

R&D Tax Incentives: Japan, 2021

Design of R&D tax relief provisions

Japan offers volume-based and incremental tax credits that can be claimed in combination.

Table 1. Main design features of R&D tax incentives in Japan, 2021

	General R&D tax credit (Permanent measure)	Open innovation activity-based R&D tax credit (Permanent measure)	High R&D intensity tax credit (Temporary measure until 31 Mar 2023)
Type of instrument	Volume-based tax credit		Incremental tax credit
Eligible expenditures[†]	Current, MED	Current, MED, collaborative R&D	Current, MED
Headline rates (%)	6-10 for large; 12 for SMEs [according to R&D intensity] Temporary (until 31 Mar 2023): 2-14 for large; 12-17 for SMEs.	20 or 25 or 30***	20 x [R&D intensity – 10 per cent]
Refund and carry-over (years)	No		
Thresholds & ceilings	Base amount	-	10% of average annual turnover
	Ceiling (R&D tax relief)	25% (40% if R&D venture corporation*) of the corporation's national CIT liability before the credit is applied. Temporary (until 31 Mar 2023): up to extra 5%**	10% (previously 5%) of the corporation's national CIT liability before the credit is applied
	Total	Up to 45% of corporation's national CIT liability can be deductible (60% if R&D venture corporation)	

CIT: Corporate Income Tax; MED: Machinery & Equipment Depreciation; R&D intensity: eligible R&D expenditures divided by average annual turnover (average amount of turnover in the applicable business year and in each business year which started within three years prior to the first day of the business year); *Established within the past 10 years or less, not a subsidiary of a large corporation, and with carry forward losses; ** If gross sales in the business year beginning between 1 April 2021 and 31 March 2023 decline by 2% or more compared to the latest business year that ended earlier than 1 February 2020 and qualified R&D expenditures for the business year are greater than the amount spent in the previous business year that ended earlier than 1 February 2020; *** The open innovation tax credit is applicable for joint or contracted R&D with universities and national research institutes at a rate of 30%, for joint or contracted basic or applied research or R&D for the purpose of using intellectual property rights with R&D venture corporations at a rate of 25% (previously 20%) and for other qualifying companies at a rate of 20% (new provision).

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/rntax>, December 2021.

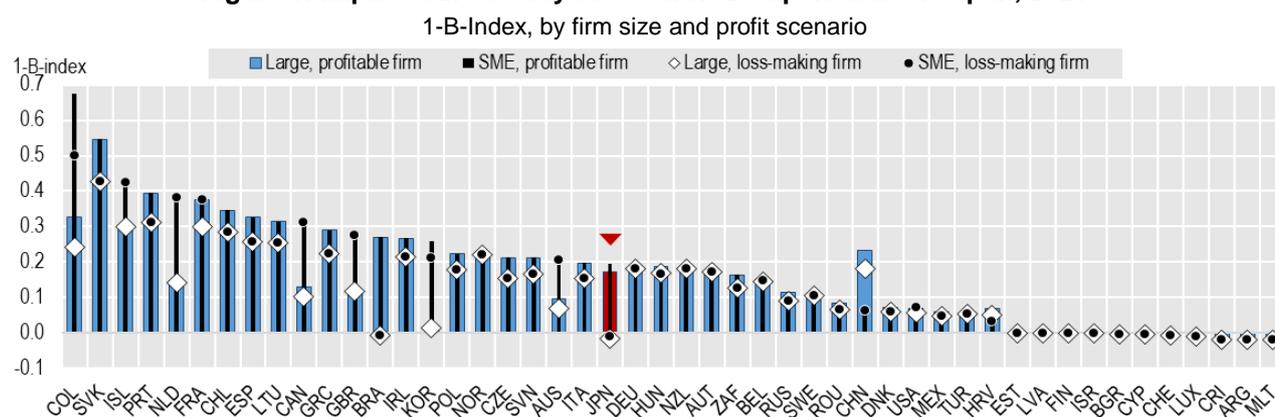
Key features:

- In case of insufficient tax liability, unused credits are neither refundable nor can be carried-forward.
- Under each scheme, an upper ceiling applies to the value of R&D tax relief. Overall, R&D tax benefits are capped at 45% (temporarily 50%) of the corporate income tax liability before the credit is applied.
- In addition, **Japan** offers to SMEs the possibility to deduct the amount of earned national R&D tax credits from their local (municipal and prefectural) tax liability.

