds or upper ceilings on qualifying R&D expenditure or tax relief amounts. In response to the COVID-19 pandemic, several countries increased the generosity of R&D tax relief or introduced modifications to the administration of R&D tax incentives to facilitate and accelerate R&D funding.

In 2020, the United Kingdom undertook two changes in its R&D tax relief provisions.

- The R&D Expenditure Credit has been increased from 12% to 13% with effect from April 1, 2020.
- The proposed introduction of the cash credit cap for the SME tax allowance regime which was expected to come into effect from 1 April 2020 has been delayed until 1 April 2021.

Neither of these policy changes are related to the COVID-19 crisis.

Trends in the generosity of R&D tax support

In the United Kingdom, implied marginal R&D tax subsidy rates for (profitable and loss-making) SMEs have increased since the introduction of an SME-specific tax allowance in 2000. This increase is directly linked to the step-wise enhancement of SME tax allowance rates, from initially 50% to 75% in 2008, 100% in 2011, 125% in 2012 and 130% in 2015.

In the case of large firms, R&D tax subsidy rates increased in four occasions: 2002, when the tax allowance was extended to large firms, 2008, when the tax allowance rate for large companies was raised from 25 to 30%, 2018, when the rate of the R&D tax credit for large companies (RDEC) was raised from 11% to 12% and finally, 2020, when the RDEC rate was further increased to 13%.

In addition, changes in corporate income tax (CIT) rates led to smaller fluctuation in the R&D tax subsidy rates estimated for SMEs and large firms throughout this period, i.e. in the years 2008, 2011-15 and 2017.

Following the introduction of the refundable R&D tax credit in 2013, tax subsidy rates for profitable and loss-making large firms coincide as do those for profitable and loss-making large SMEs. In 2020, tax subsidy rates for large firms increased when the rate of the refundable R&D tax credit was raised from 12% to 13%.

Figure 2. Implied tax subsidy rates on R&D expenditures: United Kingdom, 2000-20

Note: Implied marginal tax subsidy rates, presented for different firm size and profitability scenarios, are calculated based on headline tax credit/allowance rates (see methodology and country-specific notes), providing an upper bound value of the generosity of R&D tax support, not reflecting the effect of thresholds and ceilings that may limit the amount of qualifying R&D expenditure or value of tax relief.

Policy support for business R&D: the policy mix

In 2018, the United Kingdom is among OECD countries that provide the largest level of government support to business R&D as a percentage of GDP, at a rate equivalent to 0.33% of GDP.

Figure 3. Direct government funding of business R&D and tax incentives for R&D, 2018 (nearest year)

As a percentage of GDP

Note: Data on subnational tax support are only available for a group of countries. *For the United Kingdom, the reference year is 2014 instead of 2006 due to a break in-series in government tax relief for R&D, linked to the inclusion of additional claims in the production of HMRC tax relief statistics (HMRC, 2020).


Key points:

- From 2014* to 2018, total government support for BERD as a percentage of GDP increased in the United Kingdom by 0.07 percentage point (pp).
- From 2014 to 2018, business R&D intensity in the United Kingdom increased from 1.07% to 1.17%.
- In 2018, tax incentives accounted for 76% of government support for BERD in the United Kingdom.

Distribution of R&D tax relief recipients and government tax relief for R&D

The distribution of R&D tax relief recipients and government tax relief for R&D expenditures (GTARD) provide insights into what types of firms claim and benefit from tax relief.

Figure 4. Number of R&D tax relief recipients and value of government tax relief for R&D, 2018

By firm size*, share in percent

By industry**, share in percent

Note: Figures refer to the Corporate R&D Tax Credit and RDEC Schemes. Recipient figures are based on claims. *SMEs meet the conditions specified in the EU SME definition except that can have up to 500 employees, turnover up to EUR 100m and have a balance sheet total of up to EUR 86m. **Economic activity is classified based on SIC 2007 as follows: manufacturing (code C), services (codes G-S), other sectors (codes A,B,D,E,F), not attributable (calculating as remaining difference to total GTARD).


Key points:

- In United Kingdom, SMEs accounted for 94% of R&D tax relief recipients in 2018, while the share of tax support accounted for by SMEs amounted to around 61%. In the same year, 39% of R&D tax benefits were allocated to large firms, comprising almost 6% of the population of R&D tax relief recipients.
- In 2018, firms in services represented 69% of R&D tax relief recipients in United Kingdom, followed by firms in manufacturing with a share of 23%. The share of tax benefits accounted for the latter amounted to around 29% in that year, while this share reached almost 63% in the case of firms in services.
**Trends in the uptake of R&D tax incentives**

Over the period 2000-2018, the number of R&D tax relief recipients increased significantly in United Kingdom, reaching close to 59,265 in 2018. The sharp increase from 2013 onwards, primarily attributable to SME claims, can be linked to a number of factors which include an increase in SME allowance rates (2012-13, 2015-16) and the payable credit rate (2014-15), the introduction of a new payable tax credit for large companies in 2013 as well as the inclusion of additional claims from 2014 onwards. Between 2014 and 2017, the number of SMEs receiving R&D tax support increased nearly two-fold from around 31,765 to 58,180, while the number of large firms receiving tax support rose by 3%, from 3795 in 2014 to 3910 in 2017. Over the 2000-18 period, SMEs accounted for more than 90% of R&D tax relief recipients in United Kingdom.

*Figure 5. Number of R&D tax relief recipients, United Kingdom, 2000-2018*

Note: Figures refer to the Corporate R&D Tax Credit and RDEC Schemes and correspond to claims rather than recipients. Break in-series in 2014 (see notes for Fig 3). The figures for 2018 are based on incomplete data and are expected to increase.


**Trends in government support for business R&D**

Between 2000 and 2018, the importance of R&D tax support has increased significantly in United Kingdom, both in absolute and relative terms. The upward trend from 2013 onwards, mirroring the trend in the number of R&D tax relief recipients, can be attributed to the same set of factors discussed earlier (see Figure 5).

*Figure 6. Direct funding of business R&D and tax incentives for R&D, United Kingdom, 2000-18*

As a percentage of GDP, 2015 prices (right-hand scale)


- As percentage of GDP, R&D tax support increased from 0.05% of GDP in 2006 to 0.25% in 2018.
- Direct funding also increased over this period – from 0.07% in 2006 to 0.08% of GDP in 2018.
- The share of tax incentives in total government support increased from 39% in 2006 to 76% in 2018.


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