

R&D Tax Incentives: United Kingdom, 2021

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, 2021

	Corporate Tax Credit for Research & Development	Research and Development Expenditure Credit Scheme (RDEC)
Tax incentive*	Tax allowance	Tax credit
Type of instrument	Volume-based	Volume-based
Eligible expenditures [†]	Current, intangibles	
Headline rates (%)	130	13
Refund	Yes	
Carry-over (years)	Indefinite (carry-forward)	
Ceilings	R&D tax relief	No
	Subcontracted R&D	No
	Refund-specific	No

* Payroll for employer, ** National Insurance contributions. 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](#)

Source: OECD, R&D Tax Incentives Database, <http://oe.cd/rdtax>, December 2021.

Key features:

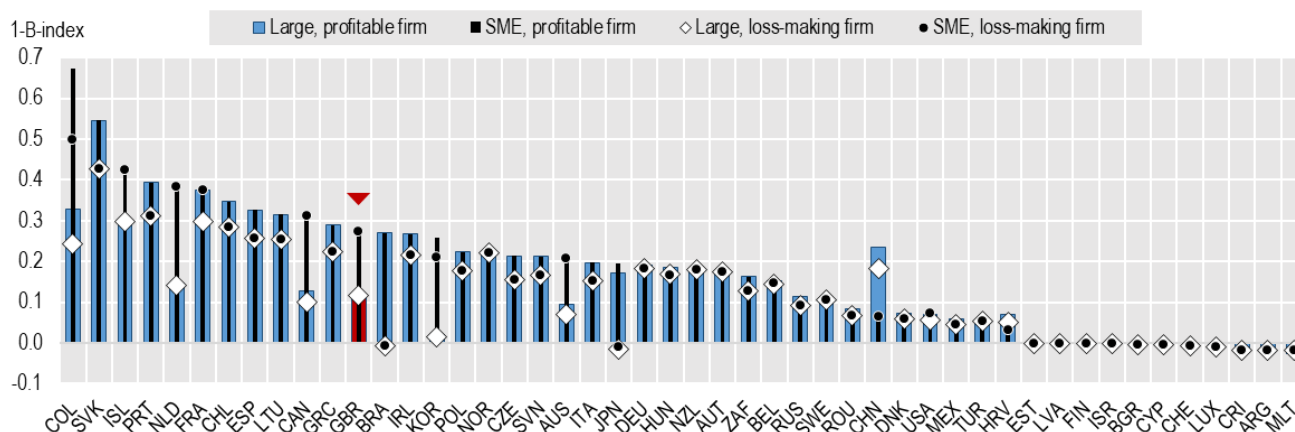
- Under the R&D tax allowance, eligible subcontracted expenditures are limited to 65% of total costs (uncapped). A refund is available to SMEs for up to 14.5% of the period's surrenderable loss (capped).
- There is no upper limit to the amount of refundable credits in the case of the RDEC scheme.

Generosity of R&D tax support in 2021

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 2021, 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, 2021

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.

Source: OECD, R&D Tax Incentives Database, <http://oe.cd/rdtax>, December 2021.

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 2021, the **United Kingdom** undertook **one change** in its R&D tax relief provision. A cash credit cap for the SME tax allowance regime was introduced with effect from 1 April 2021. This introduction had been delayed by one year, i.e. from 1 April 2020 to 1 April 2021. From 1 April 2021, the amount of payable R&D tax credit which a SME can claim is limited to GBP 20 000 plus three times the company's total PAYE and NIC liability for the period.

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.

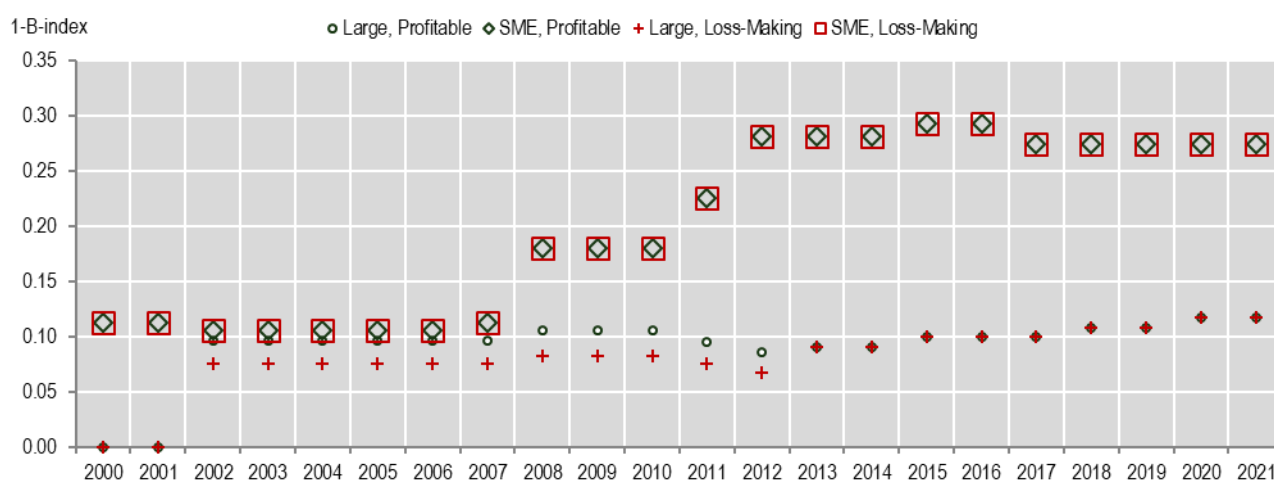
In the case of large firms, R&D tax subsidy rates increased in four occasions: 2002, when the tax allowance was extended to large firms, 2008, when the tax allowance rate for large companies was raised from 25 to 30%, 2018, when the rate of the R&D tax credit for large companies (RDEC) was raised from 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%. In 2021, the tax subsidy rates estimated for SMEs and large firms stayed at their 2020 level in the profit (loss) case.

