R&D Tax Incentives: Turkey, 2020

Design of R&D tax relief provisions

Turkey provides R&D tax relief through an incremental R&D tax allowance and partial exemption of employer's social security contributions (SSC).

Table 1. Main design features of R&D tax incentives in Turkey, 2020

		R&D tax allowance	SSC exemption
Tax incentive*		R&D tax allowance	SSC exemption
Type of instrument		Incremental	Volume based
Eligible expenditures[†]		Current, machinery and equipment, buildings	Labour
Headline rates (%)		50	50 (SSC rate of 17.5)
Refund and carry-over (years)		Infinite (carry-over)	Redeemable against social security contributions. No carry-over.
Thresholds	Base amount	Qualifying R&D expenditure in the previous year	-
	R&D tax relief	No	The full-time-equivalent support personnel who benefit from social security contribution cannot exceed 10% of the number of total full-time R&D personnel.

* Turkey also offers an accelerated depreciation of machinery and equipment used in the process of R&D (immediate write-off).

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/rdtax, March 2021.

Key features:

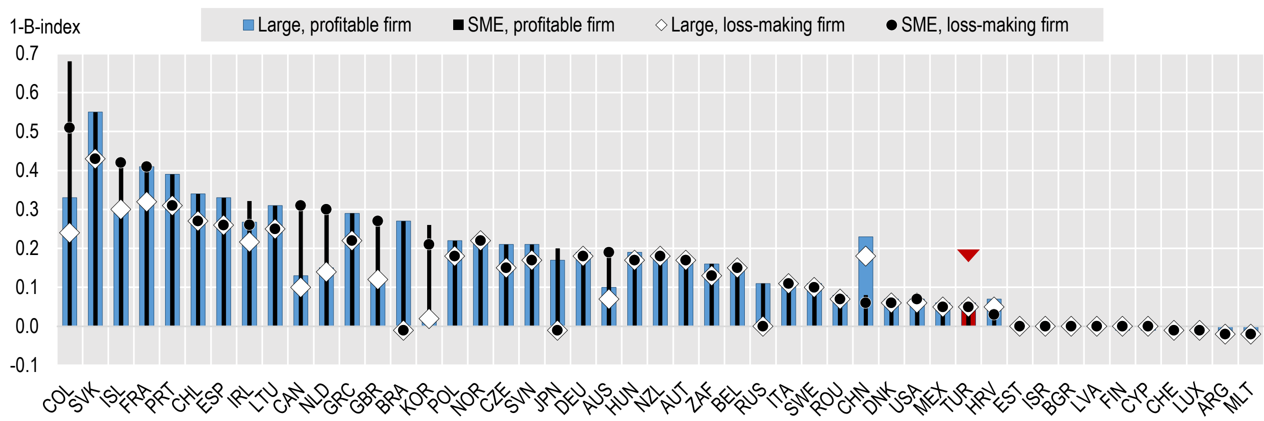
- The headline rate of the incremental R&D tax allowance is 50%. Unused tax benefits can be carried-forward for an indefinite period in the case of the R&D tax allowance.
- Under the SSC exemption, tax benefits are administered through the social security contributions system, and are thus disconnected from the corporate tax liability of the firm.
- A ceiling applies to the full-time equivalent support personnel who benefit from the SSC exemption.

Generosity of R&D tax support in 2020

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. In 2020, the marginal tax subsidy rate for profit-making (loss-making) SMEs in **Turkey** is estimated at 0.06 (0.05), significantly below the OECD median of 0.20 (0.18). The tax subsidy rate for large enterprises is equal to 0.06 (0.05) in the profit (loss)-making scenario, well below the OECD median of 0.17 (0.15). These estimates focus on modelling the provisions for the tax allowance, SSC exemption and accelerated depreciation of R&D capital.

Figure 1. Implied tax subsidy rates on R&D expenditures: Turkey, 2020

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, March 2021.

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 2020, changes in the availability and scope of R&D tax incentives represented the most frequent type of policy reform (OECD, 2020), along with adjustments to the headline R&D tax credit/allowance rates and adjustments of thresholds or upper ceilings on qualifying R&D expenditure or tax relief amounts. In response to the COVID-19 pandemic, several countries increased the generosity of R&D tax relief or introduced modifications to the administration of R&D tax incentives to facilitate and accelerate R&D funding.

