R&D Tax Incentives: Denmark, 2018

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 amount that can be given is DKK 5.5 million per year (22% of DKK 25 million). If the income year is less than 12 months, the tax credit is reduced proportionally.
- In the case of the R&D tax allowance, firms can carry over used claims over an indefinite period. No ceiling or threshold applies on 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, 2018†

<table>
<thead>
<tr>
<th>Tax incentive*</th>
<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>
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</thead>
<tbody>
<tr>
<td>Type of instrument</td>
<td>Tax credit</td>
<td>Volume-based</td>
<td>Volume-based</td>
</tr>
<tr>
<td>Eligible expenditures†</td>
<td>Current, depreciation</td>
<td>Current, depreciation</td>
<td>Machinery and equipment</td>
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<tr>
<td>Headline rates (%)</td>
<td>22 (corporate income tax rate)</td>
<td>1.5 (income years 2018-19)*</td>
<td>100</td>
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<td>Carry-over (years)</td>
<td>n.a.</td>
<td>Indefinite</td>
<td></td>
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<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>
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</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= 0.15 USD(31.12.2018)

† 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 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 2018, 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 0.20 (0.17) and 0.13 (0.10) estimated for profitable (loss-making) SMEs and large firms respectively. These estimates model the provisions of the R&D tax credit, R&D tax allowance and accelerated depreciation of R&D capital.

Over the 2000-18 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. With the introduction of an enhanced R&D tax allowance of 1.5% in 2018, a very small increase in tax subsidy rates is observable. The deviation 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, 2000-18

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 R&D expenditure or value of R&D tax relief. For more information on the calculation of implied tax subsidy rates, see http://www.oecd.org/sti/rdtax/stats/methodology.pdf, and for notes regarding the modelling of the country-specific time series, see http://www.oecd.org/sti/rdtax/stats/methodology_notes.pdf

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Public support for business R&D: the policy mix

Governments adopt various instruments to incentivize 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


- **Denmark** is placed below the OECD median in terms of total government support to business R&D as a percentage of GDP, equivalent to 0.07% of GDP in 2016.
- From 2007 to 2016, total government support for BERD as a percentage of GDP increased in Denmark by 0.03 percentage points, while the OECD median (2006-16) increased by 0.02 percentage points.
- During this period, business R&D intensity in Denmark increased from 1.76% to 2.02%.
- In 2016, tax incentives accounted for 26% of total government support for BERD in Denmark.

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, Denmark, 2000-16

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


- Between 2007 and 2016 (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.
- The cost of this support rose (in 2010 prices) from DKK48 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 379 million in 2016.
- Direct funding of BERD declined from 0.06% in 2012 to 0.03% of GDP in 2013 to revert back and reach 0.06% of GDP in 2016.
- The share of R&D tax incentives in total government support increased over the 2007-16 period, from 6% in 2007 to 16% in 2012 and 26% in 2016.