Figure 2. Implied tax subsidy rates on R&D expenditures: United Kingdom, 2000-21

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.

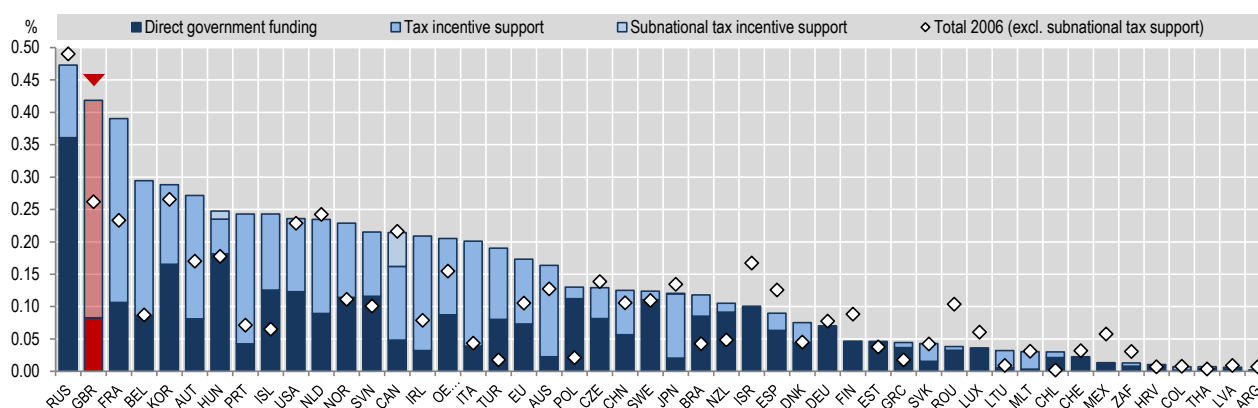
Source: OECD, R&D Tax Incentives Database, <http://oe.cd/rntax>, December 2021.

Policy support for business R&D: the policy mix

In 2019, the **United Kingdom** is placed among the OECD countries that provide the largest level of government support to business R&D as a percentage of GDP, at a rate equivalent to 0.42% of GDP.

Figure 3. Direct government funding of business R&D and tax incentives for R&D, 2019 (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, 2021).

Source: OECD, R&D Tax Incentives Database, <http://oe.cd/rntax>, December 2021.

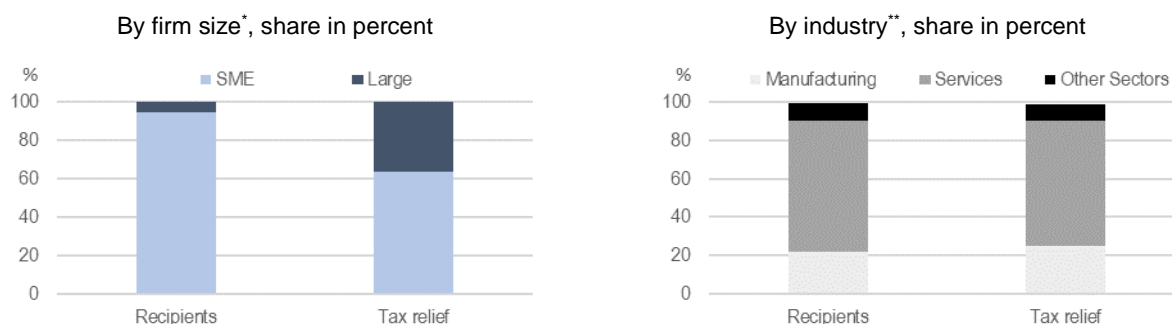
Key points:

- From 2014* to 2019, total government support for BERD as a percentage of GDP increased in the **United Kingdom** by 0.16 percentage point (pp), while the OECD average (2006-19) increased by 0.05 pp.
- From 2014 to 2019, business R&D intensity in the **United Kingdom** increased from 1.07% to 1.17%.
- In 2019, tax incentives accounted for 80% 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, 2019



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).

Source: OECD, R&D Tax Incentives Database, <http://oe.cd/rntax>, December 2021.

