R&D Tax Incentives: People’s Republic of China, 2018

Design features
China provides R&D tax relief through a volume-based R&D tax allowance.

- The headline rate for large enterprises is 50% with a special provision of 75% for SMEs as of 2017.
- In the case of insufficient tax liability, unused credits can be carried-forward for five years. With effect of January 2018, this carry-over period has been extended to 10 years in the case of SMEs and high and new technology enterprises (HNTEs).
- In the case of subcontracted R&D, R&D tax relief is limited to 80% of eligible costs (per project).

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

<table>
<thead>
<tr>
<th>Tax incentive*</th>
<th>Tax allowance</th>
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<tbody>
<tr>
<td>Type of instrument</td>
<td>Volume-based</td>
</tr>
<tr>
<td>Eligible expenditures†</td>
<td>Current and depreciation (machinery and equipment, land and buildings)</td>
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<tr>
<td>Headline rates (%)</td>
<td>50 / 75 for SMEs</td>
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Refund
No

Carry-over (years)
5 (carry-forward) – 10 (SMEs and HNTEs)

Ceilings
Subcontracted R&D (domestic R&D service providers)
Tax relief limited to 80% of eligible costs (per project); no cap currently applies in the case of foreign R&D service providers

*China also offers an accelerated depreciation for R&D capital, customs duty and value added tax exemptions for purchases of R&D equipment, and income-based tax incentives (reduced corporate income tax rate for high and new tech enterprises and Advanced Technology Service Enterprises and a tax concession on technology transfer) for outcomes of R&D activities. These are beyond the scope of this note.

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 drive 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 marginal tax subsidy rate for profit-making (loss-making) SMEs in China is estimated at 0.23 (0.19), above the OECD median of 0.20 (0.17). The tax subsidy rate for large enterprises is equal to 0.15 (0.12) in the profit (loss)-making scenario, larger than the OECD median of 0.13 (0.10). These estimates model provisions of the R&D tax allowance and the accelerated depreciation of R&D capital.

With the exception of 2017, implied marginal subsidy rates have remained stable since the broader implementation of the R&D tax allowance in China in 2008. This holds true for each of the four scenarios considered. In 2017, an enhanced R&D tax allowance rate was introduced for SMEs (75% instead of 50%), leading to an increase in the tax subsidy rate for SMEs from 0.15 (0.12) to 0.23 (0.18) in the profit (loss) making scenario. Implied marginal tax subsidy rates for large firms remained unaffected by this change.

Figure 1. Implied tax subsidy rates on R&D expenditures: China, 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 www.oecd.org/sti/rdtax/state-baseline-methodology.pdf and for notes regarding the modelling of the country-specific time series, see http://www.oecd.org/sti/rdtax/state-baseline-notes.pdf

† Disclaimer: http://oe.cd/disclaimer

‡ The R&D super deduction was introduced as part of China’s “Medium to Long Term Plan for the Development of Science and Technology” in 2006 but broadly implemented by provinces not before 2008. In this year, the State Administration of Taxation issued “Administrative Measures for the Pre-tax Deduction of Enterprise Research and Development Expenses” which provided a unified and simplified framework for implementing this R&D tax incentive in China (Zhen et al., 2018).
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

- **China** is placed close to the OECD median in terms of total government support to business R&D as a percentage of GDP, equivalent to 0.13% of GDP in 2016.
- From 2009 to 2016, total government support for BERD as a percentage of GDP increased in China by 0.02 percentage points. This increase is identical to the one observed at the OECD median (2006-16).
- During this period, business R&D intensity in China increased from 1.22% to 1.63%.
- In 2016, R&D tax incentives accounted for 52% of total government support for BERD in China.

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, China, 2000-16**

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

- The importance of R&D tax relief has increased in absolute terms in China since 2009, whereas the relative magnitude of tax vis-à-vis direct support fluctuated between 2009 and 2016.
- As percentage of GDP, R&D tax support increased from 0.05% to 0.07% of GDP during this period.
- Direct funding of BERD similarly increased from 0.05% to 0.06% of GDP between 2009 and 2016.
- The share of R&D tax incentives in total government support varied somewhat over this period, declining from 50% in 2009 to 45% in 2012 and reverting back to 52% in 2016.


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