Generosity of R&D tax support in 2021

Differences in the design of R&D tax incentives drive 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 **Japan** is estimated at 0.20 (-0.01), equal to (well below) the OECD median of 0.20 (0.18).

Figure 1. Implied tax subsidy rates on R&D expenditures: Japan, 2021



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.

The tax subsidy rate for large enterprises amounts to 0.17 (-0.01) in the profit (loss)-making scenario, equal (well below) to the OECD median of 0.17 (0.15). These estimates focus on modelling the provisions for the volume-based R&D tax credit.

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, **Japan** undertook **three changes** in its R&D tax relief provisions:

- Until 31 March 2023, the rate of the general R&D tax credit has been temporarily set at 2-14% for large firms and 12-17% for SMEs.
- The ceiling on R&D tax benefits, applicable under the general R&D tax credit, will be raised by an additional 5% of the corporation’s national corporate income tax liability (before the credit is applied) until 31 March 2023 if (i) gross sales in a fiscal year beginning between 1 April 2021 and 31 March 2023 decrease by 2% or more compared to the latest fiscal year that ended before 1 February 2020, and (ii) qualified R&D expenditures for the year are greater than the amount spent in that latest year.
- The high R&D intensity-based R&D tax credit has been extended by two years (until 31 March 2023).

Trends in the generosity of R&D tax support

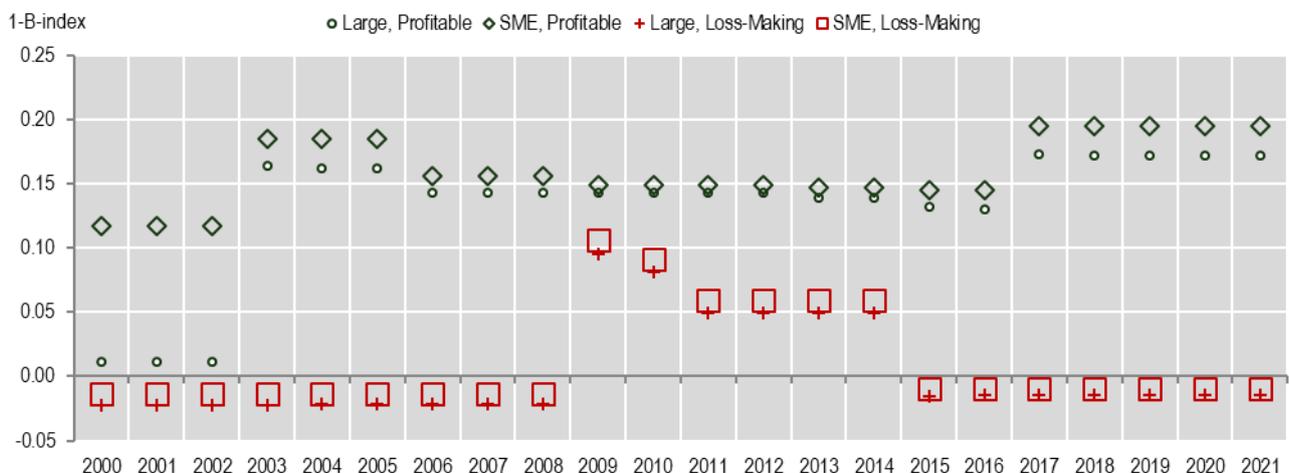
The generosity of the R&D tax credit regime varied significantly in **Japan** over the 2000-21 period across the four scenarios considered. Before 2002, an incremental tax credit was in place with a volume-based part only available to SMEs. This explains the gap between the R&D tax subsidy rates estimated for SMEs vs. large firms in those years. With the extension of the volume-based tax credit to large firms in 2003 at a slightly less favourable rate, this gap almost disappeared.

