

Methodology for calculating tax relief in the Czech Republic

The report includes an estimate of the amount of tax relief in the Czech Republic for value added tax, corporate income tax and personal income tax at the level of public budgets.

The main data sources used as a basis for calculating the estimate of tax relief in the Czech Republic are: Automated Tax Information System (ADIS), publicly available data from the Czech Statistical Office, the Czech National Bank, internal sources of the Ministry of Finance and other relevant ministries (e.g. the Ministry of Defence) and other publicly available information.

A report on the impact of tax concessions on government revenue is published annually as part of the budget documentation for the state budget law.

The Czech Republic has been obliged to publish an analysis of tax breaks since 2014. This requirement stems from Directive 2011/85/EU, specifically Article 14.2., which reads: "Member States shall publish information on the impact of tax expenditures on revenue". However, a systematic analysis of tax concessions should also be taken as a basis for various recommendations for fiscal policy, facilitating the budgetary process, formulating tax reforms and increasing transparency towards the public.

For the time being, the European Commission only gives some recommendations on the design and content of the tax relief analysis, but no strict rules are given. This is mainly due to the difficulty of establishing a uniform methodology so that the outputs can be internationally comparable. The Ministry of Finance, which is responsible for the analysis of tax concessions, has therefore developed a methodology for calculating tax concessions. To make the text easier to understand, we would first like to clarify the term 'tax relief':

Tax relief is understood as a measure which is an advantage for the taxpayer in the form of lower or later paid tax compared to the situation where such a measure would not be included in the law. Although a tax credit, according to its name, is supposed to reduce the tax burden, it is also possible to find measures which, on the contrary, impose a higher burden on the taxpayer. These include, for example, the impossibility of deducting certain expenses from gross income or double taxation of certain types of income (income tax), or limitations on the right to deduct certain goods or services used as input for the purpose of business (value added tax). Such measures are usually motivated by concerns about the abuse of certain types of expenditure.

The term "tax expenditure" can also be found in professional texts and can be understood as a subset of tax relief. These are tax policy instruments that could be, and often should be, implemented through the expenditure side of the state budget. They are those components of tax legislation that are motivated by objectives other than collecting revenue in the most efficient way.

1. Method used

As mentioned in the introduction, there is currently no uniform methodology for calculating tax relief, nor are there any other restrictive rules on the form of the tax relief analysis. The European Commission gives Member States a fair amount of freedom in this respect and only makes certain recommendations, which are reflected in the following text. In the Czech Republic, the foregone revenue method has been chosen for the calculation of tax relief. Its principle is to quantify the reduction in revenue achieved by the application of a given relief if the taxpayer uses the tax relief. In other words, it is a static¹ calculation of the revenue loss incurred by the public sector.

In general, a lot of data is needed to determine the amount of each tax credit. However, this poses a problem in procuring the data base, as in many cases this would lead to a disproportionate increase in the administrative burden on the entities concerned. Although the revenue foregone method used is not data-intensive either, it is relatively simple compared to the other methods and appears to be the most appropriate for other reasons as well. It is also the most widely used method.

Understandably, there are a few simplifications. Calculating the actual amount of tax relief is very difficult and, if it were to be done thoroughly, changes in tax behaviour, for example

¹ Static in the sense that it does not take into account changes in the behaviour of the subjects. If the tax credit is abolished, entities may change their behaviour and this may lead to a different impact of the abolition of the tax credit on public budgets.

taxpayers. However, the method used ignores this fact, so that, for example, the cost of the tax rebate should be determined as the sum of those parts of the tax rebates for individual taxpayers that were still available to the taxpayers, i.e. those that did not exceed the amount of the tax. Similarly, the cost of a deductible item is the product of the total amount of deductible items effectively claimed and the marginal tax rate. If the income tax has only one rate, the determination is straightforward. In the case of a progressive tax rate, the average marginal rate must be determined according to the distribution of taxpayers into different income groups.

2. Quantification of tax relief

The following section sets out the main formulas used to calculate the most significant tax concessions.

