

OG-India: Calibrating Parameters with Macroeconomic Data

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Macro Data and Parameter Values

- There are a number of parameters of OG-India that can be calibrated with macroeconomic data
- These parameters' values will be set with data from national accounts and financial accounts

Parameters to Calibrate from National Accounts Data

- g_y (`g_y_annual`): the exogenous underlying rate of (labor-augmenting) technological change
- γ (`gamma`): capital's share of output (which is equal to 1 - labor's share of output, given constant returns to scale)
- δ (`delta_annual`): the rate of economic depreciation
- $\alpha_{T,t}$ (`alpha_T`): government transfer spending (excluding government pensions) as a fraction of GDP
- $\alpha_{G,t}$ (`alpha_G`): non-transfer government spending as a fraction of GDP

Parameters to Calibrate from Financial Accounts Data

- $\text{initial_debt_ratio}$: the debt-to-GDP ratio in the start year of the model
- $\tau_{d,t}(\text{r_gov_scale})$: a scale parameter for the risk discount on government debt
- $\mu_{d,t}(\text{r_gov_shift})$: a shift parameter for the risk discount on government debt
- $\text{initial_foreign_debt_ratio}$: the share of public debt outstanding that is held by foreigners
- $\zeta_{D,t}(\text{zeta_D})$: the share of new debt issues that are purchased by foreigners
- $\zeta_{K,t}(\text{zeta_K})$: the share of excess capital demand that is satisfied by foreigners