Following the reduction of the volume-based and incremental tax credit rates, a marked drop in R&D tax subsidy rates occurred in 2006. Subsidy rates increased in 2017 when the volume-based tax credit rates were raised as a temporary measure and remained stable ever since.

Firms in a loss-making position effectively lost their tax benefits throughout the 2000-17 period, except for 2009-14 when a carry-over option existed in Japan (3/2/1 years in 2009/10/11-14).

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

1-B-Index, by firm size and profit scenario



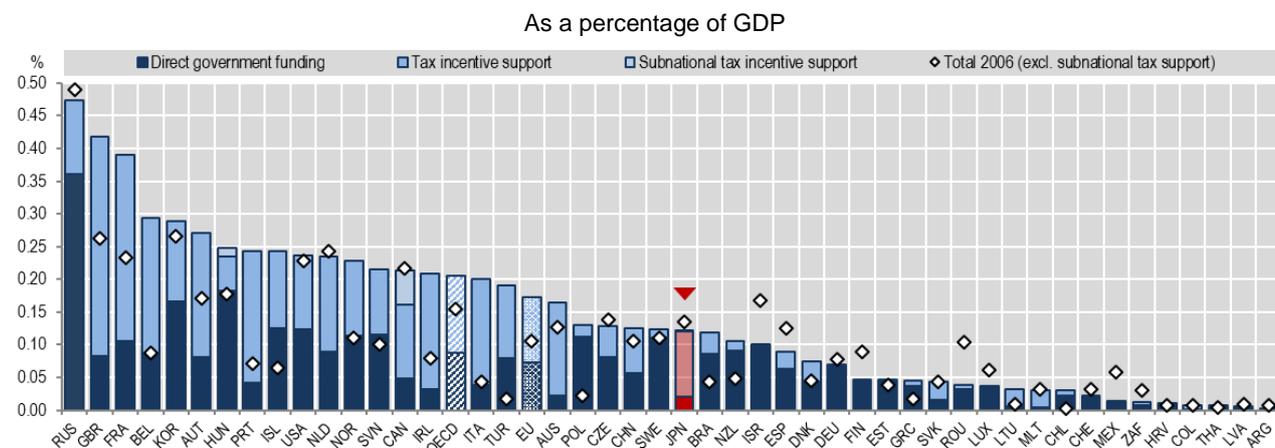
Note: Implied marginal tax subsidy rates, presented for different firm size and profitability scenarios, are calculated based on headline tax credit/allowance rates (see [methodology](#) and [country-specific notes](#)), providing an upper bound value of the generosity of R&D tax support, not reflecting 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/rdtax>, December 2021.

Policy support for business R&D: the policy mix

In 2019, **Japan** is placed below the OECD average in terms of total government support to business R&D as a percentage of GDP, with a value equivalent to 0.1% of GDP.

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



Note: Data on subnational tax support are only available for a group of countries.

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

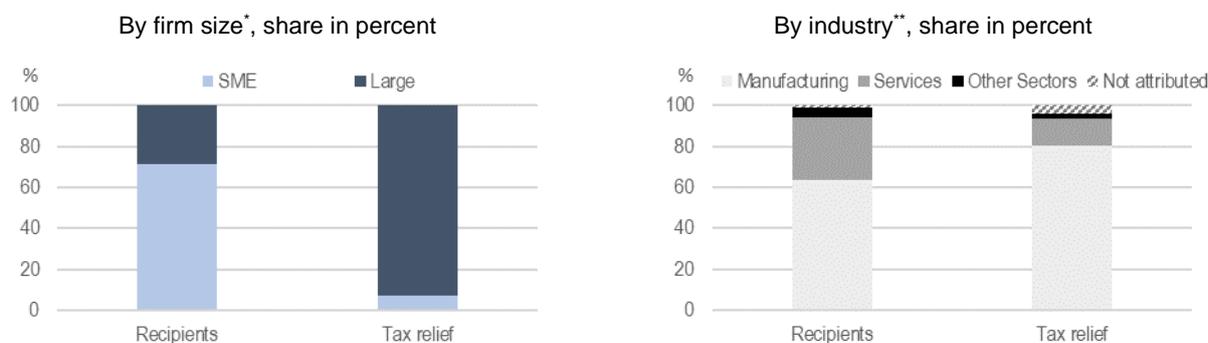
Key points:

- From 2006 to 2019, total govt. support for BERD as a percentage of GDP (excl. subnational tax relief) decreased in **Japan** by 0.01 percentage point (pp), while the OECD average increased by 0.05 pp.
- During this period, business R&D intensity in **Japan** increased slightly from 2.49% to 2.53%.
- In 2019, R&D tax incentives accounted for 83% of total government support for BERD in **Japan**.

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 total of R&D tax credits in Japan. *For reporting purposes (Figure 4), SMEs are defined as firms with a stated capital no larger than JPY 100 million, except for the following types of corporations: a. Corporation with a half or more of the stated capital of which is owned by a large-sized corporation; b. Corporation with two thirds or more of the stated capital of which is owned by a plural large-sized corporation; c. Trust corporation; or small and medium-sized entities (such as mutual corporations, incorporated associations etc.) with 1,000 or less people employed, except for trust corporation. ** Economic activity is classified based on the Japan Standard Industrial Classification (JSIC) Rev.13 and a concordance between JSIC Rev.13 and ISIC Rev.4 for corporations with consolidated and non-consolidated tax declaration as follows: Manufacturing: JSIC Rev.13, E (i.e. 09–32), corresponding to ISIC Rev.4, 10–33 (i.e. C); Services: JSIC Rev.13, F–P, Q (partly), R (partly) (i.e. 33–80, 83–85, 87, 88–92), corresponding to ISIC Rev.4, 45–82, 86–96 (i.e. G–N, Q–S); Other Sectors: JSIC Rev.13, A–D (i.e. 01–08), corresponding to ISIC Rev.4, 01–03, 05–09, 35–39, 41–43 (i.e. A, B, D, E, F); Not attributed: JSIC Rev.13, O and T (i.e. 81–82, 99), corresponding to ISIC Rev.4, 85 and N.e.c. (i.e. P and N.e.c.).

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

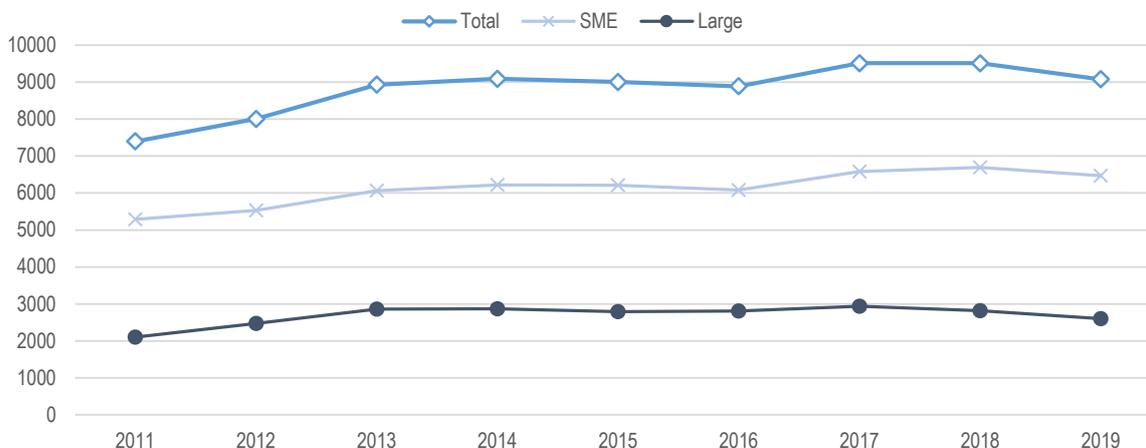
Key points:

- In **Japan**, SMEs accounted for 71% of R&D tax relief recipients in 2019, while the share of R&D tax support accounted for by SMEs amounted to around 7% in this year. 93% of R&D tax benefits were allocated to large firms, comprising 29% of the population of R&D tax relief recipients in 2019.
- In 2019, firms in manufacturing represented around 64% of R&D tax relief recipients in **Japan**, followed by firms in services with a share of 30%. The share of R&D tax benefits accounted for by the latter amounted to 13% in that year, while this share amounted to 81% in the case of firms in manufacturing.

