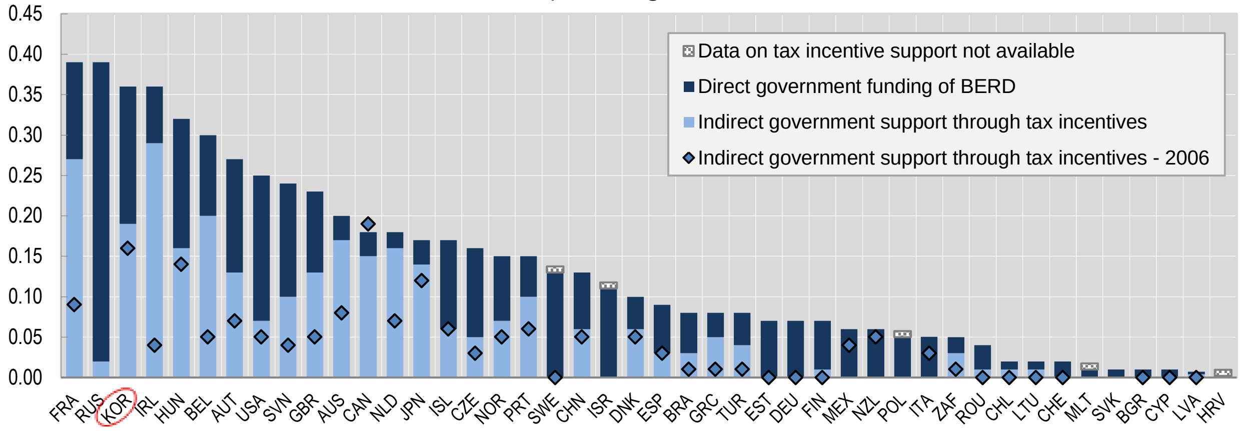
# R&D Tax Incentives: Korea

## 1. Public support for business R&D: the mix of direct funding and tax relief

Governments in many countries seek to promote R&D investment in the economy by granting a preferential tax treatment to eligible R&D expenditures, especially those incurred by firms. In 2016, 29 of the 35 OECD countries, 22 of 28 EU countries and a number of non-OECD economies offer R&D tax incentives[1].

**Figure 1. Direct government funding of business R&D and tax incentives for R&D, 2014 (nearest year)**

As a percentage of GDP




*Source*: OECD, R&D Tax Incentive Indicators, http://oe.cd/rdtax, March 2017.

### Main points:

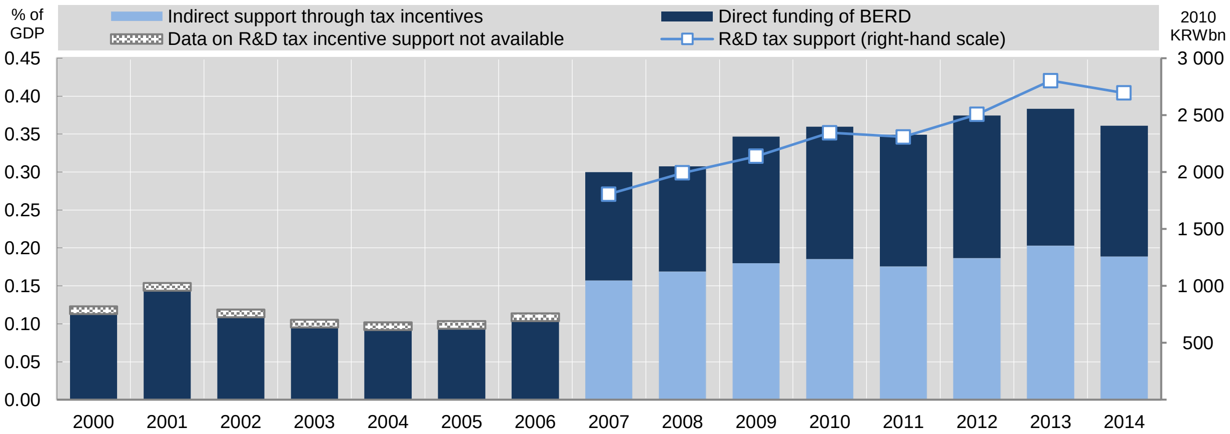
- Korea ranks third among OECD and other major economies in terms of the total volume of (central) government support for business R&D, equivalent to 0.36% of GDP.
- Tax incentives account for 53% of total public support for business R&D in Korea.
- From 2006 to 2014, R&D tax support as a percentage of GDP increased in Korea by 0.03 percentage points, while the OECD median increased by 0.02 percentage points.

## 2. Trends in government support for business R&D

Over the last decade, several OECD countries have increased their reliance on R&D tax incentives. However, this trend has not been uniform. The relative importance of tax incentives declined briefly following the global financial crisis, reflecting the demand-led nature of tax relief and its dependence on profits.

**Figure 2. Direct funding of business R&D and tax incentives for R&D, Korea, 2000-14**

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




*Source*: OECD, R&D Tax Incentive Indicators, http://oe.cd/rdtax, March 2017.

