R&D Tax Incentives: Denmark, 2019

**Design features**

**Denmark** offers companies in a tax loss position the possibility to earn a refund for deficit-related R&D expenditures. Since 2018, companies can also claim an enhanced R&D tax allowance at a rate of 1.5%.

- Companies receive tax credits corresponding to 22% of any deficit related to R&D expenses. The initial R&D tax allowance rate of 1.5% will be raised on a step-by-step basis to reach 10% in 2026.
- Under the R&D tax credit, the maximum level of relief is DKK 5.5 million per year (22% of DKK 25 million).
- In the case of the R&D tax allowance, firms can carry over unused claims over an indefinite period. No ceiling or threshold applies to the amount of qualifying R&D expenditure or value of R&D tax relief.

**Table 1. Main design features of R&D tax incentives in Denmark, 2019**

<table>
<thead>
<tr>
<th>R&amp;D tax credit for deficit related R&amp;D expenses</th>
<th>Enhanced R&amp;D tax allowance</th>
<th>Accelerated Depreciation of R&amp;D capital</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tax incentive</strong></td>
<td><strong>Tax credit</strong></td>
<td><strong>Tax allowance</strong></td>
</tr>
<tr>
<td>Type of instrument</td>
<td>Volume-based</td>
<td>Volume-based</td>
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<tr>
<td>Eligible expenditures</td>
<td>Current, depreciation</td>
<td>Current, depreciation</td>
</tr>
<tr>
<td>Headline rates (%)</td>
<td>22 (corporate income tax rate)</td>
<td>1.5 (income years 2018-19)^*</td>
</tr>
<tr>
<td>Refund</td>
<td>Yes (deficit related R&amp;D expenses)</td>
<td></td>
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<tr>
<td>Carry-over (years)</td>
<td>n.a.</td>
<td>Indefinite</td>
</tr>
<tr>
<td>Ceilings</td>
<td>R&amp;D expenditure (Refund-specific)</td>
<td>DKK** 5.5 million (22% of DKK 25 million per year</td>
</tr>
</tbody>
</table>

*This rate is raised to 3% in 2020, 5% in 2021-22, 8% in 2023-25, and 10% in income year 2026. ** 1 DKK= 0.134 EUR (Q3 2019)

For additional information: OECD R&D Tax Incentive Compendium and Eligibility of current and capital expenditure for R&D tax relief


**Recent developments and trends**

Differences in the design of R&D tax incentives introduce significant variation in the expected generosity of tax relief per additional unit of R&D investment. In 2019, the R&D tax subsidy rate for SMEs and large firms in **Denmark** is estimated at 0.00 (-0.01) in the profit (loss)-making scenario. These subsidy rates are well below the OECD median of 0.19 (0.17) and 0.14 (0.10) estimated for profitable (loss-making) SMEs and large firms respectively. These estimates model the provisions for the R&D tax credit, R&D tax allowance and accelerated depreciation of R&D capital.

Over the 2000-19 period, the generosity of R&D tax incentives has remained fairly stable in **Denmark** for each of the four scenarios considered. Until 2017, **Denmark** offered an accelerated depreciation for machinery and equipment related R&D expenditure without full expensing of R&D capital expenditure or any other enhanced tax relief provisions in place. This implies a negative marginal tax subsidy rate in both profit scenarios. In the case of loss-making firms, this subsidy rate is slightly higher in net present value terms due to the ability to carry over losses. Changes in corporate income tax rates result in smaller variations in tax subsidy rates. With the introduction of a tax credit for R&D-related losses in 2012, a reinstatement of baseline tax deduction is offered in the loss-making case. With this tax credit in place, the deviation in tax subsidy rates between profitable and loss-making firms disappears. The introduction of an enhanced R&D tax allowance of 1.5% in 2018 results in a very small increase in tax subsidy rates. The small difference in the rates between profitable and loss-making firms is attributable to the carry-over provision.

**Figure 1. Implied tax subsidy rates on R&D expenditures: Denmark, 2000-19**

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 (see methodology and country specific notes) 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 R&D expenditure or value of R&D tax relief.
Public support for business R&D: the policy mix

In 2017, Denmark is below the OECD median in terms of total government support to business R&D as a percentage of GDP, at a rate equivalent to 0.06% of GDP.

Figure 2. Direct government funding of business R&D and tax incentives for R&D, 2017 (nearest year)
As a percentage of GDP

* Data on tax support not available, ** Data on subnational tax support not available


- From 2007 to 2017, total government support for R&D as a percentage of GDP increased in Denmark by 0.015 pp. This increase is identical to the one observed to the OECD median.
- During this period, business R&D intensity in Denmark increased from 1.76% to 1.97%.
- In 2017, tax incentives accounted for 34% of total government support for BERD in Denmark.

Trends in government support for business R&D

Between 2007 and 2017 (the period for which relevant data are available), the importance of R&D tax incentives has increased in Denmark, both in absolute and relative terms.

Figure 3. Direct government funding of business R&D and tax incentives for R&D, Denmark, 2000-17
As a percentage of GDP, 2010 prices (right-hand scale)

The cost estimate of tax incentive support covers the R&D tax credit


- The cost of this support rose (in 2010 prices) from DKK 48 million in 2007 to DKK 190 million in 2012 when an R&D tax credit for deficit related R&D expenses was introduced. The cost of R&D tax support steadily increased thereafter to reach DKK 416 million in 2017.
- Direct funding of BERD declined from 0.05% in 2012 to 0.03% of GDP in 2013 to revert back and reach 0.04% of GDP in 2017.
- The share of R&D tax incentives in total government support increased over the 2007-17 period, from 6% in 2007 to 16% in 2012 and 34% in 2017.


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