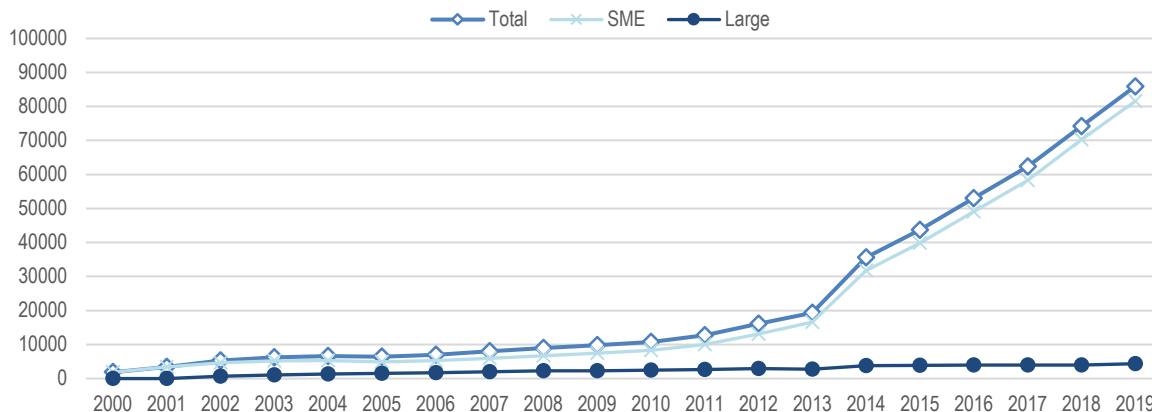
Key points:

- In **United Kingdom**, SMEs accounted for 95% of R&D tax relief recipients in 2019, while the share of tax support accounted for by SMEs amounted to around 64%. In the same year, 36% of R&D tax benefits were allocated to large firms, comprising 5% of the population of R&D tax relief recipients.
- In 2019, firms in services represented 68% of R&D tax relief recipients in **United Kingdom**, followed by firms in manufacturing with a share of 22%. The share of tax benefits accounted for by the latter amounted to around 25% in that year, while this share reached 65% in the case of firms in services.

Trends in the uptake of R&D tax incentives

Over the period 2000-2019, the number of R&D tax relief recipients increased significantly in **United Kingdom**, reaching 85 900 in 2019. 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 2019, the number of SMEs receiving R&D tax support increased more than two-fold from 31 765 to 81 530, while the number of large firms receiving tax support rose by 15%, from 3 795 in 2014 to 4 370 in 2019. Over the 2000-19 period, SMEs accounted for 90% of R&D tax relief recipients in United Kingdom.

Figure 5. Number of R&D tax relief recipients, United Kingdom, 2000-2019



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 and 2019 are provisional.

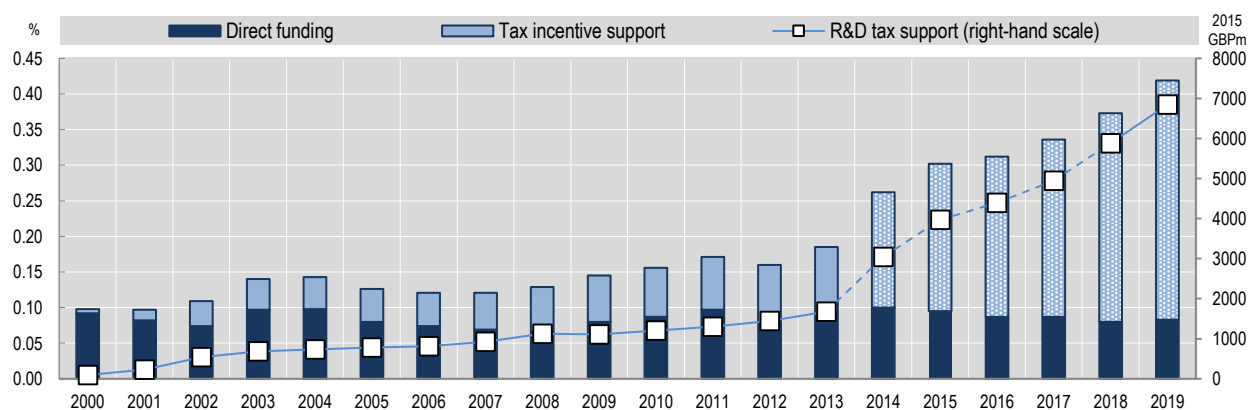
Source: OECD, R&D Tax Incentives Database, <http://oe.cd/rntax>, December 2021.

Trends in government support for business R&D

Between 2000 and 2019, 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, 2000-19

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



Source: OECD, R&D Tax Incentives Database, <http://oe.cd/rntax>, December 2021. Break-in-series in 2014 (see notes for Fig 3).

- The cost of government tax relief for R&D rose (in 2015 prices) from GBP 816 million in 2006 to GBP 6 845 million in 2019 (1 GBP = 1.169 EUR, Q3 2021).
- As percentage of GDP, R&D tax support increased from 0.05% of GDP in 2006 to 0.34% in 2019.
- Direct funding also increased over this period – from 0.07% in 2006 to 0.08% of GDP in 2019.
- The share of tax incentives in total government support increased from 39% in 2006 to 80% in 2019.

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