In 2020, **Turkey** did not undertake **changes** in its R&D tax relief provisions. The **latest change** in the design of the R&D tax incentives (SSC exemption) in **Turkey** occurred in **2014**, when the SSC rate was raised from 16.5% to 17.5%, increasing the value of the 50% SSC exemption.

Trends in the generosity of R&D tax support

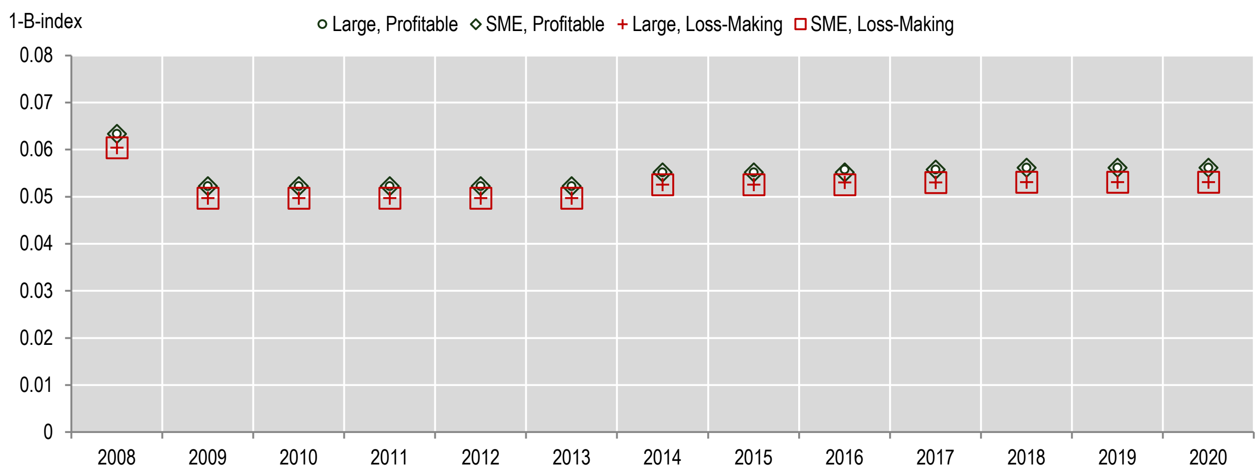
Since the introduction of R&D tax support in 2008, the generosity of R&D tax incentives has remained fairly stable in **Turkey**. With no change in the rate of accelerated depreciation, R&D tax allowance and corporate income tax between 2008 and 2020, the implied R&D tax subsidy rates estimated for profitable SMEs and large enterprises exhibit little variation throughout this period, ranging from 0.05 to 0.06.

Tax subsidy rates dropped in 2009 when the SSC rate was lowered from 20.3% to 16.5%. The value of the 50% SSC exemption is directly linked to the magnitude of the SSC rate. Following the increase of the SSC rate from 16.5% to 17.5% in 2014, the R&D tax subsidy rates increased slightly in both profit scenarios.

With an indefinite carry-over option in place between 2008 and 2020, the R&D tax subsidy rates for loss-making firms are positive but slightly smaller than those for profitable firms.

Figure 2. Implied tax subsidy rates on R&D expenditures: Turkey, 2000-20

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.

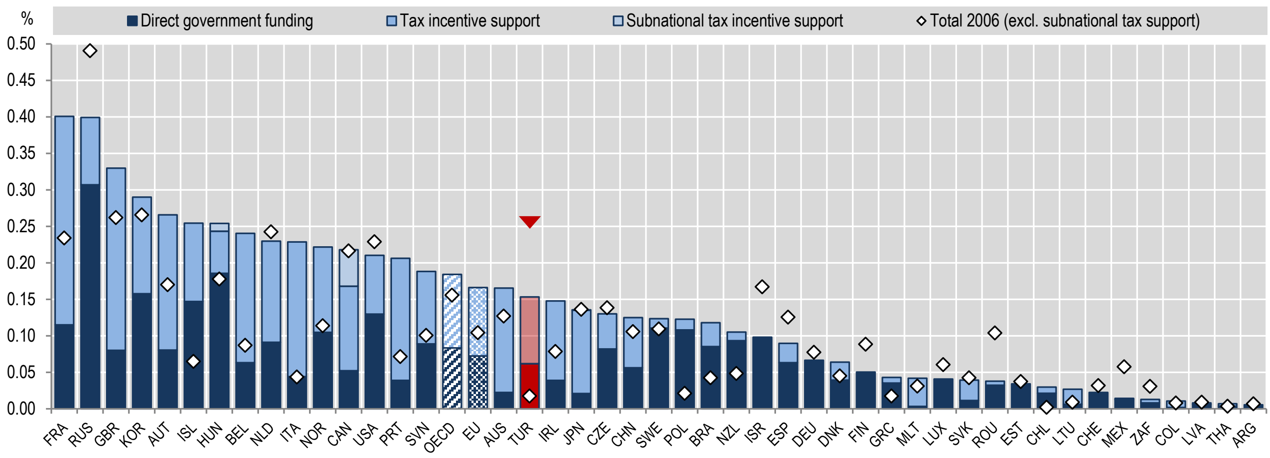
Source: OECD, R&D Tax Incentives Database, http://oe.cd/rdtax, March 2021.

