Design features

Ireland provides R&D tax relief through an entirely volume-based R&D tax credit since January 2015.
- In the case of insufficient tax liability, unused credits are refunded over 3 years (three instalments) or can be carried-forward indefinitely in addition to a one-year carry-back option.
- Upper ceilings apply to amount of subcontracted R&D and refundable credits.

Table 1. Main design features of R&D tax incentives in Ireland, 2018

<table>
<thead>
<tr>
<th>Research and development tax credit</th>
<th>Eligible expenditures*</th>
<th>Type of instrument*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible expenditures</td>
<td>Current, machinery &amp; equipment, buildings</td>
<td>Volume-based</td>
</tr>
<tr>
<td>Headline rates (%)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Refund</td>
<td>Over 3 years (three instalments)</td>
<td></td>
</tr>
<tr>
<td>Carry-over (years)</td>
<td>Indefinite (carry-forward), 1 (carry-back)</td>
<td></td>
</tr>
<tr>
<td>Subcontracted R&amp;D</td>
<td>Up to 5% if R&amp;D activities are contracted to a university or institute</td>
<td></td>
</tr>
<tr>
<td>Ceiling</td>
<td>Limited to the greater of:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>the aggregate amount of Corporate Income Tax paid in the ten preceding fiscal years, reduced by Payable R&amp;D Credit claimed in respect of prior periods; OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>the aggregate of current and preceding accounting periods payroll liabilities reduced by the lesser of:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>– any excess of aggregate payable R&amp;D credit over aggregate payroll liabilities for all periods in respect of which a payable credit was claimed prior to the period in question;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>– the payroll liabilities for the preceding period.</td>
<td></td>
</tr>
</tbody>
</table>

* Ireland also offers an accelerated depreciation for R&D capital and an income-based tax incentive for outcomes of R&D activities. These are beyond the scope of this note. ** 1 EUR = 1.14 USD, 31.12.2018

Recent developments and trends

Differences in the design of R&D tax incentives introduce a significant variation in the expected generosity of tax relief per additional unit of R&D investment across OECD and partner economies and over time. In 2017, the marginal tax subsidy rate for profit-making (loss-making) SMEs in Ireland is estimated at 0.29 (0.23), well above the OECD median of 0.20 (0.17). The tax subsidy rate for large enterprises is equal to 0.29 (0.23) in the profit (loss-making) scenario, significantly larger than the OECD median of 0.13 (0.10). These estimates model the provisions of the R&D tax credit and the accelerated depreciation of R&D capital.

The generosity of R&D tax incentives has increased in Ireland following the introduction of an incremental R&D tax credit in 2004, looking at each of the four scenarios considered. In 2009, the rate of the incremental tax credit was raised from 20% to 25% (keeping 2003 year R&D expenditure as base amount). In 2012, the R&D tax credit was converted into a hybrid tax credit with a 25% volume-based tax credit applicable to the first EUR 100 000 spend on R&D (increased to EUR 200 000 and EUR 300 000 in 2013 and 2014 respectively). In 2015, Ireland’s R&D tax credit became entirely volume-based, reflected in a significant increase in the implied marginal tax subsidy rates estimated for SMEs and large firms in both profit scenarios.

Figure 1. Implied tax subsidy rates on R&D expenditures: Ireland, 2000-18

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. Headline tax credit/allowance rates provide an upper bound value of the generosity of R&D tax incentives, not reflecting the effect of thresholds and ceilings that may limit the amount of qualifying expenditure or value of R&D tax relief. In the case of Ireland, weights based on Revenue Commissioner are applied to model the incremental R&D tax credit from 2004 to 2014 and account for the share of allowed R&D expenditure qualifying for the tax credit on a volume-basis. For more information on the calculation of implied subsidy rates, see http://www.oecd.org/sti/r&d-tax-data/index-methodology.pdf, and for notes regarding the modelling of the country-specific time series, see http://www.oecd.org/sti/r&d-tax-data/index-notes.pdf.

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Public support for business R&D: the policy mix

Governments adopt various instruments to incentivise R&D by business. In addition to direct support such as grants and buying R&D services, 30 out of the 36 OECD countries provided fiscal incentives in 2018.

**Figure 2. Direct government funding of business R&D and tax incentives for R&D, 2016 (nearest year)**

As a percentage of GDP

- **Ireland** ranks fourth among OECD and partner economies in terms of total government support to business R&D as a percentage of GDP, equivalent to 0.29% of GDP in 2016.
- From 2006 to 2016, total government support for BERD as a percentage of GDP increased in Ireland by 0.21 percentage points, while the OECD median increased by 0.02 percentage points.
- During this period, business R&D intensity in Ireland increased from 0.79% to 0.84%.
- In 2016, R&D tax incentives accounted for 85% of total government support for BERD in Ireland.

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

Over the last decade, a general trend towards non-discretionary instruments such as R&D tax incentives has been observed. This trend is far from uniform and the policy mix can vary by country and over time.

**Figure 3. Direct funding of business R&D and tax incentives for R&D, Ireland, 2000-16**

As a percentage of GDP, 2010 prices (right-hand scale)

- Since the introduction of an R&D tax credit in 2004, the importance of R&D tax support has significantly increased in Ireland, both in absolute and relative terms.
- The cost of tax relief rose (in 2010 prices) from EUR 70 million in 2004 to EUR 619 million in 2016 with a sharp increase noticeable after 2012, when the R&D tax credit in Ireland became hybrid and began to include a volume-based tax relief component.
- As percentage of GDP, R&D tax support rose from 0.05% of GDP in 2004 to 0.25% in 2016.
- Direct funding of BERD increased during this period and reached 0.06% of GDP in 2014, and then declined to account for 0.04% of GDP in 2016.
- The share of tax incentives in total government support increased from 67% in 2004 to 85% in 2016.


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