5   Scenarios

Projections in the business as usual (BAU) scenario have been shown above in section 3 for the most important parameters and variables in the model. For the following exploratory scenarios, a **tax parameter** has been **varied**, showing the effects of this change with respect to model developments in the BAU scenario.

Disclaimer: It has to be noted that the following scenarios are merely exploratory exercises to test the properties of a model in a very early stage of development, and should not be seen as actual policy recommendations. Some of them might are quite pronounced in their extent of change in the Austrian tax or government expenditure structure, and might seem unrealistic for the practitioner.

To test the model, we have initially incorporated the following hypothetical scenarios (an additional scenario is introduced in figure 34):

1. **Increase Government Spending ("G+10"):**   Starting from 2017, Government spending (G) is exogenously increased by 10 % compared to the BAU trajectory for each year until 2025. There is no financing for this increased spending, i.e. government debt increases along with this measure.

2. **Decrease Wage Tax, no Decrease Gov't Expenditure ("tau_w-10")** The wage tax rate is cut by 10 % from its initial value starting in 2017, which is about 4.5 percentage points (pp) from 45.6 % down to about 41 %. Again, there is no counteracting measure to reduce the increasing government deficit.

3. **Endogenous Rise Wage Tax, no Increase Gov't expenditure ("T_w+1Mrd")** Wage taxes are increased so that government revenues are increased by 1 bln. Euro. The additional revenues are used to reduce government debts.

4. **End. Rise Wage Tax + Increase Gov't Expenditure ("T_w+1Mrd_Gup")** Wage taxes are increased as in 3. above, but government consumption is increased by the same amount.

5. **End. Rise Capital Tax + Increase Gov't Expenditure ("T_cap+1Mrd_Gup")** The capital tax rate in the model is increased so that government revenues are increased by 1 bln. Euro. The additional revenue is spent on government consumption.

6. **End. Rise Firm Inc. Taxes + Increase Gov't Expenditure ("T_firm+1Mrd_Gup")** The firm income tax rate is raised so that government revenues are increased by 1 bln. Euro. The resulting revenue is spent on government consumption.

Our main instrument of evaluation - besides the rise/fall in GDP induced by the change in the tax rate - is the **multiplier** $MULTI$ of the respective scenario. We define the multiplier as the ratio the change in GDP induced by the tax change divided by change in tax revenue REV_T or government expenditure G in absolute values (EURO). The multiplier is positive in our definition if the tax measure leads to an increase in GDP, and negative in the opposite case. To spell this out:

$$MULTI = \frac{\Delta GDP}{\Delta REV_T} \quad \text{or} \quad \frac{\Delta GDP}{\Delta G} \quad , \quad MULTI > 0 \quad if \quad \Delta GDP > 0 \tag{21}$$

To go straight to the results of these scenarios: figure 30 below shows their effects on GDP growth from 2017 to 2025. An overview of the different tax multipliers is given in table 6 below.