### Main points:

- In Korea, R&D tax relief increased from KRW 1.8 trillion in 2007 to KRW 2.7 trillion in 2014, showing a sustained upward trend, with the exception of some smaller downturns in 2011 and 2014.
- As percentage of GDP, tax support rose from 0.16% of GDP in 2007 to 0.19% in 2014.
- Direct funding of BERD sustainedly raised, passing from 0.11% of GDP in 2000 to 0.17% in 2014.

---

[1] This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities or third party. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

## 3. Design of R&D tax incentive support

Countries differ in the extent to which they rely on tax measures to support R&D, and those that do design tax relief measures in substantially different ways. Key design features relate to the type of tax instrument, eligible R&D costs, provisions for firms with insufficient tax liability, ceilings and thresholds among others.

**Table 1. Main design features of R&D tax incentives†**

| | | R&D tax credit | | R&D investment credit |
|---|---|---|---|---|
| Type of instrument | | Hybrid (volume or increment)* | | Volume-based |
| Eligible expenditures† | | Current | | Machinery & equipment, buildings |
| Headline rates | | Volume: 2-3 [2+0.5 R&D expense ratio]** 8 (HPE), 25 (SME)*** | Increment: 40, 50 (SME) | 1, 3 (HPE), 6 (SME) |
| Refund | | No | | |
| Carry-over (years) | | 5 (carry forward) | | |
| Thresholds & ceilings | Base amount | Previous year R&DD expenditures | | n.a. |
| | Ceiling (Tax credit rate) | 3% (large firms) | | No |

R&D expense ratio=R&D/revenue; HPE: High Potential Enterprise (not SME but carry out an SME activity, respect rules about being part of a group, and sales smaller than KRW 500 billion); *: the R&D tax credit generally equals the greater of either 1) the volume-based tax off-set, or the 2) incremental tax off-set; **: 20 for large firms under the Growth Industry and Basic Technology scheme; ***: 30 for SMEs under the Growth Industry and Basic Technology scheme; 15/10 for firms losing SME status (see compendium).

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

*Source*: OECD, R&D Tax Incentive Indicators, http://oe.cd/rdtax, March 2017.

**Main points:**

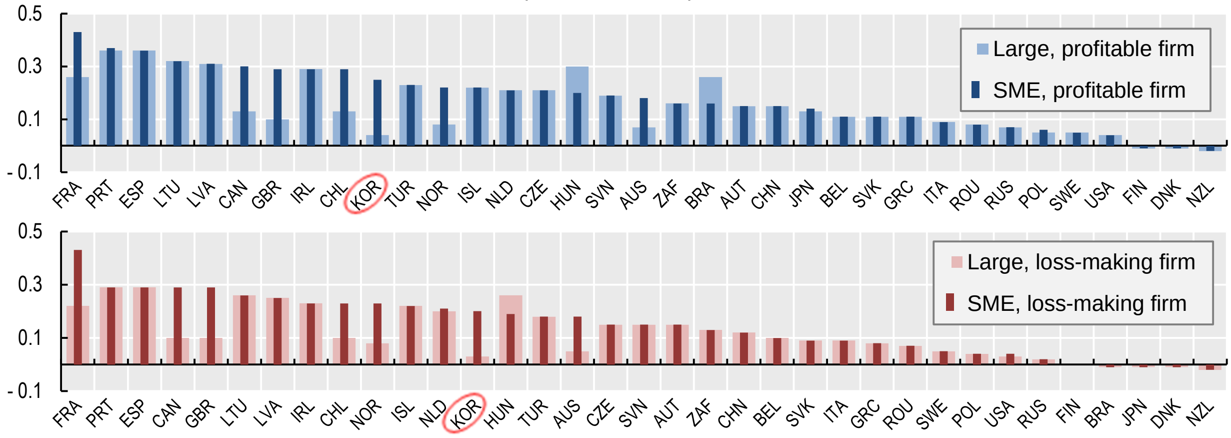
- Korea provides R&D tax relief through a hybrid R&D tax credit and volume-based investment credit.
- Under the hybrid R&D tax credit, R&D tax relief generally equals the larger of either the volume-based or the incremental tax offset.
- In case of insufficient tax liability, unused credits can generally be carried-forward for 5 years.
- Under the volume-based R&D tax credit, tax benefits are limited in the case of large companies where the maximum tax credit rate – a function of the R&D expense ratio- is capped at 3%.

## 4. Generosity of R&D tax support

The design of R&D tax incentives influences the "expected" generosity of tax relief per additional unit of R&D investment. Across OECD and partner economies providing tax relief, there is a significant variation in tax subsidy rates for firms of different size and profitability.

**Figure 3. Implied tax subsidy rates on R&D expenditures, 2016**

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




*Source*: OECD, R&D Tax Incentive Indicators, http://oe.cd/rdtax, March 2017.

**Main points:**

- In Korea, the marginal R&D tax subsidy rate for SMEs is estimated at 0.25 (0.20) in the profit (loss-making) scenario; larger than the OECD median of 0.18 (0.11) for profitable (loss-making) SMEs.
- The tax subsidy rate for profitable (loss-making) large enterprises in Korea is 0.04 (0.03); smaller than the OECD median of 0.11 (0.09) for profitable (loss-making) large enterprises.

**Please cite this note as:** OECD (2017). “R&D Tax Incentive Country Profiles 2016: Korea”, Measuring R&D Tax Incentives, http://oe.cd/rdtax, Directorate for Science, Technology and Innovation, March 2017.