Trends in the uptake of R&D tax incentives

Over the period 2011-2019 (for which relevant data are available), the number of R&D tax relief recipients increased steadily in **Japan**, from around 7 400 in 2011 to 9 100 recipients in 2019. Most of this increase is attributable to SMEs, which accounted for around 70% of R&D tax relief recipients over this period.

Figure 5. Number of R&D tax relief recipients, Japan, 2011-2019



Note: Figures refer to the Total R&D tax credits.

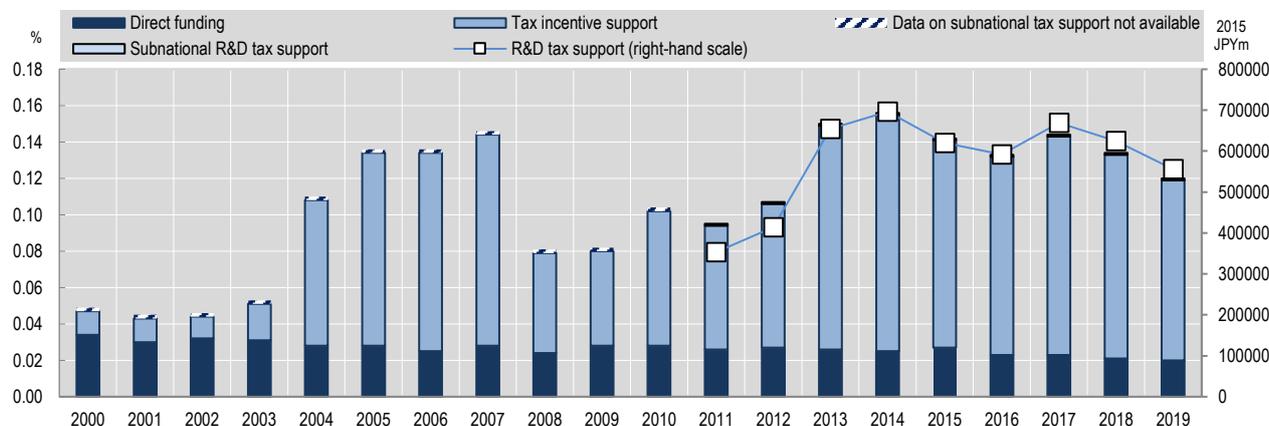
Source: OECD, R&D Tax Incentives Database, <http://oe.cd/rdtax>, December 2021.

Trends in government support for business R&D

Japan has offered R&D tax incentives since 1967. The cost of this support increased significantly from JPY 353 billion (in 2015 prices) in 2011 to JPY 556 billion in 2019 (100 JPY = 0.771 EUR, Q3 2021).

Figure 6. Direct funding of business R&D and tax incentives for R&D, Japan, 2000-19

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



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

- As a percentage of GDP, total tax relief for BERD rose from 0.07% of GDP in 2011 to 0.1% in 2019. R&D tax incentives provided at central government level accounted for 99% of tax support throughout the 2011-19 period. The cost of tax incentives at central government level increased sharply following the extension of the volume-based tax credit to large firms in 2003 (0.02% of GDP, up from 0.012% in 2002), declined during the 2008 global crisis (0.055% of GDP in 2008) to revert and then increased significantly in 2013 (0.12% of GDP) when a tax credit for collaborative R&D was introduced.
- Direct funding of BERD decreased slightly from 0.034% in 2000 of GDP to 0.02% in 2019.
- The share of tax incentives in total government support increased from 73% in 2011 to 83% in 2019. Subnational tax incentives accounted for a very small share of total tax support (1%) over these years.

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