2.1 Income taxes

As personal income tax and corporate income tax are similar in nature, similar methods of quantification can be applied.

a. Tax credits that reduce the amount of tax

The following equation is used only for the case of personal income tax and consists in comparing the amount of tax in a situation with and without tax relief:

$$D\dot{U} = \sum_{i=1}^n t' - t_i$$

Where:

$D\dot{U}$ represents the amount of tax relief for the whole economy
 N represents the number of taxpayers in the Czech Republic
 t'_{i} represents the tax of the i -th taxpayer in the presence of tax relief
 t_i represents the tax of the i -th taxpayer in the absence of tax relief

b. Deductible items from the tax base

In this case, it would be desirable to work with individualised data from tax returns to calculate the actual amount of tax relief. However, this is not possible due to tax confidentiality, therefore it is necessary to work with aggregated data on the amount of statutory entitlements to deductible items, i.e. not with data on their effectively claimed part. The method therefore necessarily leads to an overestimation of the amount of tax relief.

The amount of tax relief can therefore be expressed by the following formula:

$$D\dot{U} = ODP \cdot T^e$$

Where:

ODP represents the total amount of the deductible claimed by all taxpayers
 T^e represents the average effective tax rate for all taxpayers

The overestimation of the relief could then be expressed as:

$$\sum_{i=1}^n (odpi - eodpi) \tau^e_i$$

Wh	represents the amount of the taxpayer's statutory entitlement to the deductible item
$eodpi$	represents the effective amount of the deductible item, i.e. the amount of tax by which the tax base of the i -th taxpayer has been reduced
τ_{ie}	represents the effective tax rate of the i -th taxpayer

In the case of personal income tax, the situation is complicated by the fact that employees can claim deductible items through their employer and that the Czech Financial Administration does not have data on employees because employers are obliged to report only aggregated data on their employees. Therefore, only data on taxpayers who have filed a tax return are available. It is therefore necessary to estimate the amount of deductible items for taxpayers who do not file a tax return, assuming that the average amount of the deductible item is the same for taxpayers who file a tax return as for taxpayers who do not file a tax return. The relationship used for the calculation is:

$$ODP = ODPDAP \cdot \frac{n}{ndap}$$

Where:

$ODPDAP$	represents the total amount of the deductible item claimed by those taxpayers who filed a tax return
N	represents the total number of natural persons who are liable for VAT
$ndap$	represents the number of entities that have filed a tax return

c. Tax rebates

The amount of tax is expressed as the difference between the tax before the rebate and the tax rebate. To calculate the amount of tax relief for discounts, again as in the previous case, only aggregated data on the total amount of tax discounts claimed are available. The following relationship will be used to quantify tax relief in the form of tax credits:

$$TA = DISCOUNT$$

Where:

The $DISCOUNT$ represents the total amount of tax relief claimed by all taxpayers, i.e. the relationship applies:

$$SLEVA = \sum_{i=1}^n slevai$$

Again, in the case of personal income tax, the problem arises that the tax administration has no data on employees who can claim tax rebates through their employers. It is therefore necessary to estimate the amount of the tax credit for these taxpayers using the following relationship:

$$DÚ = SLEVA = SLEVADAP \cdot \frac{n}{ndap}$$

d. Exempt income

Again, available total exempt income data will be used to quantify exempt income. It must be assumed that although a taxpayer cannot deduct the costs of earning, securing and maintaining such income from income that falls within the exempt category, he would be able to do so once the exemption is removed. Otherwise, a negative tax relief would be created. The amount of exempt income will be derived using the following notation:

$$DÚ = (OSVPŘ - VÝDAJOSVPŘ) \cdot T^e$$

W_h
 OSVPR represents the total amount of that type of exempt income for all taxpayers
EXPENDITURE represents the total amount of expenditure incurred to achieve, secure and maintain the type of exempt income or otherwise related expenditure (if quantifiable)
 Here represents the average effective tax rate for all taxpayers

It is not uncommon for the cost of earning, maintaining and securing exempt income to be as much or more than the exempt income. Therefore, the amount of such tax relief would be zero. The same procedure would apply to exempt income, except that no expenditure is normally incurred in order to earn, secure and maintain such income.

e. Reduced tax rate

This tax relief is only available for DPPO. Its amount is calculated on the basis of the following relationship:

$$DÚ = ZD (T^e - T^{s,e})$$

Where:

ZD represents the total tax base of all taxpayers subject to the reduced tax rate

Here represents the average effective basic tax rate

$T_{s,e}$ represents the average effective reduced tax rate

2.2 Value added tax

The quantification of tax relief in the case of value added tax is complicated by the fact that there is no data available on individual transactions, whether they are intended for VAT payers or non-payers (only transactions from VAT payers where the buyer does not have the option to reclaim input tax, i.e. most often transactions where the buyer is a non-taxpayer of VAT, have an impact on net revenue). Therefore, the data on the amount of transactions received by non-taxpayers, which are contained in the tables of supplies and uses published by the CSO and also in the VAT own-source summary statement, are used here.

a. Formulas for initial calculations

The average effective tax rate is calculated using the following formula:

$$\tau_{cpa}^a = \frac{\tau^z \cdot y_{cpa,z} + \tau^s \cdot y_{cpa,s}}{y_{cpa,z} + y_{cpa,s} + y_{cpa,o}}$$

Where:

τ_{cpa}^a represents the average effective rate for a given two-digit CPA code

τ_{from} represents the standard VAT rate

$y_{cpa,z}$ represents the volume of transactions in the sectors listed in the Summary Statement in the given CPA code which, according to the Summary Statement, are subject to the basic rate

τ^s represents the reduced VAT rate

$y_{cpa,s}$ represents the volume of transactions in the sectors listed in the Summary Statement in the given CPA code which, according to the Summary Statement, are subject to the reduced rate

$y_{cpa,o}$ represents the volume of transactions in the sectors listed in the Summary Statement in the given CPA code which are exempt according to the Summary Statement

It is also necessary to calculate the amount of theoretical VAT, which differs from the actual VAT collection, for example because of tax evasion or because the supply and use tables include estimates of the grey economy. Therefore, the theoretical VAT amount is usually higher than the actual VAT collection. It is calculated using the following relationship:

$$DPHt = \sum_{cpa=01}^{99} y_{DPH,cpa} \cdot \tau_{cpa}^a$$

When

τ_{cpa}^{theor} represents the theoretical VAT yield

$yDPH_{cpa}$ represents the total volume of transactions in a given CPA code on which the buyer is not entitled to deduct VAT

τ_{cpa}^a represents the average effective rate for a given CPA code

The correction factor, which will help to obtain realistic estimates of the tax relief corresponding to actual collections, is obtained by the following relation:

$$k = \frac{DPH^s}{DPH}$$

Where:

k represents the VAT correction

coefficient represents the theoretical

VAT yield τ_{VATs} represents the actual VAT yield

b. Reduced rate

The default consideration for quantifying this case is that the currently applied reduced rate(s) would be replaced by the basic rate, while the exemptions would remain. This would create a situation where the value of the average effective rate would remain lower than the value of the basic rate in some CPA codes (with exempted benefits).

The amount of VAT revenue after the abolition of the reduced rate can be calculated on the basis of the following equation:

$$\tau_{cpa}^a = \frac{\tau_z \cdot y_{cpa,z} + \tau_z \cdot y_{cpa,s}}{y_{cpa,z} + y_{cpa,s} + y_{cpa,o}}$$

99

$$DPH' = \sum_{cpa=01} yDPH_{cpa} \cdot \tau_{cpa}^a$$

Wh

$\bar{a}r\acute{e}: cpa^a$ represents the average effective rate for the supply in the given CPA code after the abolition of the reduced VAT rate

VAT' represents the theoretical VAT revenue after the abolition of the reduced VAT rate

$yDPH_{,cpa}$ represents the total volume of transactions in a given CPA code on which the buyer is not entitled to deduct VAT

In the case of multiple reduced VAT rates, the resulting tax relief is the sum of the values calculated for each reduced VAT rate.

From these relationships, an equation is derived to quantify the tax relief in the form of a reduced tax rate:

$$D\acute{U} = k. (DPH' - DPH)^t$$

c. Exemption from performance

The amount of relief in the form of an exemption for a given sector can be expressed by the following relationship:

$$D\acute{U} = k. phsektor. \tau^z$$

Where:

k represents the correction coefficient

$phsektor$ represents the gross value added in the sector identified by the NACE code

τ from represents the basic tax rate