Policy support for business R&D: the policy mix

In 2018, **Turkey** is placed below the OECD average in terms of total government support to business R&D as a percentage of GDP, at a rate equivalent to 0.15% of GDP.

Figure 3. Direct government funding of business R&D and tax incentives for R&D, 2018 (nearest year)

As a percentage of GDP



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, March 2021.

Key points:

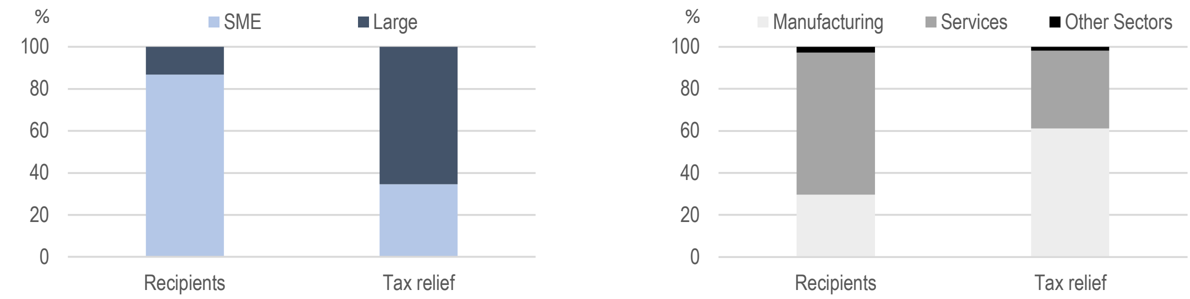
- From 2006 to 2018, government support for BERD as a percentage of GDP increased in **Turkey** by 0.14 percentage point (pp), while the OECD average increased by 0.03 pp.
- During this period, business R&D intensity in **Turkey** increased from 0.20% to 0.62%.
- In 2018, R&D tax incentives accounted for 60% of total government support for BERD in **Turkey**.

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, 2018

By firm size*, share in percent — By industry**, share in percent



Note: Figures refer to the R&D tax allowance and SSC exemption. *SMEs are defined as firms with 1-249 employees. **No details on the industry classification available.

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

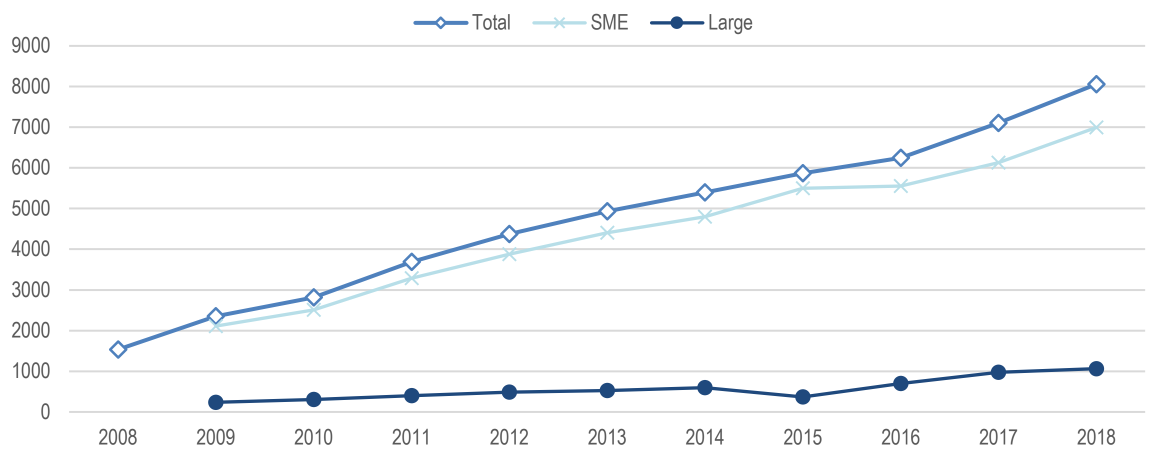
Key points:

- In **Turkey**, SMEs accounted for 87% of R&D tax relief recipients in 2018, while the share of R&D tax support accounted for by SMEs amounted to around 35% in this year. 65% of R&D tax benefits were allocated to large firms, comprising 13% of the population of R&D tax relief recipients in 2018.
- In 2018, firms in services represented around 68% of R&D tax relief recipients in **Turkey**, followed by firms in manufacturing with a share of 30%. The share of R&D tax benefits accounted for by the latter amounted to 61% in that year, while this share amounted to 37% in the case of firms in services.

Trends in the uptake of R&D tax incentives

Over the period 2008-2018, the number of R&D tax relief recipients increased steadily in **Turkey**, reaching around 8 000 in 2018. This increase is primarily attributable to SMEs. While the number of large firms receiving R&D tax support quadrupled and the number of SMEs benefiting from R&D tax support tripled from 2009 to 2018, SMEs accounted for close to 90% of R&D tax relief recipients in **Turkey** throughout this period.

Figure 5. Number of R&D tax relief recipients, Turkey, 2008-2018



Note: Figures refer to the Compensation for social security contributions and R&D tax allowance.

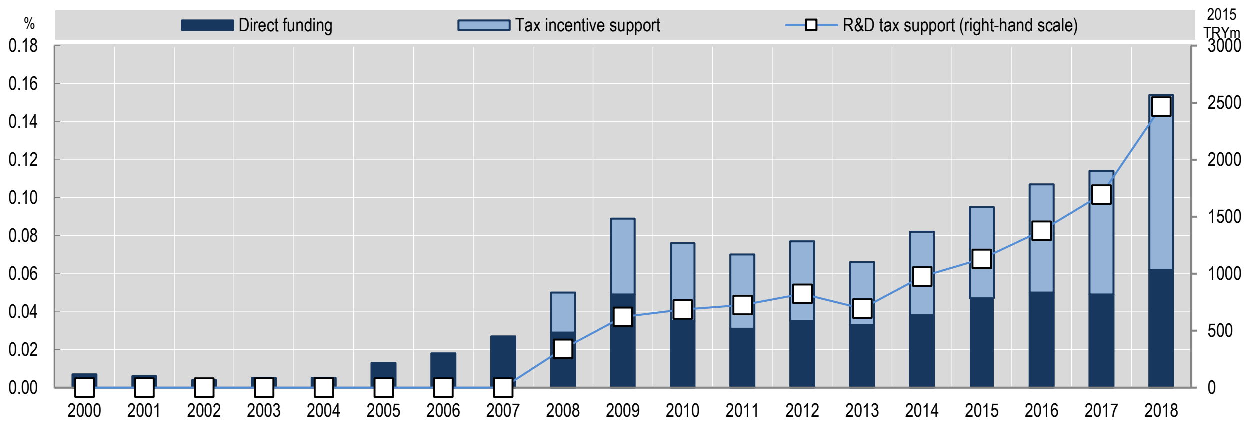
Source: OECD, R&D Tax Incentives Database, http://oe.cd/rdtax, March 2021.

Trends in government support for business R&D

Since the introduction of R&D tax support in **Turkey** in 2008, the importance of R&D tax incentives has increased significantly, both in absolute and relative terms.

Figure 6. Direct funding of business R&D and tax incentives for R&D, Turkey, 2000-18

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



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

- The cost of government tax support for R&D rose (in 2015 prices) from TRY 341 million (1 TRY = 0.118 EUR, Q3 2020) in 2008 to TRY 2 465 million in 2018.
- As percentage of GDP, R&D tax support increased from 0.021% to 0.092% of GDP during this period.
- Direct funding of BERD accounted for 0.007% of GDP in 2000 and increased steadily thereafter, only interrupted by a slowdown in 2010, reaching 0.062% of GDP in 2018.
- The share of R&D tax incentives in total government support increased significantly over the 2008-18 period, from 42% in 2008 to 60% in 2018.

Please cite this note as: OECD (2021). “R&D Tax Incentives: Turkey, 2020”, www.oecd.org/sti/rd-tax-stats-turkey.pdf, Directorate for Science, Technology and Innovation, March 2021.